

Deane, Kevin (2013) *A socio-economic analysis of HIV: exploring the relationship between population mobility and HIV risk in Tanzania*. PhD Thesis. SOAS, University of London

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**A Socio-Economic Analysis of HIV: Exploring the
relationship between population mobility and HIV
risk in Tanzania**

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Thesis submitted for the degree of PhD in Economics

2013

Department of Economics
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Declaration for PhD thesis

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Abstract

Population mobility has long been associated with the dynamics of HIV transmission. Initial concerns focused on the historical spread of the disease, whereas more recent concerns view mobile populations as engaging in higher levels of risky sexual behaviours than non-mobile populations. Two main case studies South African mineworkers and truck drivers, illustrate this, with lessons from these cases applied across all forms of mobility. However, a review of statistical analyses that test for differences in risk behaviours and HIV rates between 'mobile' and 'non-mobile' groups shows that there is no universal correlation, suggesting that the relationship between mobility and HIV requires further unpacking. This project explored the underlying socio-economic determinants of flows of people and how engaging in these processes creates risky sexual contexts and influences individual risk behaviours, through a case study in Tanzania. Three mobile groups were studied – farmers who farm land away from home, maize traders and dagaa sellers. Results from focus group discussions and in-depth interviews highlight that the requirements of each economic activity, and the factors that draw mobile groups to specific destinations influence patterns of movement and the conditions of moving, including where mobile individuals live and sleep, who they stay with, and the general relationship they have with the destination area. This has implications for the nature of relationships they have whilst away, how they access local sexual networks, who potential sexual partners are, and whether condoms are used. However, the sexual behaviour of mobile groups is also shaped by local sexual norms around sex and exchange and the structure of local value chains, in which economic and social power is expressed at specific gendered interfaces. These influences are distinct from but entangled with the mobility narrative, and emphasise that mobile and non-mobile groups may experience risk in similar ways.

For Emily – who'd have thought it!

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Acronyms and Abbreviations

ABC	Abstain, Be Faithful, Use a Condom
AIDS	Acquired Immunodeficiency Virus
ASP	Afro-Shirazi Party
DSS	Demographic Survey
FAOSTAT	Food and Agriculture Organisation of the United Nations, data access tool
GBP	Great British Pounds
GDP	Gross Domestic Product
GNI	Gross National Income
HBM	Health Belief Model
HIV	Human Immunodeficiency Virus
HSV2	Herpes simplex Virus 2
NAPB	National Agricultural Products Boards
NIMR	National Institute for Medical Research, Tanzania
STD	Sexually Transmitted Disease
TAA	The African Association
TACAIDS	Tanzanian Commission for HIV/AIDS
TANESA	Tanzania – Netherlands Essential Strategies for AIDS
TANU	Tanganyika African National Union
TAZAMA	Demographic Cohort Project, North-West Tanzania
THIS03	Tanzania HIV/AIDS and Malaria Indicator Survey 2003/04
THIS07	Tanzania HIV/AIDS and Malaria Indicator Survey 2007/08
Tshs	Tanzanian Shillings
UNAIDS	Joint United Nations Programme on HIV/AIDS
UN-HABITAT	United Nations Human Settlements Programme
US	United States
USAID	United States Agency for International Development
UTP	United Tanzania Party
VEO	Village Executive Officer
WHO	World Health Organisation

Acknowledgements

This PhD project has been made possible with input and support from many different people and institutions, and to whom I would like to extend my sincere gratitude. I certainly feel lucky that I have had the right people around me throughout, both academically and personally, and hope that everyone involved is able to share in this achievement.

I would like to thank my funders, the Bloomsbury Colleges for the scholarship that enabled me to fully concentrate on my studies, and the London International Development Centre for the generous fieldwork grant. The School of Oriental and African Studies has been my home for eight out of the last nine years, and has been an environment in which I have thrived; it will be difficult to leave. The London School of Hygiene and Tropical Medicine also gave me their full support, and were kind enough to allow me to audit a number of MSc modules in my first year to facilitate the interdisciplinary aims of the project. I was warmly welcomed by both staff and students on those courses.

My supervisors, Deborah Johnston and Justin Parkhurst have been amazing throughout the whole process. They have both invested a huge amount of time in meetings, writing papers, and general academic support, and have been a pleasure to work with and spend time with. I have been privileged to have had the opportunity to benefit from their knowledge, experience and passion. Ben Groom and James Hargreaves, members of my supervisory committee, engaged with my project and during the upgrade process gave me a huge amount of useful and challenging feedback which was invaluable in helping me clarify the aims and objectives of my project and fieldwork.

Myriam Blin provided encouragement and support with writing the original PhD proposal while I was finishing my MSc. Ben Fine has been a source of ongoing inspiration and guidance on navigating the PhD process, and my colleagues in the Economics Department at SOAS have offered a much needed mixture of advice, suggestions, feedback and emotional support, in particular Marco Boffo, James Meadway, Danisha Kazi, Pallavi Roy, Jeff Powell, Alexis Stenfors, Grace Kite, Chiara Mariotti, Nina Kaltenbrunner and Bernd Muller. However, thanks to all those who were involved in the research students seminars and the bar afterwards, the collective spirit in this community has been important throughout.

Thanks also to the participants of the workshop on conceptualising the political economy of HIV risk in Africa held at SOAS in May 2012, and the opportunities I had for further discussions with Tanvi Rai, Oonagh O'Brien, Sally Theobald, Esther Richards and Eleanor MacPherson.

My thesis benefitted from detailed comments from Bernd Muller and Elisa Van Waeyenberge who reviewed and edited draft chapters. Hannah Mansfield and Cathryn Bell transcribed and translated two focus groups and also gave me some interesting insights into the workings of my research activities.

The time that I spent on fieldwork was one of the greatest experiences of my life. This was made possible with the support of Basia Zaba. I am extremely grateful to John Chungalucha and the National Institute of Medical Research (NIMR), Tanzania, for hosting me. In particular, Mark Urassa provided ongoing guidance and problem solving, and made things happen when

needed. Ray Nsigaye played a vital role in linking me in with the local community in the study site, and with indispensable operational support. Babah Hussein and Patrick Masahi managed my project finances. Thanks also to the transcription and translation teams at NIMR, Mwanza.

My research assistants Lucas Boniface, Penina Samwell and Grace Bulugu were a pleasure to work with. I thank them for the commitment they showed to my project, all the hard work that they put in, their honesty and integrity, and also for their companionship and the laughter we shared. Mathius Shimo, Joyce Chuwa and Mpyanjo Chagu were also involved at certain stages, and along with Frank Shija and Ifigenia Haule made trips to the field an enjoyable experience. All the staff at NIMR were incredibly welcoming and made it easy for me to settle in. In particular, I appreciated the many informative conversations I had with Denna Michael, and also the opportunity to practice my Swahili with him.

I am indebted to Joyce Wamoyi, who was an important source of advice and ideas during my fieldwork, and with whom I was able to discuss my findings and emerging themes. Maria Roura also provided useful guidance on the practicalities of doing fieldwork in Tanzania.

I am extremely grateful to all those who participated in focus groups and interviews, and who shared sensitive and personal information with us, and also to the Magu District Officer, Kisesa Ward Officer, and the Village Executive Officers and Village Chairmen of Kisesa A, Kitumba, Welamasonga and Igekemaja for supporting this study.

Aura Andreasson was much more than a landlady, welcomed me into her family home, and was a great friend throughout. Sorry for the occasional late night, and the bats that I kept letting in! Fortu ferried me around and helped me practice my Swahili. I made many friends whilst in Mwanza, and in particular valued the time I spent with Amanda Wilkinson, Marcel, Daniela Manno, Max Tagliamonte, Rebecca Harrison, Jane Rose, Caoimhe Cawley and Alison Wringe, amongst many others. I am also grateful to Rajabu Yahya, David Weston and Benny Kova and all at Mwanza Veteran Sports club for allowing me to play football with them each week. My time in Mwanza was also illuminated with daily Swahili classes at the International Language Training Centre in Mwanza run by Charles Mwombeki. My tutor, M. Salala was the best teacher one could have, and an important source of local knowledge and advice.

Whilst conducting my fieldwork in Mwanza, I was taken ill, and ended up being evacuated to Kenya for an operation before returning to the UK to recuperate. During this period, I was in a great deal of pain and was at the complete mercy of others. Sincere gratitude is extended to all those involved; Aura Andreasson for her support during that time, and for calling the Doctor – I was lucky that I was living with you; Dr Deborah Watson Jones for taking me under her care and sorting everything out for me, you were an absolute saviour (and also thanks for the much needed whiskey); Katrina for conducting a necessary but impromptu operation– that was an experience I will never forget!!; the Flying Doctors for airlifting me to Nairobi; Dr J.K.N Kariuki and all the fantastic staff at Nairobi hospital who looked after me, and did so in such a dignified way in situations which for me were pretty undignified; Grace Karanja and Merab Mulindi from Kenya Samaritans who came to visit me in hospital; Eric and Johan at AIMS South Africa for arranging everything in such an organised and reassuring way; Columbus Direct for taking the insurance claim seriously and approving everything so quickly; the British Airways staff that looked after me on the flight home; the staff at Old Basing Health Centre who nursed

me back to full health; Basia Zaba, Mark Urassa and the project team in Mwanza for their concern and for continuing with the planned activities while I was gone.

My close friends – you know who you are – have been there for me throughout, whether to listen to my academic woes or to help take my mind off them. I am lucky that you guys are on my side. Thanks also to Mark Cooper for his evocative poem.

Finally, my partner Emily has suffered eight long years of me being a student. Her love, belief and unwavering support has kept me going during times when I never thought it would end – I am eternally grateful, I couldn't have done it without you.

Of course, all errors are entirely mine.

The ibis makes a call that splits the sky.
The ibis becomes the lake and surfaces when she chooses.
The ibis came here from far away. How strange is her cry.
The ibis can fly in any direction she pleases.
The ibis soars like a shadow in the air.
The ibis will return, year after year.

(Mark Cooper, 2013)

“Maybe because I travelled with my wife, with my partner, I had no desire that, I am not so desperate to have sex” [Laughter]

(Male farmer, Tanzania)

Chapter 1 – Introduction

1.1 HIV: An ongoing concern

The 5th of June, 2011, marked the 30th anniversary of the identification of the first cases of Acquired Immunodeficiency Syndrome (AIDS) in San Francisco (Merson et al. 2008). Whilst infection rates were already reaching epidemic proportions in equatorial Africa during the 1970's (Iliffe 2006), this discovery was significant in that it signalled the beginning of the global response to the epidemic. 30 years on, the virus continues to impact millions of individuals across the globe, and in particular sub-Saharan Africa, which bears the brunt of the epidemic. In 2011, sub-Saharan Africa was home to 69% of the global population living with the human immunodeficiency virus (HIV), which equates to an estimated 23.5 million adults and children, with on average 1 in 20 adults infected across the region (UNAIDS 2012). However, there are encouraging signs that the epidemic is slowing, as the number of new infections is in decline in many regions and countries, including sub-Saharan Africa, where, between 2001 and 2011, new infections were estimated to fall from 2.4 million to 1.8 million, a reduction of around 25% (UNAIDS 2012). This data is cause for some cautious optimism over the potential for tackling the epidemic, with renewed political commitment to specific targets covering a range of prevention and treatment issues encapsulated in the UNAIDS political declaration on HIV/AIDS (UNAIDS 2011). This declaration outlined ten targets, and challenged the global HIV/AIDS community to, amongst other things, reduce sexual transmission by 50%, reduce transmission amongst injecting drug users by 50%, and eliminate new infections amongst children, by 2015 (UNAIDS 2011). These targets emphasise that despite recent progress, there is a need to redouble prevention efforts to both consolidate this progress and help stimulate further reductions in new infection rates. Although there is currently no consensus over the impact that the epidemic has had on economic development (Johnston 2013), the cumulative number of HIV-related deaths, which is estimated to be 24 million globally between 1980 and 2007 (Bongaarts et al. 2009), and the accompanying human suffering endured by those infected with the virus, should serve as a reminder that the imperative for on-going prevention efforts is still strong.

1.2 HIV prevention to date

HIV prevention efforts to date have encompassed a wide range of interventions that have been in general framed within a biomedical and behavioural paradigm (Campbell et al. 1999).

Initial efforts centred on behaviour change programmes that typically included a range of interventions that aimed at addressing individual sexual behaviour, such as information, education, and communication campaigns to raise awareness (Kahuthia 2001), condom distribution and promotion (UNFPA 2005), and programmes that emphasise both abstinence and condom use such as the ABC campaign (Abstain, Be faithful, use a Condom) (Shelton et al. 2004), alongside access to testing and counselling services (Mann et al. 1998). Later interventions have included peer to peer counselling and education (Medley et al. 2009), male circumcision (Weiss et al. 2000), and an expansion of biomedical programmes such as the treatment of other sexually transmitted infections (Fleming et al. 1999), the use of pre-exposure prophylaxis to prevent mother to child transmission (WHO 2006), also extended for use in other high risk groups such as sex workers, men who have sex with men and uninfected partners in sero-discordant couples (Montaner et al. 2006; Okwundu et al. 2012).

Early responses to the epidemic were largely formulated on the basis of intuition (Fisher et al. 2000), the need to do something quickly (King 1999), or on moral or religious grounds (Harman 2011), resulting in programmes guided by common sense, advocacy or the self-promotion of donor priorities. However, as the knowledge base expands, policy is increasingly based on evidence from experimental studies that assess the extent to which specific interventions reduce the likelihood of HIV transmission. In terms of biomedical approaches, there is clear evidence for the efficacy of interventions such as male circumcision (Weiss et al. 2000), the prevention of mother to child transmission (WHO 2006), and the preventative use of antiretroviral drugs (Okwundu et al. 2012), though these prevention methods are accompanied by challenges such as expanding coverage and reaching at risk populations (WHO 2007), ethical concerns around male circumcision (Rennie et al. 2007), issues of adherence to drug regimes (Mutua et al. 2012), generating the necessary funding (WHO 2011), and the (re)building of health systems and infrastructure through which to deliver services (Coovadia et al. 2005; Hickel 2012).

The evidence in relation to behaviour change is less conclusive, with Padian et al (2010), in a review of randomised control trials that evaluated a number of behavioural interventions, finding no evidence of a statistically significant impact on incidence. Whilst there is a growing evidence base of studies that demonstrate success in changing risk behaviours (Global HIV Prevention Working Group 2008), it has been acknowledged that there is an urgent need to improve the design and implementation of behaviour change interventions (Coates et al. 2008), particularly as changes in risk behaviours have been central to all reversals in the epidemic to date (Global HIV Prevention Working Group 2008). These concerns are reflected in the recent UNAIDS update that reports despite decreases in risk behaviours in a number of

sub-Saharan African countries, risk behaviours are increasing in others, with the target of reducing sexual transmission by 50% by 2015 likely to be missed (UNAIDS 2012).

Although behaviour change is a complex issue, and notoriously difficult to effect across a range of health issues (Coday et al. 2002; Whitehead et al. 2004; Panter-Brick et al. 2006), we will argue that one reason for the moderate progress in HIV behavioural change programmes is the limited theoretical conceptualisations of behaviour that underpin interventions. It has been acknowledged that only a small proportion of these programmes have been grounded in conceptual frameworks or social theory (King 1999; Fisher et al. 2000), suggesting a prevention effort that has attempted to change human behaviour with little *a priori* conceptualisation of how humans actually behave, a severe conceptual limitation which has resulted in a set of interventions based on simplistic and unrealistic assumptions. Increasingly, and in the light of the expansion of national data sets over the last decade (Johnston 2013), results from the large body of epidemiological literature that tests for statistical correlations between outcome variables and a range of explanatory variables (see for example Hunter et al. 1994 and Guiella et al. 2007) also drive intervention design, so that understanding behaviour has become less of a theoretical and conceptual issue, and more of an empirical one, effectively removing the need for recourse to social theory or formal modelling.

This issue is compounded by the fact that the theoretical work on understanding and modelling sexual behaviour and HIV transmission is itself both limited and problematic. The prominent theories of behaviour change that are specifically related to health behaviour include, amongst others, models such as the Health Belief Model (Rosenstock et al. 1994) and the AIDS Risk Reduction Model (Catania et al. 1990) which originate from the field of social psychology. Whilst these models address important cognitive aspects of behaviour change, they are firmly rooted in an individualistic paradigm (Hickel 2012), and assume that individuals are rational and have the power to implement behavioural changes (Fisher et al. 2000). This assumption is highly questionable, especially when thinking about the extent to which economic and gendered power relations place limitations on individual agency. The response of the economics discipline is also rooted in a methodological individualism that employs a more strictly defined version of the rational individual than the psychosocial approaches, with transmission understood through approaches that range from a market for safe sex (Philipson et al. 1995; Gertler et al. 2005), utility maximisation and trade-offs between safe sex and financial exchange (Luke 2006; Oster 2012), game theory (Schroeder et al. 2002) and the market failure framework (Gaffeo 2003). These stylised accounts, which suffer from both empirical and theoretical shortcomings, shed little light on the dynamics of transmission, nor contribute to new and innovative interventions (Johnston 2013). As with the psychosocial

approaches, most economic approaches systematically fail to incorporate the influence of structural and social factors over individual agency, influences that must be accounted for if behaviour is to be fully understood. Recent economic interventions, such as microfinance and conditional cash transfers offer a potential alternative approach (Pronyk et al. 2007; Baird et al. 2012), but whilst they attempt to address important structural issues such as unequal gender relations, they are still conceptualised at the level of the individual and formulated in the language of markets and choice, so that it is questionable to what extent, if scaled up, they can mount a realistic challenge to socially, economically, and historically embedded structural relations.

1.3 Structural Drivers

Although individualistic approaches to HIV prevention have dominated the policy and academic arena, it has long been acknowledged that context and social structures have a role to play in influencing and shaping the dynamics of the epidemic (Hahn 1991; Sweat et al. 1995). More recently, there is a growing body of literature that recognises that structural/social factors play an important role in shaping both risk behaviour and risk contexts (Sumartojo 2000; Gupta et al. 2008; Rotheram-Borus et al. 2009; Auerbach et al. 2010; Evans et al. 2010). These approaches have moved away from one-size-fits-all explanations by attempting to provide a more nuanced conception of how structures influence behaviour across specific contexts (Auerbach et al. 2011). Whilst this has succeeded in forcing the issue onto the global policy agenda, in particular in the form of combination prevention which emphasises that effective prevention must be a combination of biomedical, behaviour and structural strategies (UNAIDS 2010), how best to design and evaluate structural interventions is still a work in progress (Auerbach et al. 2011).

However, in similarity to individualistic approaches, structural drivers and interventions are not always well conceptualised, with social theory not always explicitly used to provide a framework within which structures and the different ways that they influence behaviour can be articulated. Therefore, there is a need to better understand how social and structural drivers influence risk. Additionally, some structural approaches find it difficult to find space for individual agency, and so can appear overly deterministic. Of course, this is a complex theoretical issue that has been grappled within the sociological discipline, which for decades has debated the relative roles of structure and agency in shaping human behaviour (Giddens 1979). Although this is a debate that inevitably remains unresolved, this body of work provides

fertile ground for ‘better mining of the social sciences’ and the opportunity to improve structural approaches through the rigorous application of social theory (Auerbach et al. 2010).

The use of theory in understanding how social structures influence behaviour is one of the themes taken up in this thesis, which attempts to incorporate a more nuanced conceptualisation of human behaviour based on insights drawn from the large body of literature on social theory, including theory that tackles the relationship between agents and structures, and an attempt to root this in a political economy framework that is better suited to an economic approach that is able to address social structures and context. This approach will be applied to the topic of migration, and population mobility more broadly, which has been identified as a core social process that is linked to both the extensification of the epidemic, and also enhanced risk behaviours (Brummer 2002; Iliffe 2006), using evidence gathered from qualitative fieldwork in Mwanza region, Northern Tanzania. This process has been chosen due to the central role that population mobility plays in economic development and the recent focus on migration as a tool for development as promoted by both the World Bank and the United Nations Development Programme (UNDP) in their 2009 annual reports (UNDP 2009; World Bank 2009). If potential developmental gains from mobility and migration are to be fully realised, it is imperative that the mechanisms through which these processes influence risk behaviours and risk context are fully understood (Deane et al. 2013).

1.4 Overview of the thesis

This thesis is structured in the following way. Chapter two critically reviews both individualistic and structural approaches to understanding the dynamics of HIV transmission through a discussion of their theoretical underpinnings, arguing that there is a need for an economic approach that is able to engage with issues such as gender, power, and the influence of social structures. Following, under the mantra of ‘better mining of the social sciences’, the theoretical framework is developed, which takes a materialist view and seeks to understand how engaging in specific livelihoods that involve mobility influences sexual behaviour and HIV risk. The chapter concludes with a brief review of the theoretical literature on migration and mobility.

Chapter three reviews the epidemiology of HIV in the case study country, Tanzania, alongside a brief history of responses to the epidemic to provide the background to the research project. However, the main aim of this chapter is to review what are considered to be the primary structural drivers of HIV, and how these have been conceptualised and understood, with an application to Tanzania. Following a discussion around the roles of poverty and gender, the

literature on migration and mobility is then reviewed, with a focus on how this enhances risk behaviours, arguing that beyond the two main case studies of mineworkers and truck drivers, the role that mobility plays is not well understood for mobile groups that are less easily identifiable. In particular, a critical review of the literature on mobility and risk in the Tanzanian context enables the three main research questions, in combination with some critical insights from chapter two, to be fully developed and outlined.

Following, chapter four provides a brief historical overview of the Tanzanian context and also details of the study site, which is introduced at the end of chapter three. Chapter five outlines the research methodology used and also includes a number of reflections on the process, with chapters six, seven and eight presenting the themes and analysis of the data gathered during fieldwork, with each chapter dedicated to answering one of the three research questions. Finally, in the conclusion, some final comments are made on the main findings, their implications for HIV prevention, reflections on some of the limitations of the project and avenues for future research.

Chapter 2 – Conceptualising HIV risk

2.1 Introduction

This chapter builds on and develops in more detail some of the themes mentioned in the introduction and specifically the role of social theory and different ways in which behaviour and the dynamics of transmission have been conceptualised in the literature to date. The main objective is to critically assess these approaches and develop the theoretical framework that is used in this project. This is achieved in the following way. Firstly, the chapter focuses on approaches that are conceptualised at the level of the individual, and includes a brief review of the most prominent body of theoretical work applied to HIV which is rooted in psycho-social theory, and against which the materialist approach taken in this project is juxtaposed. However, it must be made clear that these theories are not to be dismissed, and despite some limitations, offer a range of important insights into human behaviour. This cannot be said for the economic approaches which are subsequently reviewed. These are predominantly articulated in the language of choice, and occupy a peculiar theoretical micro-structural space, in which models are conceived of as individualistic, but with behavioural decisions purely reflecting extra-individual structural and social stimuli. This dichotomy can also be observed in the application of individualistic micro-economic theory to interventions that seek to address structural issues, such as microfinance programmes and cash-conditional transfers. This review of individualistic approaches, which illustrates the way in which the social world is present in a limited form (Fine et al. 2009), concludes that structural influences on behaviour need to be accounted for in order to provide a more comprehensive understanding of transmission. Structural approaches developed in public health are then assessed in section 2.3. The review emphasises the need for more recourse to social theory within these approaches, and also highlights some of the challenges of linking structures and agents in a coherent manner, a theoretical issue that has been grappled with for centuries. Finally, drawing on the insights from this review, the political economy framework that underpins this project is developed.

2.2 Individualistic approaches

2.2.1 Psycho-social theory used in behaviour change

The most prominent set of theories of behaviour change applied to sexual behaviour and HIV (AIDSCAP Project 2002), including both theories that were initially formulated to examine

other health related phenomenon, such as the Health Belief Model (HBM) (Rosenstock 1966), and models designed specifically to address HIV, such as the AIDS Risk Reduction Model (ARRM) (Catania et al. 1990), originate from the field of social psychology. Whilst it is necessary to avoid over-simplification, broadly speaking these theories seek to develop a theoretical understanding of cognitive processes, with many of them sharing concepts or building on previous work. The HBM, one of the most widely used psychosocial models (Rosenstock et al. 1994), is a value-expectancy theory, which seeks to examine the factors that contribute to the likelihood that an individual will engage in preventative health-related behaviour. Initially designed to explain low participation rates in free Tuberculosis screening programmes in the US during the 1950's, the model evaluates preventative healthcare seeking action through an understanding of an individual's perceived susceptibility to the disease, perceived severity of the disease, perceived benefits of avoiding the disease, perceived barriers (to taking action), combined with cues to action, external factors that influence these perceptions, and beliefs about their capability to enact the necessary behavioural change (self-efficacy), a component added at a later date to address the issue of power. An alternative approach, the ARRM, shares some of the elements of the HBM, but incorporated into a process that investigates the three stages an individual must pass through on the way to changing their behaviour; labelling their actions as risky in terms of the potential for infection, committing to changing the risky behaviour, and the enactment of the strategies necessary to change behaviour. The commitment stage includes a (perceived) cost-benefit analysis similar to the HBM, though located within a more dynamic process. Other closely related models are variations on these themes. For example, the Transtheoretical Model identifies 6 stages that an individual must pass through in order to change behaviour (Precontemplation, Contemplation, Preparation, Action, Maintenance and Termination), the Theory of Reasoned Action sees behaviour as determined by a cognitive structure composed of underlying behavioural and normative beliefs, extended in the Theory of Planned Behaviour to include the perception of control over preventative behaviour (self-efficacy), and the Information-Motivation-Behavioural Skills model, which attempts to combine some of the factors and concepts used in other models into three linked categories to assess the requirements for behaviour change¹.

These models have been criticised from within their own discipline for being largely descriptive, with not enough attention paid to the mechanisms which move individuals through different cognitive stages, and often being comprised of a number of concepts and

¹ A full review of these theories is beyond scope here – details can be found in DiClemente, R. J. and J. L. Peterson, Eds. (1994) and Peterson, J. L. and R. J. DiClemente, Eds. (2000).

theoretical constructs that do not have clearly defined linkages or priorities (Fisher et al. 2000). Because of this lack of clear specification, they can be difficult to test empirically, and in cases when they have been, complaints have often been made that tests do not reflect the workings of the model as a whole, as they only test the statistical significance of concepts treated as isolated components, rather than accounting for the dynamic relationships between components (Rosenstock et al. 1994). As a result, 'no single model readily translates into a comprehensive intervention, although elements of each contain valuable suggestions for constructing components of a comprehensive intervention' (Fisher et al. 2000, p47). The general lack of coherence is also influenced by the introduction of new models to a field already characterised by 'disparity, overlap and a lack of unification' (Traube et al. 2011, p1), which in part may explain the difficulty this set of theories has in exerting influence over policymakers and intervention design.

Another important shortcoming is that all these models are conceptualised at the level of the individual and hence fail to address both the dyadic nature of HIV preventative behaviour (Fisher et al. 2000), and the influence of social structures on behaviour. The reduction of sexual behaviour to an isolated individual act, rather than a relation and interaction between two (or more) people, results in sexual behaviour being conceptualised in a similar way to a wide range of very divergent health-related issues, such as smoking, wearing a seat belt or going for a TB screening, that are more (if not entirely) individualistic (King 1999; Katz 2009). Of course, this doesn't mean to say that those behaviours do not involve more than one individual, but that they are not dependent on human relations – you can smoke a cigarette or put on a seat belt on your own, but you can't have sex (where you may be at risk of HIV infection) on your own – so that what remains is a set of models that attempt to address sexual behaviour but have a highly stylised and abstract notion of sexual behaviour, and arguably models in which sexual intercourse is largely missing.

Closely linked to this issue, not only are models highly individualistic, it is assumed that individuals are rational and are free to make rational behavioural decisions, along with the means to implement these decisions (Fisher et al. 2000), an assumption that is acknowledged as questionable (Fisher et al. 2000). Attempts to address this shortcoming within the HBM have resulted in the addition of the concept of self-efficacy to the list of perceptions that influence health-related behaviour, which is specifically designed to capture the influence of power over perceptions and behaviour (Bandura 1994; Raffaelli and Pranke 1995). The construct of self-efficacy addresses the beliefs about an individual's ability to carry out the known actions necessary for protection, recognising that individuals may not attempt to take preventative action if they do not think that they will be able to enact it. However, this is still

only conceived of as an external source of power exerting itself on an individual, rather than an imbalance of power that exists between two people (or two social groups), and crucially influences behaviour only through perceptions or beliefs. Whilst when applied to some health related behaviours it may enhance our understanding, for example the belief in ones' ability to successfully stop smoking, in the context of sexual behaviour the implications for the use of this construct are less clear, especially in relation to whether these perceptions or beliefs are modifiable and represent an inaccuracy or lack of something (for example confidence or information), as opposed to being rooted in everyday human experiences that would require broader concrete, and not just psychological, change. This reflects a tension between the 'real' world and the cognitive processes of the individual, with attempts to bridge this gap hampered by the underlying ontology on which these models are based. Further, the absence of this relational aspect and narrow individualistic conceptualisation, these models have been described as 'gender-blind', as they fail to address gender-based power differentials which have a strong influence over the degree to which women and men have power over sexual decisions, and hence possibilities for enacting preventative action (King 1999).

A further related implication is that these theories struggle to account for environmental and socio-economic/ socio-cultural factors that influence behaviour (AIDSCAP Project 2002; Traube et al. 2011). The need to account for contextual factors is explicitly acknowledged in the broader psycho-social literature on health, which views psychosocial factors as: '(1) mediating the effects of social structural factors on individual health outcomes, or (2) conditioned and modified by the social structures and contexts in which they exist' (Martikainen et al. 2002, p1091). This literature views psychosocial factors as operating at a meso-level, below macro-structural factors, but above the level of the individual, and offers a broader framework within which to frame the determinants of health (Martikainen et al. 2002). However, this has yet to permeate the models reviewed above, with the social incorporated in a limited manner through influencing cognitive processes through perceptions (Rosenstock et al. 1994), normative beliefs (Fishbein et al. 1994), or the degree of social support for positive behaviour change (Bandura 1994). This creates a degree of tension across the models, as they seek to find ways to account for the role that social or structural factors play, but find that, due to the predominantly individualistic approach, the avenues through which these influences may be articulated severely constrained. Recent theoretical developments within this specific strand of literature attempts to situate individual behaviour within dyadic relationships and broader social structures (Johnson et al. 2010; Karney et al. 2010), and represents an encouraging, if rare, critical development of theory that focuses on HIV-related sexual behaviour². An example

² See the Special Issue of AIDS Behaviour, Volume 14, Supplement 2, December 2010

of a dyadic framework is one in which the capacity of individuals to enact safer sex depends on a range of individual, structural, and relational factors, and can be applied to both long term and one-off partnerships (Karney et al. 2010). This development, amongst other things, further emphasises the need to incorporate the role of the social in shaping and influencing sexual behaviour.

2.2.2 Economics and HIV transmission

The economics literature addressing HIV in general is surprisingly sparse (Johnston 2011), and even more so when applied to the understanding of the dynamics of transmission. Two themes within the literature that does exist can be identified; work that attempts to model and understand sexual behaviour (Philipson et al. 1995; Schroeder et al. 2002; Gaffeo 2003; Luke 2006; Oster 2012); and some interventions that are designed on the basis of the application of economic theory such as microfinance and cash conditional transfers (Pronyk et al. 2005; Baird et al. 2009; Baird et al. 2012). To date, both strands of literature remain firmly rooted within a standard neoclassical economic framework, whether using the principles of demand and supply (Philipson et al. 1995), utility maximisation and consumer choice (Luke 2006; Baird et al. 2009; Duflo et al. 2012; Oster 2012), game theory (Schroeder et al. 2002) or a market failure framework (Gaffeo 2003; Pronyk et al. 2005). Whilst the theoretical underpinnings and assumptions of the standard neoclassical utility maximising framework and variants of it have been criticised on many grounds³, this section will not focus on a general technical exposition of the flaws of this framework, but the way that these models have been applied to the issue of HIV/AIDS and sexual behaviour, though there is inevitably some overlap.

Although the approaches referred to above tackle the subject from different angles, one commonality is the underlying methodological individualism that frames these economic models. This dictates that each approach is conceived of at the level of the individual, and more specifically an individual that makes behavioural decisions in a rational way. However, unlike the psycho-social models reviewed above, the notion of rationality is the central driving force of this approach, and when used in economics, takes on a more formalised and technical definition within the standard apparatus that defines this approach (Fine et al. 2009). Rationality in the economics models refers to individuals who make optimal behavioural decisions based on information about potential outcomes, bearing in mind their own preferences and tastes, and importantly these are choices that they are free to make.

³ For example see, Keen, S. (2007) and Fine, B. and D. Milonakis (2009).

Underpinning a number of different models is the concept of the ‘opportunity cost’, a principle which is prominent in the work of Philipson and Posner (1995) in which this is expressed as ‘the optimal investment in health human capital is lower the fewer periods in which a return to the investment can be expected’ (Philipson et al. 1995, p837). This captures the idea that individuals make a trade-off between health seeking behaviours, which are in general associated with short-term reductions in utility, bearing in mind how long they expect to live. When applied to the issue of HIV, this view suggests that those who are poorer (and expect to remain poor) and thus have low levels of lifetime income utility, or those who anticipate a low life-expectancy and thus place a lower value on long-term survival, will place a higher value on short term pleasure (in this case sex), and thus do not have the incentive to change their sexual behaviour.

A recent example of the application of this notion is the work of Oster (2012). In this behavioural model individuals maximise their lifetime utility over two ‘life-periods’ in a world with HIV:

$$U_{tot} = u(\sigma_1) + p(1 - \sigma_1 \gamma \beta h)u(\sigma_2)$$

Individuals gain utility only through the number of sexual partners they choose in period one (σ_1) and two (σ_2), and make an optimal choice over the number of partners to have sex with in period one, taking into account information about how the number of partners they choose to have might impact their probability of surviving into period two: the general rate of HIV (h), the transmission rate (β), and also their perceptions about the HIV rate (γ). In period two, the choice of partner is independent of the HIV rate, in which case, if an individual manages to survive beyond period one, in theory they can choose to have as many sexual partners as they want until the marginal utility of each additional partner is non-positive. On this basis, Oster (2012) anticipates that someone who is more likely to live longer has more of an incentive to reduce the number of partners they have in period one. This is tested for by estimating the relationship between levels of sexual behaviour and child mortality, malaria, and maternal mortality, variables used to represent non-HIV adult mortality.

Sexual behaviour is thus reduced to a trade-off between the lost utility of having less sex in period one, and the lost utility of dying prematurely and losing the opportunity of gaining utility through having of sex in period two. Whilst Oster (2012) does not explicitly refer to this trade-off in terms of an opportunity cost, it is clear that this is the underlying principle, as if an individual does not think they will survive into period two, it is ‘rational’ for them not to decrease the number of partners that they have in period one as the ‘cost’ of becoming

infected (lost utility in period two multiplied by the likelihood of survival) is lower. This model is a development of an earlier version in which Oster presents this trade-off in the light of both choices of the number of partners and expected income in both periods, which captured both poverty and non-HIV life expectancy effects (Oster 2007). The logic underpinning these two models is well illustrated by Oster's characterisation of deciding whether to have an additional sexual partner as similar to the trade-off involved in deciding whether to have 'a carrot or a cookie, a trip to the cinema or a trip to the gym' (Oster 2007). However, an alternative framework may in fact be based on the opposite framing of human behaviour, as those who have low life expectancy may place a higher value on the 'scare' years they have left, and thus seek to extend them by any means possible (Srinivasan 1994), so that the use and application of this concept is in fact highly subjective, rather than objective, view of rationality.

A closely related, and influential, approach is the behavioural model of Duflo et al (2012). This used data gathered from a long term randomised control trial that assessed the relative impact on sexual behaviour, teen pregnancy, schooling and HIV/HSV2 rates of three different interventions (Duflo et al. 2012). The behavioural model was developed based on insights from this study, and to better understand the mechanisms through which the competing incentives worked. Girls gain utility from unprotected sex and education, and make choices in relation to how much they invest in education, whether to have a casual or committed relationship, and how often to have unprotected sex in the light of HIV educational programmes, subsidised schooling, or a combination of both (Duflo et al. 2012). The model is explicit in that it does not account for rape, or indeed, by definition, any other form of sexual coercion, with the choices that girls make relating only to the different incentives that they are presented with. Further, there is no accounting for safe sex, with utility only derived from unprotected sex. Again, whilst this model is more complex and seeks to incorporate a number of different factors into the analysis, the underlying driver of this model is the notion of free choice.

This central building block and assumption that all individuals have the power to control their sexual interactions is highly questionable in settings where many individuals, and particularly women, have limited power over sexual decisions, ranging from difficulties in insisting on condom use within partnerships, the threat of domestic abuse, violence and rape, and other economic and non-economic forms of coercion (UNAIDS 1999; Gupta 2000; WHO 2004; Fuller 2008). This notion of choice is, therefore, unable to account for the role that gender and power play in shaping the nature and frequency of sexual interactions and the divergent abilities of individuals to influence these interactions (O'Laughlin 2006). Further, not only are considerations of power, or other social, economic and contextual factors that constrain or influence behavioural decisions in general obscured, the lens exerts a strong influence over the

interpretation and framing of empirical evidence. Statistically significant results are interpreted as evidence of individual agency. For example, Luke (2006), in a study on informal exchange and condom use, finds a market for safe sex, in which women, rather than being 'vulnerable victims', 'make conscious trade-offs between the risks and benefits of informal exchange relationships' (Luke 2006, p345). Whether this is a free choice and evidence of female agency or coercion in the form of desperation and low social status combined with a lack of alternative economic options constrained by local structures and social relations⁴ is an important issue that remains unaccounted for. Whilst this may appear to be an epistemological issue, these differences are more a result of the underlying methodologies and associated assumptions. If the issues of power and coercion are accepted as important, then the basis on which all these models are formulated is undermined.

Following, not only are many of these models formulated on the basis of incentives and trade-offs between competing ends, these decisions are made in isolation from the socio-economic and historical context. The behavioural models assume that all individuals make decisions in the same way across space and time. In some cases, history is acknowledged but assumed not to be important. For example, in a study conducted in an urban environment in Kenya to investigate whether there was a market for unsafe sex in sexual relationships that were not considered as commercial, Luke (2006) concludes by stating that: "Although my results indicate that a market for unsafe sexual activity exists in urban Kisumu, I am unable to determine if this market has always been present or if it emerged in response to perceived risk in this high HIV/AIDS environment. The practice of trading money for sex may be a historical occurrence in Kisumu. However, given the relatively recent onset of the HIV/ AIDS epidemic, I conjecture that the market for risky sexual behaviour is a new phenomenon" (Luke 2006, p344). In this case, ignoring the historical background enables these sexual interactions to be framed in relation to the element of exchange rather than other norms, customs or gendered power that are historically produced.

A second important implication is that these approaches suggest that as a result of freely choosing to not engage in preventative action nor to reduce the number of sexual partners, individuals therefore choose to put themselves at risk of infection and that this HIV infection or exposure to the risk of infection is in some sense 'optimal' (Johnston 2013). For example, in the market for safe sex described by Philipson and Posner, an equilibrium market solution to this problem involves an optimal level of risk behaviour. In this case different actors react to changes in the price (and cost) of risky sex, with poor sex workers rationally lowering their

⁴ This is an example – in practice the use of this dichotomy is limited, though the mainstream economic models have little to say about these opposing positions

prices (for risky sex) in an attempt to maintain demand for their services from wealth(ier) men, whose cost for risky sex has increased. This optimality theme is also found in the market failure framework (Gaffeo 2003), in which a man has a relationship with both his wife and a long-term extra martial partner. The market failure is one of asymmetrical information, as the wife is unable to know whether her husband uses condoms with his extra-marital partner even if he agrees to, a situation that can be resolved by the husband giving a side payment to his wife which would compensate her for accepting a certain level of risk. Part of the attraction of these economic approaches is they may be able to shed some light on the reasons why some HIV related risk behaviour continues, despite increasing education and awareness among vulnerable populations, and also that they challenge simplistic 'victim' narratives (Luke 2006). However, it is unclear to what extent an 'optimal' or 'equilibrium' level of HIV is a useful concept when trying to understand the dynamics of the epidemic, and indeed in what sense the human cost of HIV infection can ever be thought of as 'optimal'.

Other conceptual weaknesses of these models include that they often only enable a partial analysis, and rely on a large number of assumptions. In the cases of both Oster and Duflo, there is no condom use, with individuals choosing between 'unprotected sex' and no sex at all'. As with Oster's view of equating having sex or not like choosing between a carrot and a cookie, it is always implied that any preventative measure must equate to lost utility. Whilst some studies report that men experience reduced pleasure when they use condoms (Agha et al. 2002), it is unclear if this can also be applied universally to women, and perhaps framing it in this way serves to perpetuate this notion. In the case of Gaffeo, condom use is central, with primary importance given to finding a market solution in which all parties are satisfied, but this is done without addressing what drives multiple concurrent partnerships. In other cases, such as the use of cash conditional transfers (Baird et al. 2009; Baird et al. 2012) or microfinance (Pronyk et al. 2005), these interventions do not have a clearly defined behavioural model, but succeed or fail on whether they 'work', in part influenced by the increasingly influential 'experimental approach' to economics (Banerjee et al. 2008). Additionally, the underlying statistical methodology controls for demographic characteristics with the aim of isolating the statistical significance on the coefficients of the explanatory variables, rather than allowing for these differences to flourish.

Alongside some of the theoretical weaknesses of these mainstream approaches, there are some empirical issues that also call into question their applicability. For example, Oster's model takes at face value the self-reported data on sexual behaviour (Johnston 2013), data that is generally acknowledged as highly unreliable and often gender biased (Nnko et al. 2004), rather than using it with caution (Curtis et al. 2004) or in triangulation with other available

data, in this case HIV prevalence rates. Consequently, the statistical findings are likely to be influenced by other factors. For example, self-reported data in sexual behaviour may not be consistent across the population sample, particularly when considering the responses wealthier individuals who may report lower levels of sexual activity, based on a greater ability to know and give more socially and morally acceptable answers to behavioural questions. If wealth is a factor, then returning to Oster's results, might the statistical links made between lower levels of sexual behaviour and non-HIV life expectancy in fact merely reflect that wealthier people systematically report less sexual activity, whilst at the same time being more likely to live longer? Whilst the statistical method used controls for the influence of wealth on the estimated relationships, it cannot capture the role of wealth in the formulation of the data itself.

The work of Duflo (2012) acknowledges that the statistical results 'apply to a particular type of HIV education program in a particular context (Duflo et al 2012, p31), and also emphasises that the findings would be different if the educational HIV programme would have focused on condom use, rather than abstinence, suggesting that there are limits to which the findings from this project can be generalised, or indeed applied to any other context. Other empirical data also suggests that there are flaws in the general poverty related narrative forwarded by Philipson and Posner as national HIV prevalence rates show that the correlation between HIV prevalence and wealth is ambiguous, if not in a number of cases displaying increasing prevalence with increasing wealth (Wojcicki 2005; Bujra 2006; Mishra et al. 2007; Parkhurst 2010). In some cases prevalence seems to be decreasing more rapidly in the wealthier quintiles, though the evidence is sparse and inconclusive at this point. However, even if reductions are observed, it is unclear whether this reflects positive behaviour change in the wealthier classes or merely the increasing impoverishment of those already infected. Therefore, it is questionable to what extent these economic approaches are related to epidemiological data and 'knowing your epidemic' (Wilson et al. 2008), and indeed the degree to which economic approaches are able to acknowledge and account for the fact that wealth and poverty will influence risk in different ways across different contexts (Parkhurst 2010; Parkhurst 2012). Other economic models discussed in this section have even less to say empirically, either limited to technical expositions only (Gaffeo 2003) or consisting of simulations from which empirically testable propositions are derived (Schroeder et al. 2002) but that remain unexamined.

A final important theme which is central to this project is the tension between the individual and social and structural influences on behaviour that can be identified to some extent in all these economic approaches. Whilst behaviour is framed in an abstract, ahistorical and

individualistic manner, and not directly influenced by factors such as gender relations and power, all attempt to engage with structural and social issues in a variety of ways. For example, Oster (2012) addresses the role of wealth infant-mortality, malaria and life expectancy, which are central developmental concerns, whilst Philipson and Posner (1995) investigate the role of poverty in transmission. The potentially preventative role of cash conditional transfers or education subsidies reflect broader concerns in the literature over the difficulties that many girls face in staying in education and the negative consequences this may have if they have to drop out early (Baird et al. 2012; Duflo et al. 2012), whilst microfinance programmes acknowledge that the degree of control women have over their sexual interactions is influenced by unequal gendered power relations that are, in part, rooted in unequal economic relations (Pronyk et al. 2005).

This gives rise to an number of inconsistencies. In relation to cash conditional transfers and education subsidies, the framing of this issue in terms of incentives and choice represents a tinkering at the margins and an acceptance of the status quo, with the social and historical bases of this issues remaining largely unchallenged (Reddy 2013). Other approaches, such as Oster (2007 and 2012), direct attention to the broader environment, with behaviour purely reflecting external stimuli. The result is a peculiar deterministic micro-structural model that has potential policy prescriptions that are outside of the behavioural model, and only reflect changes to the external environment, a model that has parallels with the structural sociological literature in which agents purely reflect the properties of the social system (Craib 1992). Other policy prescriptions include a solution to the market failure problem by suggesting that the state should help to 'facilitate the emergence of social norms aimed, for instance, at reducing male psychological resistance to condom use' (Gaffeo 2003, p31), a surprising conclusion given the complete absence of norms in the original model. Finally, there is a tension between the units of analysis. In the case of microfinance, the solution to the unequal power relations that exist between men and women as social groups is challenged through isolated individual action that attempts to empower individual women, without addressing the underlying structural factors that shape these relations, and thus enables unequal power relations to be narrowly conceptualised (Fine et al. 2009). As with the psycho-social approaches above, the role of the social and structural influences is thus explicitly accepted, but can only be incorporated in these analyses, in a limited way (Fine and Milonakis 2009).

In conclusion, this review of the application of neoclassical economics to the issue of HIV, both in terms of the way behaviour is modelled and how theory underpins interventions, illustrates that these approaches are based on highly individualistic and stylised views of behaviour, a

narrow range of economic theory that in general is centred on the principle of choice and the language of the market, a partial focus on isolated elements of sexual behaviour, and a tension with both the empirical realities of the epidemic and social/structural factors that influence the nature of sexual interactions. In particular, issues such as gender, power and class are purged from the analysis (Fine et al. 2009), with individuals treated as both homogenous and often in isolation from other individuals. These limitations reflect some of the weaknesses of other individualistic HIV related theory reviewed above, and highlight the need for an economic approach that is able to incorporate the influences of social structures, contexts and processes to enable a more complex and nuanced understanding of sexual behaviour and the dynamics of HIV transmission, something that mainstream economic theory is simply ill-equipped to do. What is known as 'economics' has, however, become increasingly narrowly defined and associated with a standard mathematical apparatus, rather than a discipline that, as in the classical political economy tradition, was more closely linked with sociology, politics and philosophy (Fine et al. 2009). Therefore, to enable the development of an appropriate economic framework, it is necessary to go beyond the standard economic literature, and also to take inspiration from other theoretical sources, such as the sociological literature that addresses the issue of the relationship between structures and agents.

2.3 Structural Approaches

Although individualistic approaches to HIV prevention have dominated the policy and academic arena, it has long been acknowledged that context and social structures have a role to play in influencing and shaping the dynamics of the epidemic (Sweat et al. 1995). More recent observations note that 'it has become clear that the development, uptake, and effectiveness of the biomedical and behavioural strategies for HIV Prevention that have dominated the intervention arena are very much affected by social and cultural contexts' (Auerbach et al. 2010, p1). This reflects the growing emphasis on understanding what have been termed as either structural drivers, social drivers or structural determinants of the epidemic and the design of structural interventions (Des Jarlais 2000; Parker et al. 2000; Sumartojo 2000; Gupta et al. 2008; Evans et al. 2010; Kippax 2010; Auerbach et al. 2011), alongside increasing international recognition of the importance of structural issues (UNAIDS 2010) and investment in new research (DFID 2011). However, despite this recognition, a number of issues have limited the incorporation of structural policies into standard mainstream prevention programmes. This include the relatively small evidence base from which policy makers can draw (Auerbach et al. 2011), perceived and real barriers to the

operationalisation of structural programmes (Hunsmann 2012), and the complex and interrelated nature of structures, social processes and social systems (Auerbach et al. 2011).

Structural approaches have been broadly defined as ‘physical, social, cultural, organisational, community, economic, legal, or policy aspects of the environment that impede or facilitate efforts to avoid HIV infection’ (Sumartojo et al. 2000, s1), although it has been noted that it is difficult to give a precise definition (Auerbach et al. 2011), with the generic terms ‘structural’ and ‘social’ used interchangeably with drivers, determinants or factors⁵. Alongside this, there is an ever-growing list of pre-defined structural drivers, such as poverty, income inequality, gender inequality, social capital, human rights, economic opportunity, governance, religion, urbanisation, mobility and migration (Barnett et al. 2000; Gupta et al. 2008; aids2031 Social Drivers Working Group 2010), which all operate in different ways in specific social contexts as opposed to being applicable universally, and which themselves may be causally linked with each other (Parkhurst 2012). A more nuanced definition sees structural drivers being understood as ‘core social processes and arrangements - reflective of social and cultural norms, values, networks, structures and institutions - that operate around and in concert with individuals’ behaviours and practices to influence HIV epidemics in particular settings’ (Auerbach et al. 2011, p2). This is a more useful term as it makes clear distinctions between structures, systems and social processes, rather than referring to a more general and abstract notion of context, and importantly locates the dynamics of the epidemic in the way that the broader social system operates (O’Laughlin 2013). In practice, almost anything that is in some way related to context and is conceptualised beyond the level of the individual can be thought of as structural⁶, enabling a plurality of approaches to coexist (Evans et al. 2010), so that what becomes more important is the way that the terms are utilised. Examples of structural interventions include the 100% condom program in Thailand (Rojanapithayakorn et al. 1996) or community interventions to address specific populations such as sex workers or miners (Campbell 2003; Evans et al. 2010).

Underpinning this conceptualisation of the structural influences on sexual behaviour is a large body of theoretical literature that addresses the question of the relationship between structures and agents (for example see Levi-Strauss 1963; Giddens 1979; Lukes 1982; Craib 1992; Foucault 2002; Callinicos 2004; Bourdieu 2005), a debate that has been termed *the* central problem of social theory (Giddens 1979). This on-going historical debate, which inevitably remains largely unresolved, seeks to address and identify the mechanisms through

⁵ The author will use the term structural as opposed to social in this thesis

⁶ An attempt to summarise and discuss competing definitions is beyond scope here, and will be addressed indirectly in the discussion that follows.

which structures influence and shape behaviour, and contains many divergent and competing views. Following Craib (1992), these theories range from models that can be thought of as social action models, in which the agent is still central to the analysis, to those in which social structures are conceived of as separate from and existing independently of individual behaviour, and overall represent a juxtaposition to the approach of methodological individualism which views behaviour as purely agent based. However, in part due to the complexity of the models, which do not always lend themselves easily to direct application to the issue of HIV and also require interest in and engagement with a broad range of disciplines, it is not always clear to what extent different programmes are based on specific theories. Rather, what currently exists seems to be a loosely shared understanding of the importance of structures. As a result, illuminating the role of theory in the development of structural research programmes and design of interventions is not always straightforward.

Unsurprisingly, the pre-existence of a theoretical literature from which insights, concepts or even complete theories which can be transferred, applied and modified for use in the study of HIV transmission has, in contrast to the psychosocial approaches discussed above, limited the development of new structural theories designed specifically to address HIV. One early attempt to do so, the Jaipur Paradigm (Barnett et al. 2000), viewed the level of HIV prevalence as shaped by the interplay between the degree of social cohesion and wealth in a country, with susceptibility and vulnerability to HIV infection decreasing as wealth and social cohesion increase. However, increasingly structural approaches have moved away from this style of macro-explanations, which attempt to impose a one-size-fits-all model and set of concepts on often very divergent societies, towards an understanding that structures will not always influence behaviour in the same way across different contexts (Parkhurst 2012).

Alongside this, the explicit articulation of social theories applied to HIV is rare. Within the literature, two main theories that have been directly applied to HIV can be identified, namely Diffusion Theory (Dearing et al. 1994) and Social Movement Theory (Friedman et al. 1994). Diffusion theory examines the process by which new innovations are communicated through social networks and systems, and has been applied to a range of issues including the diffusion of new agricultural products and across a number of disciplines such as international development, public health, marketing and anthropology (Dearing, Meyer et al. 1994). The theory stresses the role of change agents and opinion leaders in this process, along with the compatibility of the innovation with the social system (Dearing et al. 1994), and thus may be best placed to the study the success (or not) of specific interventions, rather than providing an underlying explanation or theory of how structures influence initial behaviours. Social Movement Theory also looks at the process of behaviour change, but in terms of locating the

role of the collective action and the mobilisation of local populations, and the potential structural barriers and opposition to change that may be encountered, be this from specific groups, or institutional, legal, social or political, (Friedman et al. 1994; Friedman et al. 2002). This approach has been exemplified in the study of intravenous drug users in the US (Friedman et al. 2002) , but due to its inherently political nature, and specifically the challenging of the power of those that are in opposition to the adoption of preventative behaviours, which in the sub-Saharan African context often means local political leaders, religious groups, and more broadly men (Friedman et al. 1994; Friedman et al. 2002; Harman 2011), and the bottom up approach to social transformation that is central to the process of change, this theory does not lend itself easily to the top-down approaches of international donors or and global health organisations (that may be part of the problem). More recently, the concept of AIDS resilience (aids2031 Social Drivers Working Group 2010), which is the capability of an individual to avoid HIV infection, and is influenced by the AIDS competence of the community and a range of contextual factors, has been developed on the basis of Sen's (1999) capability approach (Parkhurst 2012). This is a rare but welcome theoretical development and extension of existing social theory.

Beyond these examples, it is often unclear precisely which theory has provided the inspiration for a particular approach. Few structural approaches or interventions clearly state the theory from which they are drawing, and so it is rare to see a theoretical discussion that states the strengths, weaknesses and assumptions of the theory used. More commonly, general concepts and insights from the social sciences, such as norms, values or power relations, which appear to have accepted meanings, are borrowed, transferred or applied. Whilst this may appear a neutral and objective approach, it is important to note that these terms are not universal in definition, construction or role, and so this is not necessarily unproblematic. This obscures the theoretical sources from which concepts or ideas are drawn and their origins and competing forms, eliminating the discussion of limitations and assumptions that accompany them, and hence to some extent perpetuating a field in which structures are not always rigorously conceptualised. For example, the manner in which social norms and the role that norms play in society are conceptualised is widely divergent in different sociological theories. In some sociological theories, such as structural functionalism, that have been termed 'consensus theories', norms are shared values that enable the smooth running of the social system (Ritzer 2011). In contrast, 'conflict theorists' such as Marx view norms as playing a controlling role in the workings of a social system that is dominated by certain social groups, and as such these norms ultimately reflect the interests of the dominant class (Ritzer 2011). This emphasises the importance of authors explicitly acknowledging the theoretical work from which they draw.

The different ways in which these concepts are employed will, therefore, have repercussions for the way that structures are either conceptualised or challenged, and so this is not purely a theoretical question. This can have the effect of de-politicising the debate, to a certain extent glossing over the conflict that is inherent in competing ways of thinking about the nature of the social system. Other commonly cited issues, such as unequal gender relations, are also for this reason not always rigorously conceptualised. In many cases, the general acceptance of unequal gender relations as a 'fact' forms the basis from which structural interventions then seek to address this power. However, few analyses attempt to uncover the historical underpinnings of gender relations, and are often overly simplistic in the way that gender relations are characterised as antagonistic relationships between men and women, in which women are prevented by men from engaging in preventative sexual behaviour, and where the mutual interests of men and women remain excluded or unaddressed (Baylies 2000; O'Laughlin 2007; O'Laughlin 2008).

Closely linked to this, these assumptions appear in the mechanisms through which structural factors are thought to influence behaviour. The result is often overly deterministic and simplistic narratives, rather than theory that can be transferred to and help explain different contexts. The case of the poverty narrative is illustrative here, widely thought of as one of the main explanatory factors for the high levels of HIV in sub-Saharan Africa (Poku 2001; Masanjala 2007), but which in the light of the epidemiological data, appears overly deterministic and unable to capture the different ways in which wealth influences sexual behaviour and ultimately serostatus (White 2003; Gillespie et al. 2007). Clearly poverty will, in some circumstances, contribute to the enhanced risk that some individuals face, but this will operate in different ways across contexts. However, these overarching narratives find themselves at the other end of the theoretical spectrum, and present another challenge to those seeking to address structures and behaviour, as the behaviour of agents has become almost entirely determined by external social structures.

Theory also enters structural approaches as already embedded in pre-designed policies or interventions that are transferred and adapted for application to HIV prevention efforts, such as microfinance and conditional cash transfers (Pronyk et al. 2005; Pronyk et al. 2007; Baird et al. 2009; World Bank 2010), and which aim to address issues that are thought of as structural, in this case unequal gender relations and poverty. Whilst innovative approaches are in general to be welcomed, the borrowing of fashionable policies from development economics without a clear theoretical model has a number of implications which avoid consideration (Pronyk et al. 2005). Often, these policies are borrowed unquestioningly, with little examination of how they were originally formulated, and their applicability to the purpose in mind. This is in part due to

the practice of carrying out feasibility studies in an experimentation format to assess the potential for an intervention to 'work', which relegates theory to the back seat, with experimentation and empirics to the fore (Baird et al. 2009). However, when subjected to close scrutiny, these interventions incorporate a great deal of theory, which largely remain unaddressed. The most prominent examples of this are microfinance (Pronyk et al. 2005) and conditional cash transfers (Baird et al. 2009; Baird et al. 2012), the origins of which are rooted in mainstream economic theory, and more specifically the market failure framework, which highlights imperfections in the credit market which deny the poor access to finance that prevents beneficial economic activity take place, be that taking advantage of a business opportunity or longer term investment in education (Morduch 1999; Fiszbein et al. 2009). Additionally, this framework also incorporates a highly stylised view of inter-household relations, which are characterised as necessarily antagonistic (O'Laughlin 2007) and in which the behavioural preferences of men and women are in direct contradiction. When the evidence, which shows that the positive role that targeted microfinance can play in increasing female economic empowerment is by no means universally accepted (Goetz et al. 1996; Mayoux 2001; Bateman et al. 2012), it seems more of a leap of faith to suggest that giving women the chance of gaining some economic independence will translate into increased power over sexual relations. Thus, when subjected to scrutiny, and without careful consideration of the theoretical underpinnings, interventions such as microfinance that aim to challenge structures are essentially individualistic theory that has maintained a foothold or has been repackaged as 'structural' (Evans et al. 2010). More importantly, these theoretical origins remain unacknowledged and to a great extent enter the analysis through the back door.

Lastly, there are an increasing array of frameworks and diagrams that seek to formalise often uni-directional influences of contextual factors on behaviour, or provide endless reorganisation of the different layers of analysis that need to be considered (Blankenship et al. 2000; Boerma et al. 2005; Barnett et al. 2006; Karney et al. 2010), and that can be understood as a way of avoiding the use of theory, though this is not always the case (Glass et al. 2006; aids2031 Social Drivers Working Group 2010). It is unclear to what extent these represent theory as opposed to an exercise in mind-mapping interactions between a range of different levels of analysis, appearing as an attempt to capture every possible factor that may influence transmission in one place. Whilst this is not necessarily a bad thing in itself, there is a danger that this form of schema is then used in lieu of theory, and that these linear models fail to capture dynamic interactions between factors that operate at different levels.

This brief review highlights the need for a more rigorous and explicit use of theory when considering the role of social structures in HIV prevention to avoid some of the potential pitfalls discussed above, and to ensure that the assumptions and interpretations of the author are openly articulated. Additionally, it is hoped that this approach will enable a more rigorous conceptualisation of structures and their relationship with agents. Lastly, it has been noted, ‘a better development and mining of the basic social science ... Should underlie structural intervention design’ (Auerbach et al. 2010, p1): this thesis will attempt to do just that. However, whilst this section has attempted to engage critically with the literature on structural drivers, it must be made clear that, in the light of the limitations of the psychosocial literature discussed above, and the economic literature discussed in the next section, ensuring that future research and prevention efforts account for the role of social structures is paramount, and has, arguably been the missing link to date. This critical engagement is, therefore, an attempt to suggest some avenues through which future structural research and interventions may be enhanced and improved.

2.5 “Better mining of the social sciences”

Drawing on some of the themes developed in the preceding sections, it has been argued that the psychosocial and mainstream economic approaches are predominantly highly individualistic, and based, to varying degrees, on the assumption that individuals behave rationally. Whilst they acknowledge and attempt to address and account for the role of social structures in shaping behaviour, they do so in limited ways, with the unit of analysis (the individual) precluding anything but a limited incorporation. Structural approaches acknowledge that social factors influence both individual behaviour and the dynamics of transmission, and whilst this growing body of literature has succeeded in making the case for the incorporation of structural drivers onto the global agenda (Hankins et al. 2010; UNAIDS 2010), they are not always well conceptualised. This is acknowledged by those working within this tradition, and so this project will attempt to contribute to the mining of social science.

In this section, the theoretical approach used in this project will be outlined. It is comprised of two closely related elements, the first being some critical insights from the sociological literature that addresses the relationship between structures and agents in explaining human action (Craib 1992). Whilst the author will not be able to reconcile this debate that has raged for a century or more, this is an important starting point. This literature encompasses a broad range of approaches and theories which are difficult to summarise concisely. However, for the purposes here, a review and appraisal of all competing analyses is not necessary. Rather, the

focus is on gaining some insights that are compatible with an alternative economic approach to the neoclassical framework reviewed above. Reviewing a range of different theories, Craib (1992) argues that social theory fragments, as attempts to formulate an all-encompassing view of society that incorporates both agents and structures, when subjected to close scrutiny collapse back to either a theory of agency or structures. In this way he characterises the Structuration theory of Giddens and the functionalist theory of Parsons as social action models in which the agent is still given primacy, in contrast to Structuralist models, such as Althusser's interpretation of Marx and other currents of Structuralism which can be more broadly thought of as predominantly oriented towards structures, with little if any room for the role of agents. As such, he remains unconvinced that any theory offers a coherent account of both, arguing that agents and structures are markedly different entities, and thus may require different forms of theory and levels of analysis (Craib 1992). This is a compelling view, and perhaps explains some of the difficulties that structural approaches have in terms of incorporating theoretical insights without resulting in overly deterministic accounts of the progression of the epidemic. It also reminds us to keep in mind both levels of analysis, and that by focusing on one element alone will only enable a partial analysis.

One attempt to provide a rejoinder to this is neatly summarised in the writing of Marx:

'Men make their own history, but they do not make it as they please: they do not make it under self-selected circumstances, but under circumstances existing already, given and transmitted from the past' (Marx 1852, p1)

This view, which attempts to incorporate an explicit role for both agents and structures, is not uncontested, with Althusser famously arguing that this 'humanist' view can be attributed to the early Marx, but was then superseded by the mature Marx whose focus was on the scientific properties of the capitalist system (Craib 1992). However, it draws attention to both agency, though more specifically collective (men) rather than individual (man), and context, in the form of 'circumstances that exist already. A more recent formulation of the relationship between structures and agents that builds on Marx's conceptualisation is worth quoting in full:

'Action always takes place within structures of relations, rules, roles and classes. But structures are not agents in the way some functionalists and holists seem to believe. They do have powers of a conditioning kind, which set parameters for the exercising of human agential action, but they do not cause themselves to change. This means that humans are not pure agents because their powers are limited and constrained both internally and externally, and it also means that individual and collective action is the fundamental agent of history. This

methodological structurism is not reductionist, holding that explanations of mechanisms have to be given on both the micro and macro levels' (Lloyd 1986) in Fine et al. 2009)

This methodological structurism highlights the importance of incorporating both structures and agents in the analysis, and that the two are intimately related. In fact, as structures do not change by themselves, human agency cannot be ignored. As dominant and overwhelming as some structures may appear, at the same time, they are both socially produced, but reflect back on and condition future behaviour. Additionally, and this will be attempted in this analysis, 'explanations have to be given on both the micro and macro levels', as, if structures and agents are linked, the two must be coherent with each other, rather than appearing in opposition or viewed as a micro-macro paradox (Johnston 2008). This in itself suggests that we cannot ascribe an overly deterministic role to structures, as they will both enable and constrain behaviour, and will also be challenged and shaped by agential action. This central dynamic, of men making history, also suggests that, although structures may appear permanent, they are not, and need to be understood within a dynamic and changing social system. In stark contrast to the static and optimising mainstream economic approaches, social structures must be conceived of in the light of this dynamic and changing social system, a system that is in flux, rather than equilibrium.

This broad view of the relationship between structures and agents is well suited to use within a political economy approach, explicit as it is that 'actions take place within structures of relations, rules, roles and classes', and more specifically a political economy approach that is rooted in the social relations of production and reproduction (Marx 1976; Fine et al. 2004; Bernstein 2010). This is the second element that this project draws upon. This political economy approach has been chosen as it is one of the few examples of economic theories that attempts to locate human action within the workings of the social system, and is consistent with the insights developed from the broader sociological literature. It is an approach that is in stark contrast to neoclassical economic theory, with the unit of analysis not strictly limited to the individual, and importantly a theory that attempts to assess the social world in a relational sense, a world in which individuals interact with each other.

Perhaps the most important element of the political economy approach is the primacy given to the economic system and its role in shaping the social system in general (Lenin 1913), with other social and political spheres built on the economic superstructure. At the centre of human society, as with other species in the natural world, is the constant need to survive, both in the everyday sense, and also in the reproductive sense as a species (Marx 2007). The main thing that separates man from the natural world is the dynamically changing way in which man as a

species produces the material things needed for survival, and as such man is defined by the manner in which this production is organised. Therefore, the specific social relations of production and reproduction that exist at any one point in time are a central to understanding the social system and how is it structured. Simply put, how we survive, and the way that we do so, has a strong influence on the way that society is organised. Bernstein (2010) neatly summarises four key questions which help to define precisely what a political economy approach, and which help to give shape to the social character of production, which are 'who owns what?', 'who does what?', 'who gets what?', and 'what do they do with it?' (Bernstein 2010, p22). In contrast to the psychosocial models reviewed above, this is a materialist view of history and of human social action. When applied to the study here, social and systemic forces, norms, rules and roles that influence the circumstances and context within which sexual behaviour takes place will be rooted in these relations of production and reproduction. The relations of production refer to the way in which societies produce the material means for survival, and the totality of relationships and interdependencies within that process, whilst reproduction refers to the reproduction of man and also the social system (Fine et al. 2004; Bernstein 2010). When thinking about individual behaviour and the role of context in this sense, attention is drawn to understanding how the economic processes that individuals engage in influences their behaviour, and how these processes are located in the workings of the broader social system. This is a materialist view, in contrast to the psycho-social approaches discussed above, though within psycho-social frameworks that engage with social determinants, it is made clear that there is interaction between psycho social processes and the material conditions of existence (WHO 2010). Following this underpinning, each mode of production, that is the distinct but concrete ways in which production and reproduction are organised, give rise to different class dynamics and relations. Class is defined as one's relation to the means of production, and will have strong implications for the social organisation, and the expression of competing interests within the social system. Therefore, the system, unlike other holistic expressions, is characterised by conflict and competing interests, with power expressed as class power.

Secondly, it is vital to locate these social relations of production and reproduction in a historical context. Returning to the quote presented above, this suggests that structures appear as 'circumstances ... given and transmitted from the past', stressing that structures of relations, roles, rules and class need to be understood in a historical perspective, and that they also have historical roots. This perhaps obvious statement is not always acknowledged or accounted for in structural approaches, which can often appear ahistoric. The example of unequal gender relations is relevant here, an imbalance of power that rarely, if ever, addresses

the historical underpinnings beyond some vague conception of this being cultural, traditional, or even backward. This also gives more meaning to what may be broadly be termed context, and the importance of the historical context, rather than context in a static, immediate sense.

2.5 Migration theory

For the purposes of the main subject of this thesis, migration and population mobility, better mining of the social sciences also involves a review of the theoretical literature on migration and mobility. Whilst a comprehensive review is beyond scope here⁷, a brief overview of some of the main theories and approaches draws attention to a number of insights that are incorporated into the research approach, fieldwork design, and interpretation and framing of the results. It also enables some of the arguments developed in this chapter around the differing roles of structures and agents, to be examined using a concrete example, as migration and mobility are conceptualised on many competing levels of analysis. It must be noted that in general, most of the theories focus on explaining international, rather than internal migration, which is in general less well theorised. However, theories of international migration offer a number of important insights that are equally as applicable to internal migration.

Some influential economic theories, such as the Todaro-Harris model, attempt to explain migration on an individualistic basis, with migration reduced to decision based on spatial differences in income (and later expected income) levels (Todaro 1969). This approach captures in a limited way the rationale for economic advancement that is undoubtedly part of the process of migration. However, it is unable to account for the many different places that migrants from the same area go, nor can it be used as a predictive model when multiple potential destinations are considered. Further, the narrow conceptualisation of migration as an individual decision fails to engage with the structural factors that shape the spatial differences which are acknowledged to stimulate migration, but remain outside of the model. Importantly, it is unable to explain who moves, and isolates the migratory decision from intra-household relations, a criticism illuminated and developed in the New Economics of Labour Migration (Stark et al. 1985), which situates migration as a household decision to overcome risk, diversify income, or to accumulate capital, rather than purely an individual decision. This gives the migratory decision a little more context, though it is still limited in terms of explaining where people actually go (Boyd 1989), and primarily couched in the language of optimal decision making, with the household reduced to an individual decision-making unit. However, whilst there are limitations with these approaches, which enable only a limited picture of the

⁷ A full review can be found in Massey et al (1993)

migratory process, insights from these theories suggest that, if one is attempting an analysis that addresses both agents and structures (Massey et al. 1993), that understanding the reasons why individuals say they move, and how these decisions are made are important questions to ask.

A more common conceptual approach is to think about migration in terms of push and pull factors, with push factors capturing elements of the sending area that are forcing the potential migrant to leave, and pull factors the characteristics of the receiving area that attract the migrant (Zolberg 1989). As Zolberg (1989) argues, this enables a 'shift from a view of "ordinary" international migration as the aggregate movements of individuals in response to differential opportunities, to a view of this process as a movement of workers propelled by the dynamics of the transnational capitalist economy, which simultaneously determine both the "push" and the "pull"' (Zolberg 1989, p406). Whilst this lays the groundwork for the development of theories that engage with migration at the structural or systemic level, it also highlights the need to understand the nature of the contexts which migrants move between, which will help illuminate migrants go to the places they do. These factors are important to consider, particularly when attempting to understand the role of context in shaping migration, mobility and risk, and will be incorporated into the study design.

A number of theories exist that seek to explain migration at a macro level. Migration Systems Theory (Fawcett 1989) argues that migration and mobility need to be considered as a system, emphasising the connections and linkages between places, stressing the importance of understanding both mobility and stability and, as with the push/pull factors approach, ensuring that each end of the migratory process is accounted for. It also highlights the need to 'examine one flow in the context of other flows' (Fawcett 1989, 672), particularly pertinent when applied to the interlinking flows of mobile sex workers and truck drivers/mineworkers, and the systemic imbalances that create the dynamic energy within the system. The systemic imbalance theme is apparent in other theories, such as neoclassical equilibrium theory, which models movement of workers as reactions to 'imbalances in the spatial distribution of land, labour, capital and natural resources' (Wood 1982, 300), though mobility is seen as an equilibrating force, rather than the more dynamic view of mobility in Migration Systems theory in which changes in the system will be followed by further changes in other parts of the system. Closely related to Migration Systems Theory is the notion that migration is strongly influenced by community, kinship and family networks (Boyd 1989). These spatial networks can make it easier for a migrant to gain knowledge about opportunities elsewhere, reduce transition costs, provide a stable and known environment within which to move, and ultimately are useful in explaining the destinations of migrants. They can help explain how,

once established, flows of people can become self-sustaining. In this sense, Boyd argues that migration is a social product (Boyd, 1989), rather than an individual or household decision. This theory suggests that understanding the role of these networks is also an important element of mapping migratory flows.

Migration is also theorised as shaped by the penetration of capitalism, and the advancement of capitalist economic and political institutions (Portes 1978; Portes et al. 1989). This approach emphasises the historical development of productive forces and market relations in the creation of systemic imbalances shaped by patterns of deepening capitalist production and accumulation. These systemic imbalances are given a more politicised nature than in the migrations as a systems theory, with imbalances not arbitrarily or naturally occurring, but as part of a productive system with clearly specified relations of production, and in which processes of development are combined and uneven (Johnston 2012). Therefore, the system is not viewed as equilibrating, but in a constant state of flux. This insight provides the backdrop to this study, which attempts to locate the analysis within the dynamics of the broader economic system, a system in which capitalist relations are dominant and deepening.

This brief review has highlighted some key themes that will be utilised in the study. Whilst it is acknowledged that there are many other theoretical contributions that have not been covered, this review has illustrated a number of competing ways and levels of analysis in which migration can be understood. Although all theories have strengths and weaknesses (some more than others), as Massey et al (1993) argue, 'it is entirely possible that individuals engage in cost benefit calculations; that households act to diversify labour allocations; and that the socioeconomic context within which these decisions are made is determined by structural factors operating at the national and international level' (Massey et al 1993, p454), suggesting that, in line with the aim of this study to incorporate both agents and structures, useful insights can be gained from different levels of analysis that will enable the development of a viable research project.

2.6 Conclusion

This chapter has reviewed the role of theory in the development of HIV research and prevention programmes. Bearing in mind the startling admission that the vast majority of these, particularly in the early stages of the epidemic, did not involve the use of any theory (King 1999), it has been shown that the most influential theory used is highly individualistic, and amongst other things fails to address the influence of social structures on behaviour. This is now being addressed by structural approaches, which, broadly speaking, seek to incorporate

the role of structural factors in terms of their influence on sexual behaviour and the dynamics of transmission. This is a welcome advance, and is an argument that is increasingly gaining academic and political traction. However, due in part to the inconsistent use of theory, which can appear missing or implicitly wrapped up in the author's own assumptions, structures are not always well conceptualised, and to a degree remain ahistorical and apolitical. Additionally, individualistic theory has succeeded in maintaining a foothold in some approaches that borrow concepts from other social sciences without a clear examination of their theoretical underpinnings. The overall contribution from the economics discipline is weak, largely if not exclusively framed within variants of the neoclassical economic theoretical framework, and add little to our understanding of behaviour and transmission. This thesis will seek to rectify this by taking a political economy approach to the framing of behaviour and transmission, an approach that will address the role of structures over behaviour, rooted in an economic approach that addresses of the social relations of production and reproduction, whilst leaving space for individual and collective agency.

Chapter 3 – Structural Drivers and the epidemiology of HIV in Tanzania

3.1 Introduction

The previous chapter critically discussed the different ways in which HIV transmission and HIV-related sexual behaviour have been conceptualised within the literature. In this chapter, the applied literature is the primary focus, though this inevitably touches on a number of issues that have already been introduced in the previous chapter, such as poverty, gender and power, and hence to some extent overlaps with the theoretical review. This chapter has three main objectives; firstly, to introduce the general literature on three important structural drivers of the epidemic, namely poverty, gender, and the specific focus of this research, migration and mobility; secondly, to review the literature that relates these drivers to Tanzania; and thirdly, following on from the extended discussion of the literature on migration and mobility, to develop the research questions, which are also framed by insights developed in chapter two. This approach gives the reader an overview of current debates within which specific knowledge related to the HIV epidemic in Tanzania can be situated. As the choice of the study site follows from this review, the introduction of the study site, and also a broader overview of the socio-economic context in Tanzania, will follow in chapter four, rather than being addressed here.

This chapter is structured in the following way. Section two provides a brief overview and background to the HIV epidemic in Tanzania. Following is a critical discussion of how poverty and gender, two of the main structural drivers that have been identified in relation to Tanzania, influence the dynamics of transmission, including how these combine to shape what has become known as transactional sex. In section four, the topic of this research project, exploring the relationship between migration and mobility and HIV, is introduced, with a comprehensive review of the general literature complemented by a detailed review of the key studies that have been applied to Tanzania. This review enables the development of the research questions in the penultimate section, before some concluding remarks.

3.2 Epidemiology of Tanzania

The first cases of AIDS in Tanzania were recorded in the Kagera region in 1983 (Ministry of Health 2003; Iliffe 2006), though it is likely that the virus entered the Uganda- Tanzania border region in the mid to late 1970's (Iliffe 2006). By 1986, just a few years later, the virus had

penetrated all mainland regions (Iliffe 2006). It is difficult to build up an accurate picture of prevalence rates during the 1990's, in part due to the fact that estimated prevalence rates were based on samples taken from pregnant women at antenatal clinics (Bennel 2004). Data gathered from antenatal clinics in Dar Es Salaam show that prevalence increased from 4% in 1986 to a peak of 15% in 1999, declining to 11.5% in 2002 (UNAIDS 2004). Whilst this method is useful in that it can aid the tracking of prevalence trends, this does not necessarily provide an accurate picture of HIV prevalence rates in the general population. More recently, the Tanzanian government have conducted two nationally representative surveys that have enabled the results to be extrapolated across the population to enable more accurate estimates of HIV prevalence. These surveys, the Tanzania HIV/AIDS Indicator surveys of 2003-04 (THIS03) and Tanzania HIV/AIDS and Malaria Survey of 2007-08 (THIS07), triangulated with data from the ANC sites, show a national prevalence rate of 7% in 2003-04, and 5.7% in 2007-08 (TACAIDS 2005; TACAIDS 2008). These surveys have also formed the basis for a comprehensive review and assimilation of all data and reports on HIV in Tanzania, including data from antenatal clinics and other reports on STI's which has enabled a range of projections to be made as to the historical trajectory of the epidemic, and suggests that prevalence peaked in Tanzania in 1997 (ASAP 2008). At present, on the mainland, prevalence rates are higher in urban areas in comparison with rural areas, and vary widely between regions, ranging from 15.7% in Iringa to 1.5% in Manyara (TACAIDS 2008). Women are disproportionately impacted by the epidemic, with prevalence rates of 6.6% for women in comparison to 4.6% for men (TACAIDS 2008).

The primary mode of transmission is generally thought to be through heterosexual transmission, which accounts for an estimated 90% of new infections (UNAIDS 2004; TACAIDS 2008), with the second most important mode of infection reported to be via mother-to-child transmission (Maswanya et al. 2010). This is in line with the results of mathematical modelling designed to calculate the number of new infections through each route of infection using data from nearby Kenya which reported that 90% of new infections were through heterosexual transmission (Gouws et al. 2006). Other contributing factors, but which are seen as less important, are reported to be blood transfusion, unsafe injections or traditional practices, including male circumcision or female genital cutting (Maswanya et al. 2010). However, it is not clear on what basis the relative importance of these different modes of transmission have been estimated. In some cases, alternative factors beyond heterosexual transmission have been suggested on the basis that 0.9% of 15-24 year olds who report that they have never had sex are infected with HIV (TACAIDS 2008), though this may be due to inaccurate reporting of sexual behaviour, illustrating the difficulties with providing accurate and coherent data.

The dynamics of the epidemic in Tanzania are viewed as driven by a ‘complex set of intertwining biological, behavioural, and underlying socio-cultural and socio-economic factors’ (TACAIDS 2009, p6), which are summarised in table 3.1:

Individual level behavioural and biological factors	Cultural and Gender related drivers	Socio-economic and underlying drivers
<ul style="list-style-type: none"> • Multiple Concurrent Partnerships • Cross Generational Relationships • Transactional Relationships • Low and inconsistent condom use • Untreated Sexually Transmitted Infections • Unsafe Injections, Blood transfusions and contact with body fluids • Alcohol, Drug and injecting drug use • Men who have sex with men • Mother to child transmission • Mobility • Coverage of male circumcision • Lack of knowledge on own and partner’s status 	<ul style="list-style-type: none"> • Gender and sex based violence • Gender inequalities • Socio-cultural norms 	<ul style="list-style-type: none"> • Poverty and Wealth • Conflict situations

Table 3.1 – Drivers of HIV in Tanzania. Compiled by the author based on: Review of HIV Epidemiology and HIV Prevention Programmes and Resources in Tanzania Mainland (TACAIDS 2009)

This report identifies a broad range of factors at different levels of analysis associated with the spread of the disease, with care taken to acknowledge that these different categorisations are artificial to some extent and are strongly interlinked, with cultural, gender, and other socio-economic drivers having an influence on individual drivers. For example, gender inequalities and socio-cultural norms may influence transactional relationships and cross generational relationships, whilst transactional relationships may also be influenced by poverty and wealth. This project, as discussed in the previous chapter, attempts to assess some of these interlinked relationships between factors that are conceptualised at different levels of analysis, and in particular how structural and socio-economic factors influence behaviour.

A second observation is that this list is strongly biased towards those that are considered as behavioural or individual level factors. This may in part be due to the fact that individual level factors lend themselves more easily to measurement in demographic health surveys or other epidemiological analyses which can establish them as statistically significant risk factors (TACAIDS 2008). This emphasises in itself the need for more focus on structural drivers of the epidemic, as argued in the last chapter. Further, in some cases, factors such as mobility which

are considered as behavioural or individual factors can be reconceptualised as structural or socio-economic drivers, following on from the definition of Auerbach et al (2011) which incorporates core social processes as structural drivers.

A full review of all the factors outlined in table 3.1 is beyond scope here, not least because this would be a huge undertaking given the breadth of the literature. Therefore, in line with the general project aims, this review focuses on three main structural factors that have been identified as important to assess in the Tanzanian context; poverty and wealth, viewed as an underlying socio-economic driver; gender inequalities; and mobility, which, as will be argued below, can be reconceptualised as a structural driver. In relation to gender inequalities, this review focuses on how gender is related transactional relationships, as this is one important manifestation of this issue, and also relevant to the findings of this project. However, other behavioural issues, in particular the issue of multiple concurrent relationships, are discussed here and in later chapters, so that this report is a useful starting point when considering the many contributing factors.

3.3 Structural Drivers of HIV: Poverty and Gender

3.3.1 Poverty (and wealth)

In the early stages of the epidemic, HIV/AIDS was strongly linked with poverty within the international development community (Johnston 2013), with poverty viewed as exerting a strong influence over the nature and shape of the epidemic (World Bank 1999), and also responsible for the continuing transmission of the HIV virus in sub-Saharan Africa (Freedman et al. 2005; Masanjala 2007). Statements found in the literature reflect this narrative, stating that 'there is a distinct relationship between poverty and communicable diseases' (Whiteside 2002, p316), 'poverty reduction will undoubtedly be at the core of a sustainable solution to HIV/AIDS' (Fenton 2004, p1187), 'existing social and human deprivation produces a fertile environment for the spread of HIV' (Poku 2001, p203) and 'poverty constitutes a primary risk environment for HIV' (Hope 2001a, p20) illustrate the centrality of poverty in explanations of the epidemic. However, more recently, this overarching narrative has been challenged with the role of wealth, and not just poverty, seen as important when thinking about transmission (Shelton et al. 2005; Gillespie et al. 2007).

Poverty is viewed to intensify the transmission of the HIV virus through a number of mechanisms, though in some cases these are not uncontested. One broad theme is the role of biological factors, such as malnutrition, the lack of basic vitamins and micronutrients and the

presence of other co-factors like Malaria, Tuberculosis and worms, all linked with poverty and low socioeconomic status within sub-Saharan Africa, that enhance the likelihood of infection through weakening the immune system and stimulating virus replication once an individual is infected (Stillwaggon 2002; Stillwaggon 2006; Katz 2009). However, the scientific evidence for some of these biological factors is not uncontested, in some quarters described as 'contradictory and thin' with regard to 'poor nutrition and HIV infection' (Nattrass 2009, p834), and early reviews of the literature suggest that the links with the lack of micronutrients merely 'interesting', rather than conclusive (Friis et al. 1998). This suggests that the theorised link between nutrition and is not as clear cut as at first glance. There are also doubts over whether diseases such as Malaria are themselves diseases of poverty (Worrall et al. 2005), and stronger associations between male circumcision, widely reported to significantly reduce the risk of infection (Weiss et al. 2000; Londish et al. 2008), and religion and ethnicity, than socio-economic status (UNAIDS et al. 2007). Whilst these biomedical arguments will not be the main focus of this research topic, the lack of consensus in what may be viewed as a more 'scientific' area says much about the complexity of transmission. Behavioural mechanisms focus on the role of education, with the poor more vulnerable to infection because of a lack of knowledge about the virus, the modes of transmission and how to protect themselves from infection, and, as noted in chapter two, less able to afford condoms (Philipson et al. 1995). Further, gendered poverty, addressed in more detail below, creates the conditions in which women engage in commercial sex or transactional sex for subsistence purposes (Weiser et al. 2007).

Evidence to support the poverty narrative is found in a number of case studies conducted at the micro level find statistically significant associations between risky sexual behaviour (as a proxy for the likelihood of someone becoming infected with HIV) and HIV prevalence and incidence with poverty or lower socioeconomic status (Mnyika et al. 1994; Booysen Fle et al. 2002; Kalichman et al. 2006; Dodoo et al. 2007; Lopman et al. 2007; Akarro 2009). However, other case studies and reviews show the opposite correlation (Chao et al. 1994), that the relationship is less straightforward (Barnighausen et al. 2007), or that socioeconomic status is unrelated to HIV prevalence or incidence (Wojcicki 2005), studies which have helped to challenge early simplistic narratives around poverty, and aided the formation of a more nuanced debate. This is further strengthened by evidence from recent demographic health surveys at the macro level. Mishra et al (2007), in a study that used data from eight national surveys (including the Tanzanian data from 2003/04) find a strong unadjusted positive association between HIV prevalence and wealth, with significant results for women in all eight countries, and for men in six of the countries (Mishra et al. 2007), and when subjected to further tests, although the significance disappears, the authors conclude that 'HIV prevalence

is not disproportionately higher among adults living in poorer households in sub-Saharan Africa' (Mishra et al. 2007, piii). These results are supported by Parkhurst (Parkhurst 2010), who analyses data from a number of recent demographic health surveys that gather demographic and HIV prevalence data from nationally representative samples, and also reports a statistically significant positive relationship between wealth and prevalence for women in 8 countries (Malawi, Tanzania (2003/04 and 2007/08), Rwanda, Kenya, Uganda, Cote-D'Ivoire, Cameroon and Lesotho), and for men in 6 countries (Malawi, Tanzania (2003/04 and 2007/08), Rwanda, Kenya, Uganda and Cameroon)⁸. However, in this case, it is shown that the relationship between wealth and prevalence varies from country to country, in relation to the level of Gross Domestic Product (GDP) per capita of the country, and in some cases overall prevalence rates, suggesting that there are many other factors that will influence associations between wealth and prevalence at different stages of the epidemic (Parkhurst 2010).

In relation to Tanzania, recent epidemiological data, in line with the findings of Mishra et al (2007) and Parkhurst (2010) suggests a complex relationship between HIV prevalence and poverty/ wealth. Table 3.2, which breaks down HIV prevalence rates by wealth quintile for men and women from the Tanzanian HIV/AIDS Indicator Survey (THIS) reports of 2003/2004 (THIS 03/04) (TACAIDS 2005) and 2007/2008 (THIS 07/08) (TACAIDS 2008), shows that, although the trend may be gradually changing, for both women and men, the highest prevalence rates were found in the wealthiest quintile.

	Women				Men			
Wealth Quintile	2003/04	2007/08	Rate Difference	Rate Ratio 07/08	2003/04	2007/08	Rate Difference	Rate Ratio 07/08
Lowest	2.8	5	2.2	-	4.1	4.1	0	-
Second	4.6	6.6	2.0	1.32	4.3	3.5	-0.8	0.85
Middle	6.8	5.1	-1.7	1.02	4.3	4.1	-0.2	1.00
Fourth	10.9	6	-4.9	1.2	7.7	4.5	-3.2	1.10
Highest	11.4	9.5	-1.9	1.9	9.4	6.3	-3.1	1.54
Total	7.7	6.6	-1.1		6.3	4.6	-1.7	

Table 3.2 – HIV prevalence rates in Tanzania by wealth quintile (Data from THIS 03/04 and THIS 07/08. Rate Difference and Rate Ratios are authors own calculations)

However, care must be taken when attempting to interpret prevalence data, as there are a number of biases to account for. For example, prevalence rates in the wealthier quintiles may be biased upwards due to the greater access to antiretrovirals and general healthcare that are

⁸ Msisha et al (2008) also find a statistically significant relationship between HIV and wealth for Tanzania, though using the 2003/04 data only

likely to increase life expectancy in these groups. Conversely, prevalence rates for the poorer quintiles may also be biased upwards due to processes of impoverishment that can follow infection. However, overall the data suggests that the epidemic is not being driven by poverty alone, as the poorest two quintiles have the lowest prevalence of all the wealth quintiles.

These prevalence patterns in Tanzania are particularly interesting when other data from the THIS03 and THIS07 is considered. Table 3.3 shows the percentage of individuals in each wealth quintile who have a comprehensive knowledge of HIV, which is defined as 'knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chances of getting the AIDS virus, knowing that a healthy-looking person can have the AIDS virus, and rejecting the two most common local misconceptions about AIDS transmission or prevention' (TACAIDS 2008).

Wealth Quintile	Men	Women
Lowest	32.0	27.9
Second	41.0	32.9
Middle	42.2	34.7
Fourth	47.8	41.8
Highest	54.4	54.4

Table 3.3 – Proportion of individuals (%) who have comprehensive knowledge of HIV by wealth quintile. Source: THIS07

This shows that comprehensive knowledge about HIV increases with wealth quintile, with those in the highest wealth quintile the most likely to have comprehensive knowledge, and to some extent lends weight to the poverty narrative. At first glance this seems to be at odds with the data on prevalence, showing that those in the wealthiest quintile have both the highest levels of HIV and the most comprehensive knowledge about transmission, further suggesting that the roles of wealth and poverty are more nuanced than presented in earlier narratives.

However, as with the prevalence data above, it is unclear how to interpret this data.

Comprehensive knowledge about HIV can be gained through education programmes that prevent infection, but this knowledge may also be a result of an individual becoming infected, or the increasing infection of family or community members. Further, there is not always a straightforward link between knowledge and behaviour (Dinkelman et al. 2006).

The role that wealth can play in influencing the dynamics of transmission is less well researched, and within Tanzania there are no current prevention efforts, as of 2009, that specifically target wealthier groups (TACAIDS 2009). Speculative theories include that due to a westernisation of lifestyles and patterns of urbanisation, and greater mobility, the wealthy have more chances to engage in extra-marital sexual encounters and multiple partners

(Gillespie et al. 2007), and have a greater ability to maintain concurrent relationships (Shelton et al. 2005). One alternative view is rooted in a political economy approach that attempts to understand how the development of class relations influences the dynamics of transmission (Bujra 2006). Central to this approach is the definition of class as relational as opposed to reducing poverty and wealth to abstract and homogenous categories, and which seeks to address both poverty and wealth within the same narrative, rather than addressing risk for different groups in isolation. Bujra (2006) argues that the prevalence patterns observed in Tanzania are a result of on-going processes of class formation and the reinforcement of class identity (Bujra 2006) which arise from 'primitive accumulation in land, ... partial processes of proletarianisation ... and the way HIV transmission reflects the penetration of market and capitalist relations' (Bujra 2006, p118). This penetration of capitalist relations of production gives rise to developing class relations, which influence sexual networking through the 'partnering and marriage for the social reproduction of emergent class fractions' (Bujra 2006, p118), in which the class position of higher classes is consolidated through intermarrying and marked by increasingly isolated sexual networks, and also through 'extra- and non-marital liaisons as an assertion of economic (and to a degree more broadly social) power' (Bujra 2006, p118). This narrative therefore links transmission to both the development of sexual networks within emergent classes, as well as sexual networks that exist within but also between classes in which gendered economic power is expressed.

These concepts are useful in identifying other resultant processes and phenomena, such as labour migration, urbanisation, commercialised sex and HIV transmission through trading routes at a systemic level, rooted in a dynamic and historical understanding of the interaction of processes of development and HIV transmission. This approach also allows space for wealth and poverty to interact and operate in nuanced and related ways, though more empirical work is needed to map out some of these processes. This project incorporates insights from the work of Bujra, and in relation to the topic at hand, the need to incorporate an understanding of how processes of class formation influence the dynamics of mobility, and also the importance of attempting to understand who mobile populations have sex with, which may help to shed more light on the nature of transmission than approaches that are limited to counting or classifying sexual partners.

3.3.2 Gender inequalities and transactional sex

As noted above, in Tanzania, as elsewhere, women bear the brunt of the epidemic in terms of infection rates, with female prevalence in most, if not all, countries higher than male prevalence (Parkhurst 2010). Although there are some biological factors that contribute to this

pattern, with women more susceptible to receiving the virus than men (Mastro et al. 1996), this is further exacerbated by gender inequalities that are shaped by gendered differences in 'roles, access to productive resources, and decision making authority' (Gupta 2000, p1). This enhances HIV transmission in a number of different ways, with some overlap with the poverty narrative developed in the previous section, further emphasising the interlinked nature of the many different factors identified in section 3.2. These factors include (but are not limited to) intimate partner violence, coerced sex, and rape that are suffered by women (Renzhao et al. 2009; Heise 2011), limited access to HIV education and formal schooling (Krishnan et al. 2008), a lack of control that women have over sexual interactions and condom use due to weak bargaining power vis a vis male partners or male customers (Wojcicki et al. 2001; Fuller 2008), and linked to this an economic dependence on men combined with the lack of economic opportunities which force women to engage in commercial sex work or transactional relationships (Poulin 2007; Jewkes et al. 2012). It is this last issue, transactional relationships, that is the focus of this review.

Transactional sex is typically differentiated from prostitution or commercial sex as being sex that involves some form of exchange of gifts or money, though on an informal basis, and encompasses a broader range of social practices (Chatterji et al. 2004; Jewkes et al. 2012). Poverty is again ascribed a central role in mainstream articulations of transactional sex within the literature, with the standard narrative being that women from poor households engage in formal or informal transactional sex to provide basic goods needed for survival, (Byron et al. 2006; Weiser et al. 2007; Gillespie 2008), exacerbated by situations where they are the head of the household or lack male financial support (Whiteside 2002), with full time commercial sex work seen as a last resort due to the lack of alternative economic opportunities (Freedman et al. 2005). Transactional sex is viewed as a particularly risky sexual practice, as poor women are rarely in a position to insist on or bargain for condom use due to unequal power relations, fear of violence, the risk of loss of future business, the lack of negotiation skills or the acceptance under varying degrees of coercion of a higher price for sex without a condom (Gupta 2000; Smith et al. 2000; Dunkle et al. 2004; Byron et al. 2006; Luke 2006; Beegle et al. 2008; Gillespie 2008). There is evidence where poverty does induce this type of behaviour (Dunkle et al. 2004), but again on closer inspection we find that the relationship between poverty and transactional sex, and the means through which it leads to risky sex, is more complex than this narrative suggests.

Firstly, evidence indicates that there is not a consistent relationship between household economic status and sexual exchange (Chatterji et al. 2004), with women from many different economic backgrounds engaging in transactional sex. Additionally, historically commercial sex

workers are not necessarily always amongst the poorest and can command incomes above the levels earned by male labourers, often sending money home or saving to set themselves up with a business on their return (White 1990; Caldwell et al. 1997). This does not preclude that poverty was the original motivation, but highlights the fact that commercial sex workers are not always *the* poor nor a homogenous group (MacPherson et al. 2012), uncovering a dynamic dimension to the study of poverty and HIV transmission which has to date been missing.

Secondly, women are often portrayed as passive and marginalised agents, though recent researchers report a surprising level of agency in women negotiating sexual transactions (Luke 2006; Bene et al. 2008), though as noted in chapter this is not always well conceptualised and often presented in the absence of any incorporation of unequal power relations. In other cases, it is suggested that women are driven by the prospect of economic advancement, greater access to consumption goods and even independent capital accumulation, rather than pure subsistence (White 1990; Caldwell et al. 1997; Hunter 2002), challenging the assumption that poverty is always the push factor. Lastly, other findings suggest that the relative inequality between women and their transactional partners, rather than poverty, may more important in explaining risky sexual behaviour (Beegle et al. 2008), emphasising that both sides of any sexual transaction must be accounted for.

One distinct type of sexual transaction which is discussed in the literature is fish-for-sex. Fish-for-sex refers to transactional sex that occurs in fishing sector, in which female traders engage in sex with fisherman for a range of reasons in which economic and social power is exerted, such as accessing fish at lower prices, to increase profit or in time when capital is low, or to build and maintain commercial relationships to secure access to future catches (Merten et al. 2007; Bene et al. 2008; MacPherson et al. 2012). The context of unequal gender relations in many cases shapes the nature of the value chain, and more specifically who fills each role along the chain, which in turn creates a set of unique power dynamics. These power dynamics enable fisherman to coerce female fish traders into having sex with them using the threat of withdrawing their access to fish (MacPherson et al. 2012), so that it is the gendered power asymmetries that influence some forms of sexual relations between fisherman and traders. Of course, there will also be occasions where a female trader has no capital but needs to access fish to generate income and, in lieu of other alternative income opportunities, resort to transactional sex as a means of doing so (Merten et al. 2007). However, the 'transaction' needs to be understood more broadly than purely the material exchange of fish that occurs. The high levels of HIV reported in many fishing communities also involves the fishermen themselves, who are seen as an occupational group that engage in high levels of risky sexual behaviours (Gordon 2005). Explanations for these sexual behaviours have much in common with the

mineworker and truck driver examples that are discussed below, and include the argument that fisherman in general are relatively wealthy in comparison to the communities that they are fishing in and so make attractive sexual partners but also have the means to pay for sex, high levels of alcohol use, and a sub-culture of risk taking in part shaped by the potentially risky nature of fishing practices (Merten et al. 2007). This enhances the risk that female traders face when engaging in transactional sex with this group.

Transactional sex is a practice that has been identified as particularly important in Tanzania. Lugalla et al (1999), in a study on the socio and cultural context of HIV/AIDS in Kagera region, identify norms of sex as a form of reciprocity and exchange as central to the dynamics of transmission, with 'reciprocity and exchange, characterized by specific gift items ... currently defining sexual relationships in this region' (Lugalla et al. 1999, p395). The authors noted that the practice of giving gifts in return for sex was becoming increasingly common, and to some extent this form of exchange was replacing older forms of reciprocal exchange associated with goodwill (Lugalla et al. 1999). For Lugalla et al (1999), this practice is underpinned by gendered norms around male and female roles, and specifically that men are expected to provide material goods for women in return for other things, including sexual satisfaction. This represents the commodification of sex, with 'both men and women to referring to women's sexual organs in economic metaphors such as "*uchumi wangu*" (my asset/capital)' (Lugalla et al. 1999, p395).

This theme is also prominent in the work of Wamoyi et al (2010 and 2011), in which women's bodies are described as 'shops', with women viewing their sexuality as something that they can exploit for material gain (Wamoyi et al. 2011). Wamoyi et al (2011), in a study conducted in northern Tanzania that focused on unpacking the views of young women and men aged between 14 and 24, and also their parents, on transactional sex, found that both parents and their children expected some form of exchange in sexual interactions. Wamoyi et al (2011) also locate this practice within social norms around men providing for women, with these norms rooted in the tradition of bride wealth (Wamoyi et al. 2011), a practice that has been identified as central to the formation of marital relationships in Tanzania (Gottfried et al. 1962). However, these gendered norms are viewed as dynamic, with the giving of gifts in exchange for sex a more recent phenomenon, in part a response to the erosion of patriarchal relations (Wamoyi et al. 2010). Norms around sex and exchange, then, are viewed as the expression of female power, though this remains within a socio-economic setting in which men still dominate, though to a lesser extent (Wamoyi et al. 2010).

These studies emphasise that transactional sexual relationships are based on local norms around sex and exchange, in which the giving of gifts in return for sex is expected, and that this is a common practice across Tanzania. They also highlight that this norm is rooted in the on-going dynamic development of gender relations. Reflecting back on the conceptualisation of transactional sex as an individual level behaviour above, it is clear that this can in fact be thought of as a structural driver when transactional relationships are viewed as social practices.

3.4 Migration and mobility

The final structural driver reviewed in this section is migration and mobility, which is the central focus of this project. However, as the review above suggests, many of these structural drivers are strongly related and overlap, so that themes of poverty, wealth and gender are also present. Migration (and population mobility more generally) is one core social process that has long been linked with the epidemic. For the purposes of this review, migration is conceptualised as a specific form of mobility in a continuum of mobility (Bell et al. 2000). In practice, the terms 'migration' and 'mobility' are often used interchangeably or alongside each other, as precise definitions are difficult when considering a wide range of interrelated processes that include internal and international migration, circular and permanent migration, urbanisation, forced migration and internal displacement (UNDP 2009; Bakewell et al. 2011). The literature has identified two distinct but related themes over the role that mobility plays in the epidemic.

Extensification

Initial concerns within the literature focused on the role that mobility played in the historical and geographical spread of the virus, from its origins in western equatorial Africa across the continent (and globe), and the subsequent spread from high prevalence to low prevalence areas as the epidemic has matured (Iliffe 2006). Iliffe (2006) and others suggest that HIV may have originated in the broad area of Cameroon and the Democratic Republic of Congo, and then spread out to the east, west and south. This occurred through various forms of labour migration, such as circulatory, permanent or international, the movement of labour to rural sites such as plantations and mines, and patterns of trading and commerce, with recent evidence suggesting that the spatial distribution of HIV is strongly related to transport infrastructure that has facilitated and shaped patterns of movement (Tatem et al. 2012). As a result, communities along main roads, or at important staging posts such as border crossings, were among the first affected, and remain at high risk. Therefore, transmission across the

continent was seen as being shaped by patterns of urbanisation, labour migration regimes developed in colonial times or in the era of apartheid, commerce (through the development of trading routes) and uneven economic development (encouraging labour migration) (Mtika 2007; Hargrove 2008; O'Laughlin 2008).

As the epidemic has developed, the penetration of the virus into the most isolated rural areas has been facilitated by the oscillating migration of people to local or regional urban centres where prevalence rates are generally higher, with mobility then seen as linking 'geographically separate epidemics' (Coffee et al. 2007, p346), as individuals move between geographical areas that have different levels of prevalence. Whilst it has been suggested that the importance of mobility as a driver of the epidemic will reduce as the epidemic matures and the whole population becomes at risk, large differences in prevalence rates between regions within countries, and even over small geographical distances, persist (Tanser et al. 2000). For example, in Tanzania the 2008 Tanzanian HIV/AIDS and Malaria Indicator survey reported regional prevalence rates varying from 1.6% to 15.7% in the context of an overall national prevalence rate of 5.7% (TACAIDS 2008), whilst in the political ward of Kisesa, Mwanza region, prevalence and incidence in the urban centre were twice as high compared to the area defined as the peri-trading centre (within 2km of the trading centre) and three to four times higher than the rural areas (up to 8km from the trading centre) (Boerma et al. 1999). This suggests that mobility may continue to play an important role in the continuing dynamics of the epidemic, as stabilising prevalence rates have not always been accompanied by evenly distributed incidence or prevalence rates (Deane et al. 2013).

Nevertheless, mobility and migration are not immediate causal factors. As noted above, the primary mode of transmission in sub-Saharan Africa is heterosexual transmission, so that there is also an important behavioural component which distinguishes HIV from other infectious diseases, such as tuberculosis, that are also associated with overcrowding and poor living conditions associated with newly urbanising areas (Deane et al. 2013). However, precisely because the virus is transmitted through a very specific form of human interaction, it could not have spread as far as it has without the movement of infected people to geographical areas where the virus was absent, and so mobile populations have been viewed as an important bridging population (Caldwell et al. 1997; Brockerhoff et al. 1999; Brummer 2002; Msimang 2003).

Intensification

The second and more important strand within the epidemiological literature sees mobility not only linking areas of differing background prevalence, but also as enhancing HIV risk in its own

right through its impact on sexual risk taking among migrants and mobile individuals (Pison et al. 1993; Lurie et al. 2003a; Crush et al. 2006; Kishamawe et al. 2006; Khan et al. 2008). This theme currently dominates the health literature, and has to a large extent displaced earlier concerns over the geographical spread of the virus. The significance of the impact on transmission of enhanced risk behaviours due to migration has been emphasised by a mathematical simulation of the progression of the epidemic. Using data from a population study, Coffee et al (2007) designed a model that was used to investigate the role of migration, and that compared prevalence rates for three different population groups (long distance migrants, rural women, rural non-migrant men). Using three scenarios (migration and riskier behaviour, migration and no riskier behaviour, no migration and no riskier behaviour), the results of the simulation demonstrated large differences in the long term HIV prevalence rate. For long distance migrant men, prevalence stabilises almost three times higher in a scenario of migration combined with riskier behaviour than it does in a scenario in which migration occurs but is not accompanied by increases in risk behaviour (13% compared to 33%). For rural women, prevalence stabilises at 1.8% when migration was not linked to riskier behaviour compared to 19% when it was, a tenfold increase (Coffee et al. 2007). Whilst this is of course a simulation only, it illustrates clearly the magnitude of the health concerns around the potential for mobility to enhance risk behaviours.

The standard HIV-migration narrative is that whilst away, migrants engage in riskier sexual behaviours, such as increased number of sex partners or sex with commercial sex workers, and on return home infect long-term partners/spouses. Of course, moving itself per se does not directly increase risk (Samuels et al. 2011), with riskier sexual behaviour engaged in by mobile individuals explained by a number of different factors across varying contexts. Table 3.4 summarises a range of determinants from a recent systematic review of the literature on labour migration and risk. Whilst this review included studies of both international and internal labour migrants, in practice many of these themes are applied across all mobile groups. These determinants highlight a range of factors that influence the vulnerability of migrants, and in particular can be seen to support the general view that migrants are a high-risk group that engage in risky sexual behaviours. A number of these themes are reflected in the literature that focuses on internal mobility in sub-Saharan African. For example, some argue that young male migrants in particular engage in risky sexual practices as they are freed from traditional social or community controls on sexual behaviour (Brockerhoff et al. 1999; Lagarde et al. 2003; Kishamawe et al. 2006; Mmbaga et al. 2008; Vissers et al. 2008). Secondly, separation from spouses or partners for long periods of time is also associated with extra-marital sex (or sex with non-regular partners) due to feelings of loneliness and isolation (Brummer 2002), and

greater availability of and access to sex workers in destination areas (White 2003). Additionally, use of sex workers can be encouraged due to cultural and language difficulties which prevent formation of non-commercial sexual relationships with the local population (Lagarde et al. 2003; Kishamawe et al. 2006). Lastly, some writers see migrants as a group of 'risk takers' - naturally more likely to take risks, in terms of both livelihood and sexual decisions (Brockerhoff et al. 1999). Other literature has further identified spouses and partners of mobile individuals as high risk groups for some of the same reasons (e.g. separation from partners for long periods of time), along with the possibility that they may have to engage in transactional sexual interactions if money is not sent home (Lurie et al. 2003; Zuma et al. 2005).

Policy Determinants	Prolonged and/or Frequent absence
	Financial Status
	Difficult working and housing conditions
	Limited access to health care
	Language Barriers
	Legal Status
Socio-Cultural Context Determinants	Cultural Norms
	Family Separation
	Low Social Support
Health and Mental Health Determinants	Substance Use
	Other STI's
	Mental health problems
	No HIV testing
	Needle Use
	Limited Condom Use
	Multiple Partnering
	Visiting Sex Workers
	Low HIV Knowledge
	Low Perceived Risk

Table 3.4 – Summary of determinants of HIV risk amongst Labour migrants. Source: (Weine et al. 2012)

Truck drivers and Mineworkers

This narrative of migration and population mobility leading to increased risk behaviour has been applied across all mobile populations. However, whilst there are a growing number of case studies that focus on different mobile groups (see Hope 2000; Coast 2006; Kweni et al. 2012), the literature on this issue is dominated by two specific case studies, mineworkers in Southern Africa and truck drivers across sub-Saharan Africa. These occupational groups have been the subject of much academic work, and as a result the lessons from these case studies have formed, to a large extent, the basis for most conclusions that have been made on the role of migration and enhanced HIV risk. This is unsurprising, as epidemiological studies have been

combined with other research that attempts to address structural and contextual factors that contribute to risk, so that a comprehensive understanding from a range of complementary perspectives has been formed. A brief review of this literature here will allow many of the oft-repeated themes to be examined in more detail.

From a historical perspective, high levels of risk behaviour have been linked to the migrant labour system that is found across the South and East African region, rooted in practises introduced in colonial times (Hargrove 2008). South African mining companies have long been dependent on migrant labour, both internally from South Africa and from adjoining countries. Typically 40% to 50% of the mine workforce is made up of migrants from other southern African countries (Lurie et al. 2003a). In general, miners are not encouraged to bring their families, a hangover from the days when black South Africans were not allowed to settle in white areas, and foreign workers are not granted the rights of permanent residence (Crush et al. 2005). As a result, the overwhelmingly male workforce is consigned to single-sex hostels that house up to 18 mineworkers per room (Campbell 2003; Crush et al. 2005). The living conditions are cramped and lack privacy. The dangerous and demanding work further fosters fatalistic attitudes among workers (Campbell 2003) and contributes to the construction of identities of masculinity that are strongly linked to sex, in part a coping mechanism to the conditions they face (Campbell 1997). Additionally, the miners are subjected to long periods of separation from spouses and families (Campbell 2003; Crush et al. 2005) with little to do in terms of recreation except drink and have sex (Campbell 2003). Sex is readily available from sex workers who are often migrants themselves, living and working in settlements that have sprung up around the mines (Campbell 2003; Crush et al. 2005), and due to their relatively higher wages, mineworkers are attractive sexual partners for both sex workers and women engaging in less formalised transactional sex. All these factors combine to create a highly risky behavioural environment, and the conditions for the intensification of the epidemic. On their return home, infected mineworkers may then transmit the virus to their partners who have been forced to stay at home, and who may themselves have engaged in risky sexual behaviour with other partners, particularly when much-needed remittances from their partners at the mines are not forthcoming.

Epidemiological studies of mineworkers in South Africa support this view of higher HIV risk. In a cross sectional survey that compared behavioural and prevalence data from male migrant workers (comprised of miners and migrant industrial workers), with a sample of male residents from the same home areas, Lurie et al (Lurie et al. 2003a) found that migrant men were nearly 2.5 times more likely to be HIV positive than non-migrant men. Through a multivariate analysis of the sample, both 'migration status' and 'having lived in 4 or more places' were found to be

independent risk factors, suggesting that mobility and disruption were both important explanatory factors. In a complementary cross-sectional study, Zuma et al (2003) investigated the risk factors for HIV infection amongst women, recruiting women from a township in one of the mining regions in South Africa. In this case, the survey found migrant women were over 1.5 times more likely to be infected with HIV. In a follow-up paper using data from a cohort study, Zuma et al (2005) found that migrant men were also 1.5 times more likely to have contracted a STI. These South African studies, with their predominant focus on mining, show strong statistical evidence that, in this case, both migrant men and women are more likely to be HIV positive than non-migrants. Alongside this, there is evidence of more risky sexual behaviour amongst this group of migrants, including a higher number of casual partners for migrant men (Lurie et al. 2003a) and for migrant women, who were likely to have had more sexual partners, and less likely to use a condom (Zuma et al. 2003). When the partners of mineworkers were considered, consistent with the narrative above, women with absent partners were found to be more likely to have additional sexual partners (Lurie et al. 2003). Discordant rates, that is situations where only one partner is HIV positive, were found to be around 30%, broadly similar to other reported rates across sub-Saharan Africa (Beegle et al. 2009), suggesting that despite the emphasis on the direction of transmission from miner to partner, miners are also at risk of becoming infected from inside their own relationship.

Beyond the specific South African experience, other evidence suggests that the mining example is not an isolated case, with a survey around two new mining operations in North-west Tanzania showing that despite mineworkers exhibiting greater levels of HIV related knowledge than the local population this failed to translate into safer sexual behaviour. 64.9 % of mineworkers reported having had more than one sexual partner in the last 12 months, 27.9% reported never having used a condom, and 54.6% reported that they had paid for sex in the last 12 months (Clift et al. 2003). Whilst the mining context varies from the south African case, as the smaller open mines require a smaller workforce and hence large single sex hostels had not been built, other similarities, such as periods of separation, demanding work conditions, and relatively higher wages that migrant miners earn in comparison to the host population point to similar issues that may enhance risk (Clift et al. 2003). Mining has also been associated with high levels of HIV prevalence in Botswana, where data from a national survey reported a prevalence rate of 26.5% in the mining town of Selebi-Phikwe, in contrast to 17.6% national rate, with 50% of the male and female population aged between 31 and 48 infected with HIV (PlusNews 2009), and in Zambia, a similar narrative is evident, with an estimated 18% of copper miners HIV positive in comparison to a male national prevalence rate of 12.3% (ICF International 2012) .

Evidence also shows high levels of HIV prevalence and risk behaviours in truck drivers in a number of independent surveys. In 1989, Carswell et al (Carswell et al. 1989) conducted a survey of 68 truck drivers passing through a transport depot in Kampala, Uganda, finding that 35% were HIV positive, significantly higher than the prevalence rates of up to 25% that had been recorded in women visiting antenatal clinics in urban areas in 1989 (Kirungi et al. 2006), and the national prevalence rate that did not increase above 15% even at the peak of the epidemic (Tumushabe 2006). Similarly, Rakwar et al (1999), in a prospective cohort study in Kenya, found a prevalence rate of 17.8% in the cohort of 1500 truck drivers, and an annual incidence of 3.1% (Rakwar et al. 1999), and Ramjee et al (Ramjee et al. 2002) found that 56% of truck drivers who visited sex workers across 5 truck stops in KwaZulu Natal, South Africa, were infected with HIV, in comparison to 36.2% amongst women visiting ante-natal clinics in the same region in 2000 (UNAIDS 2001). A review of a number of West African countries including Mali, Niger, Togo, Cameroon and Burkina Faso also reported prevalence rates for truck drivers being consistently higher than the local general population (IOM 2005). In terms of studies that emphasise risk behaviours only, results from a survey in Nigeria reported that only 9% of long distance truck drivers consistently used condoms (Sunmola 2005). There is also evidence from other regions of the world, such as India (Pandey et al. 2008), Bolivia (Sorensen et al. 2007) and even the US (Stratford et al. 2000) that links truck drivers to either higher prevalence rates or greater levels of risky sexual behaviours, highlighting that this is not necessarily a specifically African phenomena.

Explanations for these high prevalence rates seen in truck drivers include long periods of separation from partners/spouses, the dangerous and stressful nature of their work, boredom and lack of alternative recreational options, availability of sex workers in roadside settlements and truck stops, their desirability as sex partners due to greater relative wealth in comparison to the populations they travel through, and long periods spent waiting at borders for customs clearance (Whiteside 1998; Douglas 2000; Kamwanga et al. 2006; Stillwaggon 2006). These echo some of the themes identified in studies of mineworkers in South Africa, particularly in relation time spent away from spouses, and also the risk environments that truck drivers and miners find themselves in. However, other factors that both groups have in common, such as dangerous and stressful working environments, may represent occupational risks that are only in part related to the mobility. This emphasises that the risk behaviour of mobile groups will also be influenced by factors that are not associated with their mobility

These case studies present a compelling body of evidence that both explains and quantifies the relationship between mobility and risk behaviours. However, as has just been noted above, there are a number of similarities in the reasons forwarded for why mineworkers and truck

drivers engage in high levels of risky sexual behaviour and have higher levels of HIV. This brings into question the extent to which these experiences are representative of all mobile groups, highlighting the need for more detailed research on other mobile groups that are less visible and that may engage in very different forms of mobility. This is something that the current study will seek to do.

When assessing these case studies, it is also important to consider these processes as situated within broader socio-economic structures and systems to fully and more comprehensively understand how risk is heightened for these occupational groups, particularly in relation to the environment around mines and at truck stops that are seen as settings associated with high risk. Within countries that have to date generally experienced low and more importantly uneven and unequal development, geographical areas that host economically productive and lucrative industries such as mines, attract not only flows of people seeking employment in those sectors, but also secondary flows of people who will aim to provide other goods and services to those who are able to gain formal employment. This frequently includes sex workers who themselves are usually long-distance migrants, but also more localised flows from rural to urbanising centres. The same can be observed in the case of truck drivers, as local populations are attracted to truck stops and border crossings where they may be able to provide a range of services, including sex, to those travelling through. As has been noted previously in relation to truck drivers, levels of risky sexual behaviour will also be influenced by other factors, such as the alternative economic opportunities of the populations along trucking routes or who may be attracted to them, and hence the degree of reliance on either sex work or transactional sex for survival or to access to additional income (Hsu 2001). A similar narrative is also reflected in other sectors, such as shipping (Tansey et al. 2010) and fishing (Gordon 2005), where the interaction between varying mobile populations, local populations and the pull of economically successful sectors where money circulates also creates risk environments, with fisherman and dock workers similarly highly susceptible to HIV infection, and may even be extended to plantations and more generalised movement to urban areas, themselves sites of enhanced economic activity (UN-HABITAT 2006; Madise et al. 2008; Ondimu 2010).

This broader perspective highlights the many dimensions involved when trying to conceptualise risk, and emphasises the need for different levels of analysis, from understanding the psychosocial context to the broader structural and systemic processes that shape flows of people and localised risk environments. It illustrates how geographical population flows are intimately linked to enhanced risk behaviours, which enables a more comprehensive picture of the dynamics of the epidemic to emerge, and for an analysis that

goes beyond the limited set of reasons outlined in table 3.4 above which only address the social elements of mobility and risk to a limited extent. It also helps illuminate the many different ways that context can be conceptualised and understood, whether this is limited to immediate living and working conditions, or a context rooted in a broader, changing economic and social system. Unfortunately, these insights often remain unaccounted for in policy making, with many examples of standard interventions such as targeted education and condom promotion taking precedence over recommendations that seek to address the structures of processes or the broader community context (Stillwaggon 2006; Ministry of Communications and Transport 2010). The result is a set of interventions that only partially address the drivers of infection and risk behaviour, and as one prominent academic argues, the failure to address these structural and contextual aspects of risk is tantamount to 'letting them die' (Campbell 2003).

Statistical studies linking migration, mobility and HIV prevalence and risk behaviours

These two case studies have encouraged a wider belief that migrants and mobile populations generally adopt higher risk behaviours, and have implicitly helped to entrench an approach that seeks to identify and target at-risk population. As a result, a number of other studies have been conducted to assess the role of mobility in more generalised populations, but with the remit of establishing whether or not more mobile population groups engage in riskier behaviour or have higher levels of HIV to enable the targeting of prevention efforts. This standard statistical approach utilises survey data, which typically capture demographic characteristics, details of sexual behaviours, and in some cases, HIV status through blood testing. Whilst questions designed to capture risk behaviours sometimes ask about condom use or engagement in transactional/commercial sex, the most common form limits risk behaviour to the number of sexual partners. The surveys then further attempt to define a survey question (or set of questions) related to an individual's current or past migration – creating a variable that allows the sample to be split into two or more 'mobility' categories, in general related to the length of time the individual has spent away from their household (see table 3.5). The sample is then tested for statistical differences in HIV prevalence and risk behaviours between the defined 'mobile' and 'non-mobile' groups, which can then be presented as evidence to establish (or not) whether those defined as 'mobile' can be considered to engage in higher risk behaviours or are more likely to be infected with HIV, and by inference whether 'mobility', however defined, can be considered as a risk factor.

Study	Category of Mobility	Definition
Lagarde et al 2003	Short Term Mobility	Been away for at least one day and one night in the last 4 weeks
	Long Term Mobility	Been away for at least one month in the last 12 months
Lydie et al 2004	No absence	No overnight trips in last 12 months
	Absence ≤ 31	Between 1 and 31 nights away in last 12 months
	Absence ≥ 31	More than 31 nights away in last 12 months
Kishamawe et al 2006	Resident	Did not sleep or live elsewhere at the time of the demographic rounds
	Short Term Mobile	Slept outside the household at least once the night before one of the 5 demographic rounds
	Long Term Mobile	Lived elsewhere at least once the night before one of the 5 demographic rounds
Mundandi et al 2006	Residents	Remained in their baseline location at follow up
	Future Migrants	Moved from their baseline location at follow up
Visser et al 2008	Non Mobile	Slept outside the household at most 10 times in the last year
	Mobile	Slept outside the household more than 10 times in the last year
Mmbaga et al 2008	Non in-migrant	Lived in the village since birth
	Recent in-migrants	Moved to the village during the year preceding the survey
	Long term migrants	Moved to the village more than 1 year ago
Khan et al 2008	Non-Mobile	Lived in study town for more than 12 months
	Mobile	Traveller – Lived outside but travelled to study town
		Migrant – Moved to current town of residence within the last 12 months

Table 3.5 – Mobility definitions and inclusion criteria for a range of studies conducted in sub-Saharan Africa: Source: compiled by the author

In contrast to the evidence presented above for mineworkers and truck drivers, the results of these analyses are mixed. Some studies reported different correlations between mobility and prevalence rates or risk behaviours for men and women. For example, Lydie et al's (2004) study of an urban population in Cameroon, found that there was a strong statistical association between 'mobility' and HIV prevalence for men, with prevalence increasing with time spent away, though for women there was no significant difference between the three mobility groups, with women who spent no time away having nominally higher prevalence than the other groups. Interestingly, the pattern was clearer in terms of self-reported risk behaviours, with mobility being associated with a greater likelihood of reporting a non-spousal partner (for married men) or more than one sexual partner (for unmarried men and unmarried women). Conversely, Khan et al's (2008) study of mobility and sexual behaviour in Burkina Faso found that HIV-related risk behaviours were associated with mobility for women, but not for men; while Lagarde et al's (2003) study in Senegal and Guinea Bissau found a significant statistical

association for both men and women between short-term mobility and risk behaviours, but not long-term mobility.

Contrasting results can also be found between studies that focus on the same population group (Deane et al. 2010). Two studies which collected data from the same epidemiological cohort in Tanzania, but using different definitions of mobility found mixed and conflicting associations between mobility, HIV infection and risk behaviours. Kishamawe et al (2006) found that for men, there was no statistically significant difference between mobile groups in terms of HIV prevalence or incidence, and little evidence to show strong differences in risk behaviours. However, long-term mobile women had statistically higher levels of riskier behaviour and HIV prevalence rates. Further analysis of these data found that resident men with long-term mobile wives had the highest levels of HIV prevalence, and also engaged in significantly higher levels of risky sexual behaviour, confirming that it is also important to consider the partners mobility status. In comparison, Vissers et al (2008) working with data collected from a different survey of the same population, found that 'co-resident mobile' men had significantly higher levels of risky behaviour than co-resident non-mobile men, a result that seems to contradict Kishamawe et al (2006), who found the highest levels of risky behaviour among resident men who had mobile spouses. For women, Vissers et al report no significant differences between the groups for either risky behaviour or prevalence, though the nominal HIV prevalence rate was higher for non-mobile coresident women than it was for mobile coresident women, conflicting with the highly significant results for long term mobile women reported by Kishamawe et al.

Some studies support the view that mobility is associated with HIV infection and also risk behaviours. For example, Mmbaga et al (2008) found an inverse relationship between HIV prevalence and years since in-migration for both men and women, with those who have recently moved to the area having the highest prevalence rates, and a much smaller difference between long-term in-migrants and residents. These prevalence rates were to a large extent supported by similar trends between risk behaviours and years since in-migration, though they were not always statistically significant. However, there are also studies that find no strong link between migration and risk behaviours or HIV infection at all. Mundandi et (2006) al found no significant differences in HIV incidence or risk behaviours between out-migrants and residents in a study conducted in Manicaland, Zimbabwe (Mundandi et al. 2006), whilst Coffee et al (2005), also using data from rural Zimbabwe, report a mixed relationship between mobility and HIV infection, finding that rural to rural migration was more important than rural to urban migration in explaining HIV prevalence rates (Coffee et al. 2005). This ambiguity and lack of a clear relationship between mobility and HIV risk is not limited to studies that use this statistical

approach. Coast (2006), for instance, reported that Maasai migrants to cities in Tanzania were ‘not having sex in town’ (Coast 2006, p1000), challenging the standard representation of urban to rural transmission.

Alongside these mixed results, closer scrutiny reveals trends and correlations that cannot be easily explained by either the qualitative work that occasionally accompanies them, or by recourse to other phenomena found in the literature, as well as, in some cases, overly strong claims about the links between migration and HIV. One influential study on mobility and HIV in the Tanzanian context, discussed above, is Kishamawe et al (2006), who compare data on sexual behaviour and HIV prevalence and incidence for three different mobility groups for men and women from an on-going cohort study in north west Tanzania (see Table 3.6).

	Men			Women		
	Resident N=1049	Short-term mobile N=474	Long-term mobile N= 152	Resident N=1534	Short –term mobile N=444	Long-term mobile N=207
Regular non spousal partner	13.6	14.7	11.5	2.0	1.1	8.3
Casual Partner	26.7	28.7	29.7	1.8	1.1	5.2
Two or more sex partners	40.0	47.8	45.2	2.4	1.7	6.8
Three or more sex partners	17.2	19.2	22.6	-	-	-
Ulcers in private parts	4.6	6.7	5.7	3.1	1.8	3.5
HIV Prevalence	5.7	4.0	2.8	2.7	2.7	7.7
HIV Incidence	2.1	1.5	1.7	0.7	1.2	1.8

Table 3.6 – “Relation between mobility status and sexual risk behavior and sexually transmitted disease (STD)/HIV status, by gender”. Source – Kishamawe at al 2006, p604

Notes - Values are age adjusted percentages. Statistically significant results where p is either <0.01 or 0.05 are highlighted in bold (authors emphasis)

Remembering the different definitions of each mobility group detailed in table 3.5, the results show that for men, there are no statistically significant differences between mobility groups in terms of ulcers in private parts, HIV prevalence or HIV incidence, and minimal differences in sexual behaviour, with short-term mobile men slightly more likely to have had two or more sex partners, with statistical significance disappearing for three or more sex partners. These preliminary results suggest a very ambiguous role for mobility, if any at all, and raise questions as to why behaviour and prevalence vary so little across mobile groups. More interestingly, the nominal HIV prevalence and incidence rates do not suggest a standard relationship that would become significant with an increased sample size, as nominal rates for HIV prevalence are lower as mobility increases, and incidence highest in non-mobile men. Conversely, for women, there are a clear set of significant results, with long term mobile women engaging in more risky sexual behaviour and having higher HIV prevalence. However, the lack of any difference

between short-term mobile women and resident women suggests that the nuances of the relationship remain obscured.

The innovative step of this study was to introduce a further level of analysis that also incorporates the mobility status of the partner. For the male analysis, based on the previous results, the categories short-term mobile and long-term mobile were combined due to the lack of differences. The results reported are presented here in Table 3.7 (men) and Table 3.8 (women).

	Resident Men			Short or long term mobile men		
	Resident wives N=736	Short-term mobile wives N=178	Long-term mobile wives N= 47	Resident wives N=273	Short-term mobile wives N=150	Long-term mobile wives N=157
Regular non spousal partner	11.7	16.9	30.9	13.0	14.5	10.4
Casual Partner	23.0	29.7	36.3	25.7	28.0	29.0
Two or more sex partners	36.7	43.3	62.4	47.2	43.3	44.9
Three or more sex partners	15.1	17.5	25.1	16.8	18.0	18.7
Ulcers in private parts	3.8	4.4	11.9	4.7	8.3	5.2
HIV Prevalence	5.5	4.4	11.2	3.5	2.6	2.6
HIV Incidence	2.0	0.7	6.0	1.6	0.0	0.5

Table 3.7 - “Relation between mobility status and sexual risk behavior and sexually transmitted disease (STD)/HIV status for men, by mobility status”. Source – Kishamawe et al 2006, p605

Notes - Values are age adjusted percentages. Statistically significant results where p is either <0.01 or 0.05 are highlighted in bold (authors emphasis)

	Resident women		Short-term mobile women		Long-term mobile women	
	Resident husband N=1043	Short-term mobile husband N=472	Long-term mobile husband N= 210	Resident husband N=227	Short-term mobile husband N=28	Long-term mobile husband N=177
Regular non spousal partner	1.8	3.1	1.0	1.3	7.4	8.6
Casual Partner	1.3	3.0	1.3	0.5	1.2	5.9
Two or more sex partners	2.3	2.6	1.7	1.4	6.2	7.2
Ulcers in private parts	3.1	3.3	2.2	1.4	5.0	3.5
HIV Prevalence	2.4	3.5	3.6	1.7	0.0	8.6
HIV Incidence	0.6	1.3	1.1	1.1	0.0	2.2

Table 3.8 - “Relation between mobility status and sexual risk behavior and sexually transmitted disease (STD)/HIV status for women, by the mobility status of their husbands”. Source – Kishamawe et al 2006, p606

Notes - Values are age adjusted percentages. Statistically significant results where p is either <0.01 or 0.05 are highlighted in bold (authors emphasis)

This second step reveals some previously unseen dynamics, and demonstrates to some extent the importance of disaggregating data. This can be seen in the result for men, which shows that, contrary to the standard narrative, it is resident men with long-term mobile wives that have statistically significantly higher levels of both risk and HIV prevalence/incidence. However, the partner's mobility status seems to have little impact for short or long-term mobile men. These results suggest that for men, mobility is not associated with either enhanced risk behaviours or vulnerability to HIV, and as such could have been presented as evidence to challenge the standard narrative, though this was not the interpretation of the authors.

The results for women, in stark contrast to the male results, show that disaggregating the data does not always lead to greater precision. This is in part due to the small sample size, but despite that, overall a less clear pattern emerges. There remains a distinct lack of difference between resident and short-term mobile women even accounting for the different mobility statuses of the husband, and whilst it appears that long term mobile women with long term mobile men have much higher nominal levels of risk behaviours and infection, disaggregation has removed the significance. However, due to the results from the preceding step, and the general low levels of reported behaviour and infection in the resident and short-term mobile categories, it was unlikely that disaggregation would have uncovered large differences in the second step.

Overall, the general lack of statistically significant results throws up a number of questions, as the explanations for these trends are not immediately obvious, and the relationship between the various mobility categories and risk behaviours/HIV infection counterintuitive. Interpreted differently, these results could have provided the basis for further research that seeks to challenge the standard mobility narrative, but instead, the title of the article is 'Mobility and HIV in Tanzanian couples: both mobile persons and their partners show increased risk' (Kishamawe et al. 2006, p601), an overly strong conclusion when closely examined.

Beyond the statistical work on Tanzania that also includes Mbagi et al (2008), and Vissers et al (2008), there are a limited number of studies that take a different approach. This emphasises the dominance of epidemiological studies in the construction of the HIV-mobility narrative in Tanzania. Coast (2006) examines the sexual behaviour and HIV-related knowledge of Maasai migrants to explore the standard notion that HIV is spread to rural areas through circulatory rural to urban migration. However, as noted above Coast argues that this is not the case for this population group (Coast 2006), illustrating that using a different lens, which was in this

case a mixed methods approach, alternative conclusions can be uncovered. The case study of Maasai migrants was also addressed by May et al (2004), who note the growing numbers in urban areas due to increasing impoverishment of the Maasai population (May et al. 2004). Sexual behaviour in the city was reported to be low, with only two out of 50 male migrants stating that they had sex with a 'Swahili woman'. However, the low levels of awareness around HIV in the Maasai community, coupled with their involvement in extensive kinship and sexual networks characterised by polygamous relationships, led the authors to conclude that, unless interventions addressed this marginalised community, this was a catastrophe waiting to happen (May et al. 2004). These two studies illustrate approaches that address migration as a process, and the importance of understanding both the process and the experiences of migrants in terms of how these shape risk.

Conclusions on the role of mobility

A review of the evidence gathered from case studies that use the statistical methodology demonstrates that there is no universal correlation between mobility on its own (in its various definitions) and HIV risk behaviours or prevalence, for either men or women, nor in relation to the duration spent away from the household (Deane et al. 2010). Instead, studies focusing on different populations and settings typically report contrasting results. There is also often an ambiguous relationship between reported risk behaviours and HIV prevalence, with higher levels of risk behaviours not always translating into higher levels of infection rates, and when subjected to closer scrutiny, results are not always statistically significant, and in some cases significant results have been unwittingly over-emphasised at the expense of insignificant ones. The review shows that the results are inconsistent and inconclusive, making it difficult to formulate any clear statement on the role of mobility in enhancing risk. This is an important finding that to some extent undermines the dominant narrative, and raises questions about why and how migration and mobility influence risk across different contexts.

The mixed results reported here will in part be influenced by noise in the data, such as the misclassification of mobility status due to recall bias, or the well documented problem of self-reporting of sexual behaviour (Nnko et al. 2004). However, the inconclusive results are also due to the weaknesses of the statistical methodology used. One of the requirements of the statistical framework is the need to create a variable that will enable the survey sample to be split into 'mobile' and 'non-mobile' categories. The definitions of mobility used in these studies (see table 3.5 above) are very broad, and are purely designed to capture whether an individual has moved or not and/or conceptualised as either being away from the household for a specified length of time in a preceding time period, or the length of time that a household

or migrant had been resident in a specified location. Additionally, in some cases, mobility is further divided into shorter or longer term mobility in attempt to add a degree of nuance to the analysis.

Whilst it is acknowledged that beyond clearly defined occupational groups other internal flows are more difficult to identify, these definitions are extremely abstract, and confuse and conflate many different forms of mobility and migration, such as urbanisation, seasonal and circulatory migration, rural to rural migration, commuting, internal displacement, and international forced migration, alongside mobility that is motivated by sexual behaviour, such as movement by polygamous males. This prevents any incorporation of a range of factors associated with migration and mobility such as the characteristic of the origins and destinations of migrants, the reasons for migration, and the associated patterns of movement into the analysis (Deane et al. 2010). However, it is unclear whether these factors could be incorporated into the standard statistical framework, as broad definitions are required due to the need for sample sizes that are large enough for statistically significant results to be established. If mobility status were to be replaced by a more detailed category of specific reasons for moving, this may require prohibitively large sample sizes in order for comparisons around sexual behaviour and HIV prevalence to be made. Nevertheless, this serves to highlight that the framework is not well suited to enabling a more nuanced and comprehensive approach to unpacking the relationship between mobility and risk.

An additional weakness of the statistical approach is that there is no incorporation of mobility as a complex and dynamic socio-economic process. Rather, the requirements of the methodology dictate that mobility is reduced to a static and abstract variable that is treated in the same way as an individual characteristic or trait. This reductionism removes any incorporation of context or structure, and is reflected in the categorisation of mobility by the Tanzanian Government as an individual level behavioural factor, rather than an underlying socio-economic driver. This individualistic conceptualisation is not unsurprising, as the majority of studies conducted on mobility and HIV in Tanzania use this method. However, this is at odds with much of the theoretical work on migration and mobility, which views population flows as shaped by structural and social forces (Wood 1982), capital accumulation and uneven development (Portes 1978; Johnston 2012), kinships systems (Boyd 1989), with migration in some cases conceptualised as a system (Fawcett 1989). This further emphasises the lack of any real attempt to understand these processes as anything but the act of moving (or not), which, as has already been established, is not necessarily risky in itself.

Finally, the statistical analyses are only able to establish whether or not mobile groups have higher risk behaviours or HIV rates, and are unable to establish causality between the variables. The approach, therefore, fails to account for how and why mobility influences risk, for example through its impact on sexual networking patterns or, as discussed earlier, the fact that mobile persons may be moving into geographical areas where the prevalence rate is significantly different from their sending area. As mobility itself is not a direct risk factor, complementary research is needed to shed light on why and how mobility may influence risk, and to capture of the important elements that will influence both risk behaviour and risk contexts (Deane et al. 2010), something that this project will attempt to do.

3.5 Conclusion: Developing the research questions

This chapter has reviewed the literature that investigates the relationship between migration and population mobility and HIV risk. Current thinking within the health literature on the role of migration and mobility sees migrants as populations that are vulnerable to infection, engaging in riskier sexual behaviour than those who remain at home, with the implication that this has the potential to intensify transmission, leading to prevalence rates across the general population stabilising at a higher level in comparison to scenario's in which migrants do not engage in greater levels of risky sexual behaviour. Two case studies, truck drivers and mineworkers, dominate the literature. Although it remains unclear to what extent these lessons can be extrapolated across all mobile population, they are, with some exceptions (for example see Thomas et al. 2010), generally accepted. One outcome of this is that further study of the relationship between migration/mobility and HIV risk is often reduced to the quantification of statistical differences in either HIV prevalence or sexual behaviour between 'non-mobile' and 'mobile' groups. However, the results of these statistical exercises are often inconclusive and inconsistent, with no universal correlation between mobility and HIV risk for men or women, indicating that the relationship between migration/mobility and risk behaviours is not always well understood. These also reveal little about the complexity of the role that population mobility may play in influencing behaviour and the dynamics of the epidemic. This is certainly the case for Tanzania, in which these forms of studies dominate, highlighting the need for more work that takes a different and complementary approach to enable a better understanding of the relationship between mobility and risk.

This review has enabled the formation of a number of critical insights from which the research questions can be developed, as well as providing some guidance as to the general methodological approach, explored in more detail in chapter four. Firstly, it has been argued

that, rather than being an individual or behavioural risk factor, migration and mobility is more correctly conceptualised as a structural driver. Referring back to chapter two, structural drivers were defined as ‘core social processes and arrangements - reflective of social and cultural norms, values, networks, structures and institutions - that operate around and in concert with individuals’ behaviours and practices to influence HIV epidemics in particular settings’ (Auerbach et al. 2011). This makes it clear that migration/mobility can be more rigorously thought of as a core social process, located within the workings of the social system and hence shaped by social/structural and systemic forces. Therefore, understanding how processes of migration and mobility are structured is the necessary starting point for this project, reflected in the first research question:

1. How do local socio-economic structures influence population mobility in general, and specific forms of mobility and/or migration?

Secondly, one consequence of the statistical approach is that migration/mobility is reduced to an abstract individual variable. This is in part due to the requirements of the framework itself, which necessitates this reductionism. However, it has been argued that migration/mobility is as a dynamic social process that occurs across space and time, and needs to be incorporated into the analysis in this way. Added to this, the statistical framework is utilised to measure an association between mobility and HIV, rather than investigating how or why a certain relationship may hold. Therefore, the second research question aims to ensure that migration and mobility processes are fully understood as processes, and when linked to the transmission of HIV, the research will focus on how engaging in these processes may influence behaviour and HIV risk:

2. How do processes of mobility and/or migration create risky sexual environments and influence individual risk behaviours?

This question incorporates insights from the theoretical review in chapter two, reflecting the materialist approach to understanding how what people do influences risk. It directs attention to ensuring that many factors that are missing from, and for a number of reasons cannot easily be addressed within, the statistical framework, are incorporated in the analyses. These include considerations such as: who moves, why they move, how they decide where to go, patterns of movement, the characteristics of sending and receiving areas, and who they have sex with while away. Additionally, whilst the structural narrative is important, it is also necessary to attempt to explain risk at different levels of analysis, and also to ensure that the lived experiences of individuals are also accounted for. This ensures that these processes are not conceived as overly deterministic. This enables an understanding how social structures and

systemic forces are reflected in the behavioural decisions they make, as well as how their experiences of engaging in specific forms of mobility influences their sexual behaviour and HIV risk (or not).

A final observation is that there are a number of other structural factors, including poverty and wealth, gender inequalities and sexual norms around sex for exchange, that overlap with the themes developed in the main case studies, mineworkers and truck drivers. Therefore, in terms of any attempt to assess the extent to which the mobility of migrant and mobile populations is the main contributing factor, it is necessary to consider these influences:

3. Are there other factors that are not associated with mobility that influence risk behaviours of mobile populations?

To conclude this chapter, the literature review also highlighted two studies conducted in Mwanza region (Kishamawe et al. 2006; Vissers et al. 2008) that reported conflicting results, and in the case of Kishamawe, results that were inconclusive. This project is conducted in the same study site to complement these studies and enhance our understanding of mobility and risk in this particular area.

Chapter 4 – Tanzania: Background and introduction of the study site

4.1 Introduction

The previous chapter developed the research questions and the justification for the choice of the study site. In line with the political economy approach outlined in chapter two, and general insights from the review of the literature on structural drivers, it has been argued that it is necessary to understand the general context, and more specifically a context that is historically rooted. This chapter, therefore, provides a general introduction to Tanzania, including a review of the recent history, alongside some data on economic performance and other developmental outcomes. Following, the study site is introduced.

4.2 The context: Tanzania

4.2.1 Background: From Colonialism to Liberalisation

The recent history of Tanzania can be thought of as comprising three main periods (Komu 2012); the colonial phase, the immediate post-independence period, and the recent period of economic liberalisation from the 1980's onwards. These three periods have shaped current economic, social and political conditions, and provide a useful lens through which to trace the historical evolution of developmental processes in Tanzania, and which are pertinent when considering the current socio-economic context in the study site. Nevertheless, it is acknowledged that these are not necessarily universally agreed historical periods, and that this characterisation is to some extent Eurocentric, as it fails to address the pre-colonial period. Although this is no easy task, particularly due to the lack of written records which can make it difficult for history to be reconstructed (Maghimbi 1994), it is accepted that that this period is often presented in a highly stylised manner, and is not always accounted for. However, for the purpose of this brief review, which is to provide an overview of the historical context within which present day Kisesa can be understood, it has been decided to focus on these three phases.

The first phase identified is the colonial period. Following a pre-colonial period which saw increasing levels of slave trade and economic and political influence from Europe (Gewald 2005), including a number of expeditions by the German East Africa Company (Iliffe 1979), the decision to make mainland Tanzania, what was then known as Tanganyika, a German colony, was taken by Bismarck on 23rd February 1885. Control of first the main caravan routes was

followed by deeper penetration into rural areas away from the coast proceeded either by fighting wars or through making agreements with compliant local leaders (Iliffe 1979). German colonial rule set the basis for the British period of colonial rule, with the whole economy reshaped into a colonial, extractive pattern (Iliffe 1979). Whilst settlement was not officially encouraged due to concerns that this would lead to conflict with the indigenous population, the numbers of white settlers steadily increased, from 1,390 in 1904 to 4,998 in 1913, with around 20% of those engaged in agriculture, though the amount of land alienated by settlers amounted to less than 1% of land in Tanganyika (Iliffe 1979). This period was not without sporadic resistance, with the Maji-Maji rebellion of 1905-1907 the major effort by the native population to struggle against colonial rule, though this was eventually repressed (Temu 1969; Iliffe 1979; Gewald 2005).

The First World War saw Tanganyika transformed into a battleground, as the Germans attempted to attract as many opposition troops as possible to the region, and hence away from other important areas, whilst the British aimed to gain control of the whole of East Africa. This battle was played out across the country, with the Germans fighting what was an essentially guerrilla style campaign (Iliffe 1979; Gewald 2005). This had a devastating impact on many parts of Tanganyika, especially the southern regions where crops and livestock were commandeered, and diseases such as Spanish influenza and smallpox were spread by porters and native soldiers (and deserters) who had been recruited by either side (Gewald 2005). After 4 years of fighting the Germans surrendered in Tanganyika, and following the peace conference of 1919, the British were given full legislator powers under a Mandate, which, amongst other things obliged the consideration of the material and moral wellbeing of the local inhabitants, with a general acceptance by the governor at the time that Tanganyika should be 'primarily a black man's country' (Iliffe 1979).

British colonial rule was in many ways a continuation of German colonial rule, with British companies taking over German farms, except with the introduction of widespread African cash crop production (Iliffe 1979). However, having been the jewel in the crown of German colonial territory, Tanganyika held little attraction for the British in comparison to her other colonial territories, territories that she was already struggling to develop (Iliffe 1979), so that there were not widespread structural changes to the economy and limited investment, with Britain failing to attain the export levels of the German era. Important developments in this period included the introduction of indirect rule, in which local political systems and hierarchies were integrated with the colonial administration to form a single government, and also incorporate local leaders into this new government, an approach that had been pioneered in other colonial territories (Iliffe 1979). However, paradoxically indirect rule introduced more, not less,

involvement in the daily lives of the local inhabitants, and represented the deepening and penetration of society by the state (Iliffe 1979), and was in part designed to prevent the growth of nationalist forces by linking administrative units to chiefs and along tribal lines (Temu 1969).

The interwar years were marked by a growth in regional differentiation across Tanganyika, in general shaped by patterns of cash crop or plantation production, and the drive by the indigenous population for economic improvement and education (Iliffe 1979). The seeds of the nationalist movement had been sown in the form of The African Association (TAA), though this existed on a small scale, with the main political force comprising a selection of radicalised growers Co-operative Unions (Temu 1969). From 1945 onwards, the TAA began to grow steadily in urban areas, and attempted to gain support in rural areas, with a total of 39 branches created by 1948 (Temu 1969). However, though it was still only a semi-political body, it represented the beginnings of the independence movement, and also had begun to develop the organisational infrastructure necessary for such a movement. In 1953, Julius Nyerere was elected the President of TAA, and in 1954, the TAA was transformed into the Tanganyika African National Union (TANU), a new political organisation with the stated aim of *uhuru* (freedom) (Temu 1969). The political leadership of Nyerere was crucial with regards to the push for independence, as his western education had provided him with the knowledge and skills to 'organise a movement which did not grow from local necessities' (Iliffe 1979), whilst the simple aim of the organisation appealed to the masses (Temu 1969). After an unsuccessful appeal to the United Nations, Nyerere devoted himself full time to the building of a mass nationalist movement (Iliffe 1979). Initially, TANU targeted growth in areas that were experiencing opposition to and discontent with the native and colonial administration, with recruitment increasing rapidly to around 200,000 members by 1958 (Temu 1969). Discontent with the colonial administration had begun to grow in the immediate post-war period, as more pressure was placed on Tanzanians to increase production as Britain recovered from an expensive war, with a number of development schemes initiated, and legislation passed by the native administration to force farmers into adopting productivity enhancing techniques. This top down pressure was bitterly resented by the peasantry, and led to increasing opposition and resistance to these measures, situations which were capitalised on by TANU (Temu 1969).

This organisational growth was not without opposition, as the Colonial Administration banned TANU in a number of districts, and, as a reaction to the commitment of TANU to establishing Tanganyika as a country for Black Africans, an alternative political party, the United Tanzania Party (UTP), was established to contest multi-racial elections in 1958-59, in which the electorate had to elect three candidates (one Black, one Asian and one White) per

constituency (Temu 1969; Iliffe 1979). Having considered withdrawing from these elections, TANU eventually decided to participate, and won a landslide victory in both 1958 and 1960, victories which finally pushed the British Government to grant Tanganyika independence on December 9th, 1961 (Temu 1969; 2010). Zanzibar, then an independent territory to Tanganyika, gained independence from the British a few years later on December 19th, 1963, and after the overthrow of the short-lived Sultanate by the Afro-Shirazi Party (ASP) in January 1964 (Commonwealth Secretariat 2010), these two territories were unified a few months on as the United Republic of Tanganyika and Zanzibar, later renamed the United Republic of Tanzania on October 29th, 1964 (Temu 1969).

The initial post-independence period was marked by a period of nationalist consolidation, with first president Julius Nyerere promoting a national identity above a tribal one, and also the concentration of power in the new colonial state, as this was seen as the primary agent of economic development by Nyerere (Shivji 2012). The army was disbanded, and all trade unions banned and replaced by one new trade union that was subordinate to the state (Shivji 2012). This increase in state power led to the growth of corruption, with the state a site of accumulation, and increasing discontent with the post-independence government (Shivji 2012). In 1965, political power also became more concentrated, with the introduction of the one party state, designed to prevent political cleavages along tribal lines, and also to ease the process of policy-making (Mwakikagile 2002). This period saw the prioritisation of education, with a large expansion of schools across Tanzania, and the emphasis in these schools on Swahili as the national language (Okoko 1987).

In 1967, TANU adopted a policy of self-reliance based on a commitment to African Socialism, as outlined in the famous document the Arusha Declaration (Nyerere 1967). In this document, which was more accessible than Nyerere's previous work, he outlined the principles of equality, unity and freedom upon which African Socialism would be built:

"There must be equality, because only on that basis will men work cooperatively. There must be freedom, because the individual is not served by society unless it is his. And there must be unity, because only when society is unified can its members live and work in peace, security and wellbeing." (Nyerere, 1967a in Ibhawoh et al 2003, p62)

In contrast to European Socialism, Nyerere saw the roots of African Socialism not in class struggle, but in the traditional system of the African extended family and the communal principles and values of traditional African life. The three underpinning principles were also viewed as being part of the traditional social order, with Africans demonstrating a pre-disposition towards socialism (Ibhawoh et al. 2003), emphasising the fact that Nyerere sought

to cast African Socialism as something that reflected elements of society that already existed, and not as something that had been imported from the West. This distinguished his brand of socialism as 'African', reviving stylised views of pre-colonial Tanzania and Africa. The Arusha declaration also stated that to end exploitation of one citizen by another, and to ensure economic justice, the State was required to intervene in economic life and have effective control of the principal means of production (Nyerere 1967). As a result, large plantations, banks, insurance and, wholesale business were nationalised (Ibhawoh et al. 2003; Shivji 2012). Alongside this, strict codes of conduct were placed on the party leadership and civil servants in attempt to combat corruption.

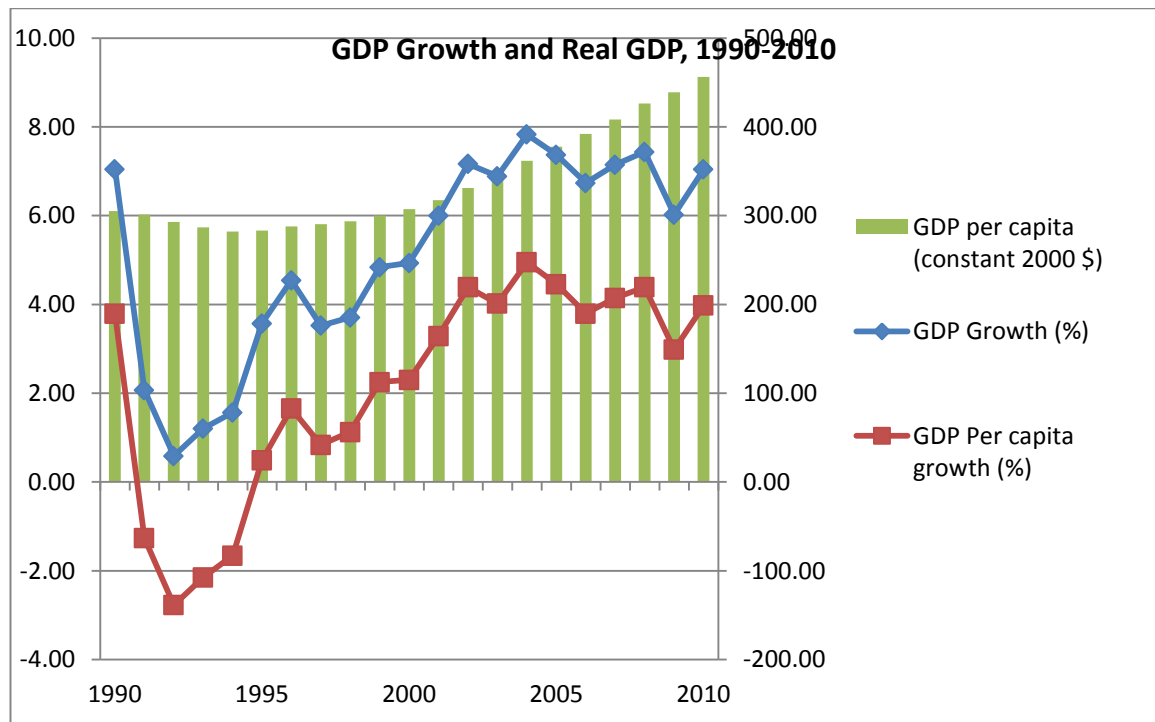
The sister paper to the Arusha Declaration, Socialism and Rural Development, published in 1968, outlined the future for rural development, based around a policy of villagisation through the creation of Ujamaa villages. Under this scheme, villagers were encouraged to come together in newly formed villages which were to be based on collective ownership and work in an attempt to increase production through investment in mechanisation and technical innovation, and also enhance the efficiency of social spending on service provision through economies of scale, as infrastructure and social services could more easily be extended to a less dispersed rural population (Okoko 1987). At first, this scheme was voluntary, but by 1973, with uptake slow, and more authoritarian forces within TANU gaining hold, it was announced that all the rural population should be living in villages, marking a period of forced villagisation, with millions of peasants removed from their land and resettled.

Initially, economic performance was promising, with modest growth for the first decade of independence. Towards the end of the socialist period, Nyerere had begun to attempt some industrialisation, with foreign currency spent on the importation of capital goods (Bryceson 1993). However, with the oil price shock in 1973, combined with drought in 1972 and again in 1974 (Bryceson 1993), food imports increased and the trade deficit began to increase. A recovery in agricultural production in 1977 and 1978 was followed by the second oil price shock in 1979, along with the war against Idi Amin in Uganda, which placed further pressure on the state finances, leading to the build-up of a sizeable external debt. The economic crisis was also exacerbated by a drop in bilateral aid of around 30% in connection with Nyerere's refusal to sign a structural adjustment agreement with the IMF (Skarstein 2005). During these years of crisis, the right had begun to gain ground within the ruling party, and a failed coup in 1982 signalled the growing pressures on Nyerere (Shivji 2012). With his position as president becoming increasingly untenable, and growing internal and external pressures for a move towards liberalisation, Nyerere stepped down as president in 1985, handing over power to Ali Hassan Mwinyi.

This signalled the end of the socialist experiment of the 1960's and 1970's, and the beginnings of a new economic and political era characterised by rapid economic liberalisation, the third period identified by Komu (2012). Tanzania signed a Structural Adjustment Programme with the IMF in 1986, less than a year after Nyerere's resignation, with relief funding released by the IMF accompanied by a liberalisation programme which included, amongst other things, exchange rate devaluation, trade liberalisation, parastatal and civil service reform, bank denationalisation, agricultural sector reform designed to remove subsidies and price distortions (described in more detail in chapter five), and policies designed to attract foreign investment (Pallotti 2008; Cooksey 2011), reflecting the standard macro-economic policy prescriptions of the Washington Consensus. As Tanzania's engagement with market-oriented policies gathered pace under the presidency of Benjamin Mpaka, fuelled by a growing acceptance of the need to participate in the global economy and a re-evaluation of the role of the State in economic development (Grosen et al. 2010), second generation economic reform in the 1990's, based on a second agreement with the IMF, included a privatisation programme, including all state-owned utilities (Bayliss 2008), and reforms that targeted foreign investment, regulation, banking and the finance sector (Gibbon 1995), marking a complete reversal of the socialist policies in just 10 years (Bayliss 2008). However, as with any implementation of such a dramatic reform programme, this is a slow and as yet incomplete transition, and has attracted opposition and a backlash from a range of groups, including the politico-bureaucratic elite, with the position of Tanzania as a star reformer highly questionable as the level of reform is often overestimated (Cooksey 2011).

Economic Liberalisation, Economic Performance and Development

The impact of economic liberalisation is subject to much debate (Atkinson et al. 2010; Mkenda et al. 2010). In the initial years following liberalisation, agricultural productivity and performance declined for a range of reasons such as increased input prices and a decrease in the ratio between producer prices and input prices (Skarstein 2005). However, recent annual GDP growth data suggest a phase of economic recovery, as following negative GDP per capita growth in the 1990's, the annual growth rate has been sustained above 4% since 1999, climbing to over 6% from 2001 onwards (see graph 4.1). Accounting for small fluctuations in annual population growth rates, the GDP per capita growth rate has kept pace with the result that real GDP per capita has increased by around 50% since 2000.



Graph 4.1 – GDP growth, per capita, and real GDP, 1990 – 2010 (based on data from the World Development Indicators April 2011 edition, access via ESDS International, University of Manchester)

Although the accuracy of the data on which annual percentage growth rates in sub-Saharan African countries are calculated has been questioned in some quarters (Jerven 2010), this recent trend is encouraging. However, it is unclear as to whether these high economic growth rates have translated into large reductions in poverty (Mkenda et al. 2010). Whilst it is acknowledged there are a number of different ways to both define and measure poverty, with little consensus over what represents the best method (Greeley 1994; Falkingham et al. 2002), some measures show significant progress. For example, measuring poverty in Tanzania using international poverty lines, the World Bank reports that based on data from a national survey in 2007, 67.9% of the population lived on less than \$1.25 per day, and 87.9% on less than \$2 per day. In comparison to data from the 2000 survey, this represents a reduction of 20.6% and 8.7% respectively (World Bank 2012). However, when a national poverty line is used, poverty incidence has only decreased by just over 5% between 1991 and 2007, with this reduction concentrated primarily in Dar Es Salaam and other urban areas (Policy Forum 2009). Using recent data, the poverty rate has declined by just 2.3% from 35.7% in 2000 to 33.4% in 2007 (Atkinson et al. 2010) during a period marked by annual GDP growth rates of over 6%. Accounting for a growing population, the absolute number of people living in poverty has actually increased between 2001 and 2007 (Policy Forum 2009). This casts doubt on the optimistic rates of poverty reduction reported by the World Bank, and suggests a high degree

of sensitivity over the type of measure used. One explanation for the small reductions in poverty is that, between 2001 and 2007, the gains from growth were distributed unevenly, with the poorest quintile income group experience a reduction of 2% in terms of consumption growth, whilst for the wealthiest quintile income group consumption growth was 7% (Mkenda et al. 2010).

In terms of standard inequality measures such as the Gini coefficient, inequality has not increased substantially in recent years (Mkenda et al. 2010), suggesting that some of the benefits of economic growth are filtering through to the poor. However, when inequality is measured in real, rather than relative, terms, the gap in income levels between the richest and poorest quintiles has increased substantially (Atkinson et al. 2010), with the richer becoming richer, and the very poor becoming poorer (Policy Forum 2009). These trends suggest that general increases in GDP and high economic growth rates have been accompanied by processes of differentiation, both within and between urban and rural areas.

Of course, growth and income levels are not the only methods for measuring development. Utilising an alternative approach to quantifying development, the Human Development Index, an index that incorporates measures of life expectancy, mean years of schooling, expected years of schooling along with Gross National Income (GNI) per capita, ranks Tanzania in 157th place out of 187 countries with a score of 0.466 (UNDP 2011). However, when comparing Tanzania's HDI and GNI ranks, in comparison to the HDI scores and income levels of other countries, Tanzania is doing relatively better in terms of broader development than a purely income based measure. It has been noted that the general pessimism surrounding performance of many African countries often hides significant developmental achievements (Sender 1999), something which is certainly applicable to Tanzania, where primary school enrolment is almost universal, adult literacy rates have improved markedly to 72%, the infant mortality rate has decreased by 50% between 1998 and 2010, nearly 50% of births are now attended by a skilled health worker, and internet use has exploded. This suggests that there is a more complex picture of economic and social development and change within Tanzania that is difficult to capture with one measure or index (World Bank 2012).

This section has presented an overview of the recent history of Tanzania from the colonial period onwards, alongside some more recent trends in economic growth rates and poverty and inequality measures. This provides the historical socio-economic context within which processes of mobility and migration and the dynamics of economic change in the study site are situated and understood. Of key importance is the transition from the socialist phase to a

population is estimated to be 3.5 million, with around 20% of the regional population living in urban areas, though using a density based measure this increases to around 55%, the fourth highest in Tanzania. In relation to general trends in internal migration and population mobility, the key theme of this thesis, whilst rapid urbanisation has been observed in a range of sub-Saharan African countries, this process is proceeding at a somewhat lower pace in Tanzania, with only 26.4% of the population living in urban areas in 2010, in comparison to 20.5% in 1995, with 7.5% of the population living in urban agglomerations of over 1 million inhabitants (World Bank 2012). Mwanza city experienced a population growth rate of 3.7% between the period 1988 and 2001 (Muzzini et al. 2008), although it is unclear to what extent this process is one that has continued until the present day (Potts 2012). This urban growth rate is by no means the highest rate of urban growth in Tanzania. However, of interest here is that the source of urban growth in Mwanza city is predominantly a net in-migration rate of 2.2%, which accounts for nearly 60% of urban growth (Muzzini et al. 2008). Therefore, in-migration to Mwanza city from the surrounding regions is an important process to consider when assessing the dynamics of the local context.

Mwanza region is in a part of Tanzania which is known as Sukumaland, which also covers areas of other regions such as Shinyanga, where the Sukuma tribe are the dominant ethnic group, a tribe which is the largest of Tanzania's 120 tribes. Swahili is now spoken widely across the region, though in some rural areas and sections of the population, Sukuma is spoken. Traditionally, the Sukuma are farmers (Gottfried et al. 1962), and to this day agriculture and animal husbandry are the main forms of economic activity engaged in by the local population, primarily cultivating food crops such as maize, cassava, sorghum, millet, sweet potatoes, paddy and legumes (Msekela 2008). However, Mwanza region does not produce enough food to be self-sufficient, and is reliant on the transfer of food from other regions (Msekela 2008), and in particular in relation to maize, this has been the case for a number of decades (Bryceson 1993). Alongside food production, Mwanza is the major cotton producing region in Tanzania accounting for around 85% of national production (Poulton et al. 2009). The proximity of the lake has also, as noted above, provided a source of livelihoods for a range of people engaged in the formal and informal fishing industry, from fishing on the lake to processing and trading Nile Perch, Tilapia and Dagaa. Mwanza's unique geological makeup, which is marked by rocky outcrops across the region, has also led to open-face quarrying of stone used for house and road building. Mwanza also hosts the largest gold mine in Tanzania, Geita mine, run by AngloGold Ashanti. The foreign ownership in the mining sector as a whole has been strongly criticised for the distribution of benefits between corporation and the Tanzania people, and for this reason it is unclear to what extent this benefits the local population (Curtis et al. 2008).

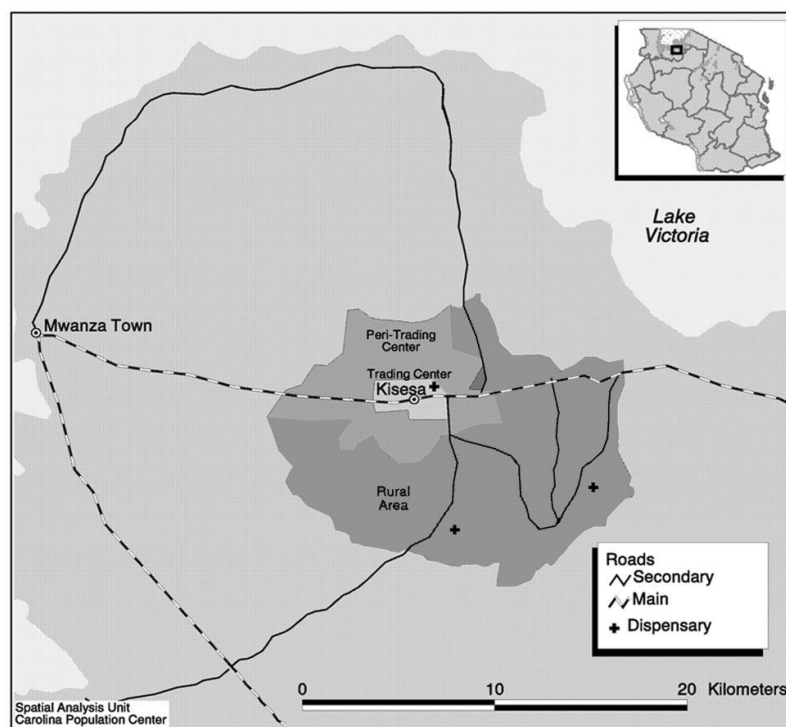
Mwanza city hosts a number of industrial plants, such as bottling plants for Coca-Cola and Pepsi, processing plants for Nile Perch for the export market, breweries and the manufacture of a range of other products, such as plastics, soap and agricultural feed (Kitundu). The city is also a regional hub for the transit of goods to other countries, such as Kenya, Rwanda, Burundi and Uganda, and also for expatriates working in the gold mining industry in Geita. Alongside the formal sector is a burgeoning informal sector, complemented with urban agriculture which is an important supplement to urban incomes (Flynn 2001). The contribution to the Mwanza regional economy of tourism is low. Although the western gate to the Serengeti national park is in Mwanza region and accessible via the main road that connects Mwanza city and Kenya, the tourist industry in northern Tanzania is concentrated in Arusha, which is to the east of the main national parks, and also close to Kilimanjaro.

Kisesa Ward, Magu District, as noted in chapter four, is around 20km outside Mwanza City, with the main road to Kenya passing through the ward. The proximity of the city has a great influence on the local economy, providing economic opportunities in both the formal and informal sector. Transport into Mwanza City costs 300 Tanzanian Shillings (Tshs)⁹ (around 12 pence in Great British Pounds (GBP)) on the *daladala*, the local public transport, with costs lower to areas on the outskirts of the city such as Igoma which have larger markets and commercial centres. Whilst there has been a degree of urbanisation along the main road in Kisesa, which hosts a number of hotels, bars and places to eat, the majority of the population, which is estimated to be around 30,000, are reliant on agriculture for subsistence and income for consumption goods, though this is often complemented by a range of other livelihood activities, including gathering wood, trading a range of local agricultural products, quarrying stone, and cooking food. The main permanent market is located in the trading centre, though basic foodstuffs such as tomatoes, dagaa and water melons can also be purchased in the open ground area. There is a weekly market every Friday where a range of consumer goods such as clothes, material, shoes, children's toys and plastic homeware, are available. Other small industries located along the main road include a furniture workshop, bicycle maintenance, and a number of *maduka* (shops). Kisesa is well served with local healthcare services, with three dispensaries and a healthcare centre, including HIV Counselling and Testing Services in the trading centre.

As noted in the previous chapter, Kisesa is the site for an on-going demographic cohort study, the TAZAMA project, that tracks HIV incidence and prevalence, along with the vulnerability and response to the epidemic by the population (TAZAMA Project a). The TAZAMA project was set

⁹ At the time of the Fieldwork, 1 GBP = approximately 2,500 Tshs

up in 1994 by the Tanzania - Netherlands Essential Strategies for AIDS (TANESA), and has continued with the help of funding from a range of sources to provide an on-going cohort survey that has produced a unique longitudinal dataset, as well as support to a range of qualitative projects and methodological findings that complement the epidemiological analysis (Nnko et al. 2004; Hallett et al. 2008; Roura et al. 2009). Map 4.2 has been developed by the TAZAMA Project (Boerma et al. 1999), and presents an overview of the local geography of Kisesa ward, which is divided into three main geographical areas: a trading centre, which is predominantly the urbanised area located on either side of the main road that passes through the ward, a peri-trading centre area, and a rural area. Each area is represented on the map with different levels of shading, with the trading centre shaded in the lightest grey, and the rural area shaded in the darkest grey. The main villages in Kisesa are Kisesa A, which is essentially the trading centre, Kitumba, located to the south of the main road in the peri-trading centre, and Igekemaja and Welamasonga, both rural villages marked on the map by the dispensary signs, with Igekemaja directly south of the trading centre, and Welamasonga to the south east of the ward.



Map 4.2 – Kisesa Ward. Source (Boerma et al. 1999)

In terms of organisational structure, in Mwanza region villages are divided into sub-villages and a further sub-unit comprising 10 households. The key community governance structures are shaped round this division, with each village having a Village Chairman, sub-Village Chairman, and *balozi*, those in charge of 10 households. Alongside this community organisation, each village also has a Village Executive Officer (VEO), a government employee who is responsible

for village administration. The VEO reports to a Ward officer, who in turn works under the direction of a District officer. Having gained formal permission from the District and Ward officers to conduct the research project, the VEO's and Village Chairman of each village were the first point of contact prior to engagement with other community members, and as such were a vital source of information about and gateway to the community.

Local Epidemiology

The HIV prevalence rate in Mwanza region is comparable to the national rate at 5.6%, though with larger gendered disparities, with women nearly twice as likely to be infected as men (7.1% compared to 3.7%) (TACAIDS 2008). The prevalence and incidence of HIV in Kisesa ward has been tracked since the early 1990's through the on-going demographic cohort study described in the preceding chapter. HIV prevalence and incidence from early rounds of the cohort survey reported age-standardised prevalence rates of 5.8% for all adults aged 15-44 in the 1994-95 survey round, which had increased to 6.6% in the 1996/97 survey round (Boerma et al. 1999), and, in line with the national prevalence rates reported above, women had significantly higher prevalence rates. At this time, there were also important spatial differences, with HIV prevalence between 3 and 4 times higher in the trading centre and twice as high in the peri-trading centre compared to the rural area (Boerma et al. 1999). HIV prevalence continued to increase in the 1990's, with the 1999/2000 survey reporting a higher level of prevalence than the 1996/97, with prevalence 1.4 times higher over a period of 5 years (Mwaluko et al. 2003). By the 2003/04 survey round, prevalence was now 7.5% for men and 8.2% for women, though this suggested that prevalence had begun to stabilise (Mwita et al. 2007). The spatial distribution of incidence had also begun to change, with incidence and prevalence falling in the roadside areas, but beginning to increase in the rural areas (Mwita et al. 2007). More recent data from the 2006/07 survey showed that prevalence had begun to decline (Urassa et al. 2008), with a reduction in the spatial differences in prevalence, as prevalence increased in the rural populations, whilst stabilising (men) and declining (women) in the urban population. However, interestingly the biggest influence on overall prevalence was in and out-migration, rather than new infections or death, suggesting an important role for population mobility in shaping the dynamics of the epidemic (Urassa et al. 2008). The overall pattern in Kisesa suggests that prevalence peaked in 2000, and since then has been in decline. However, this trend hides differences in the spatial distribution of HIV, with prevalence increasing in rural areas over the period 1994-2007. This highlights the importance of understanding what is driving the epidemic in rural areas, and also the potential role of population mobility in the extensification of transmission into these areas, an issue which is addressed in this project.

4.4 Conclusion

This chapter has introduced the study site, and also provided the reader with an overview of Tanzania in general. In particular, the themes of economic liberalisation and economic differentiation provide the historical context within which the research findings presented in chapters five, six and seven. Further, the specific context of the study site has been outlined, and which is essential in terms of the findings and methods employed, to which we now turn.

Chapter 5 – Methodology

5.1 Introduction

This provides a comprehensive overview of the methodology used, including how the project was designed and which techniques were used. The chapter is structured in the following way. Section two revisits the research questions and then develops the fieldwork objectives and general approach. Section three introduces the research team, which is an important step as this influences the study design and the fieldwork process, which follows in section four. To enable this section to be explained clearly and without recourse to abstract language, the initial results of the exploratory phase which selected which mobile groups were to be studied are presented at the appropriate point. Section five presents some key ethical considerations which also had practical implications for the study design, before the chapter finishes with some general reflections on the process in section six, and some brief concluding remarks.

5.2 Project overview: Aims and objectives

The primary research aim of this project is to explore the relationship between population mobility/migration and HIV risk. As has been argued in chapter three, this relationship is not always well understood, and needs unpacking further. A secondary aim of the project is to reflect on some explanations as to why the results of the statistical analyses conducted in the study site which were also reviewed in chapter three (Kishamawe et al. 2006; Vissers et al. 2008) were inconclusive, contradictory and often insignificant. These objectives can be thought of as both complementary to and critical of the statistical approach: complementary in the sense that the findings of this project may help to explain the statistical results, and as such can be understood as part of an extended triangulation process; and critical because the methods and motivation for this project are in part developed on the basis of a critical view of the statistical approach. This is a methodological issue that is directed at the application of the framework in general, rather than the specific authors of these papers, who have, in many ways, utilised the statistical framework in innovative ways. The literature review in chapter three lead to the development of three central research questions, which are repeated here:

1. How do local socio-economic structures influence population mobility in general, and specific forms of mobility and/or migration?

2. How do processes of mobility and/or migration create risky sexual environments and influence individual risk behaviours?
3. Are there other factors that are not associated with mobility that influence risk behaviours of mobile populations?

One approach considered to answering these questions was to use both quantitative and qualitative data (Bardhan et al. 2006). Initially, it was thought that some insights developed from the literature review in chapter three, such as the need to account for who moves, why they move, and where they go, could have been operationalised to produce a refined statistical analysis under the mantra of ‘knowing your epidemic’ (Wilson et al. 2008). This approach may also have helped to identify mobile groups and particularly those with high levels of risk behaviours or HIV prevalence rates that could be studied in more detail in the research project. To this end, the author reviewed the research tools, including the demographic survey (TAZAMA Project b) and serostatus questionnaire (TAZAMA Project c) to understand what data was gathered, and how this could be used to construct new variables that would address some of the missing elements.

While some data existed on the different reasons that members of the cohort reported for ‘being away’ on a permanent or temporary basis, the list of reasons was pre-defined and limited. Additionally, individuals may decide to move for more than one reason, suggesting that reducing the decision to move to only one decision is problematic. The demographic rounds also gathered information on the occupation of each individual, but whilst household livelihood strategies typically involve a range of different economic activities, in line with the findings of other surveys, these remain undocumented in the light of individuals’ primary identity as farmers (Mueller 2011). Therefore, as almost all members in the sample gave their occupation as ‘farmer’ this data was also unsuitable for use in an improved statistical analysis, nor for identifying different mobile groups.

Finally, in terms of revisiting the variable used to denote mobility, it was found that the method for gathering data on mobility purely captured whether an individual was away at the time of one of the demographic rounds, or had returned from being away at the previous demographic round. Therefore, periods of mobility that occurred *between* rounds were not captured. The result is that there is a risk that mobile individuals are misclassified as non-mobile if they happen to be present when the demographic round is conducted. Following this review of the demographic surveys, it was concluded that there was little scope for improving the statistical analysis, with existing analyses making full use of the available data (Kishamawe et al. 2006).

However, as has been argued above, the statistical framework reduces migration to a series of variables that are treated no differently than other individual characteristics, and is not able to incorporate structural and contextual factors in the analysis that are conceptualised above the level of the individual, something that is central to the aims of this project. Further, another key aim of this project is to conceptualise migration and mobility as core social processes, something that is not reducible to a quantitative analysis, and therefore requires a different methodological approach. Finally, for the purposes of this project, the statistical framework is in general not well suited to addressing questions such *why* and *how*. Therefore, the research methods employed in this project are exclusively qualitative. Of course, it is acknowledged quantitative research has a vital role to play in our mapping of the epidemic. However, the priority for the researcher is to use the appropriate method to enable the collection of the data necessary to meet his/her research objectives. The choice of using qualitative methods is also related to the theoretical framework employed, which in this case is inherently opposed to a reification of probabilistic mathematical modelling above other forms of knowledge, and in line with the political economy approach taken, will allow processes of differentiation to flourish, rather than for socio-economic differences being controlled for.

Having established the general methodological approach, the fieldwork objectives were developed by breaking down the research questions. As all the research questions make clear, central to the project is the study of specific forms of mobility. As this project did not commence with any specific mobile groups in mind, the first necessary objective was to learn more about the forms of mobility engaged in by the population of the study site, and then to select some of these forms of mobility for further study. This objective forms the basis for the rest of the study. The wording also emphasises that the most important or common forms of mobility are selected to ensure that this project is relevant to the local population.

- Research objective one: Understand the different forms of mobility that are engaged in by the population of the study site, and crucially, which forms of mobility are most important and/or common

The rest of the research objectives are then derived from each research question, though there is a strong overlap between objectives and research questions. Research question one emphasises the role and importance of understanding the local context and socio-economic structures, and how these influence and shape mobility in the study site:

- Research objective two: Understand and document the socio-economic context of the study site, Mwanza and Tanzania

The second research question, recalling the argument made in chapter three that migration and mobility need to be conceptualised as systemic processes (Massey 1987; Fawcett 1989), requires the selected forms of mobility to be understood as processes. Further, in line with the attempt of this project to draw on the theoretical insights discussed in chapter two that argue that the analysis must address the roles of both structures and agents, it is also necessary to understand the individual experiences of those engaging in these processes. Research objectives three and four reflect the information required to answer research question two:

- Research objective three: Map these important forms of mobility as dynamic socio-economic processes at a generalised, systemic level, including information on how each process may influence risk behaviours
- Research objective four: Document individual's experiences of these processes, and understand how engaging in a mobile process influences behaviour and HIV risk

Finally, a fifth research objective was added to enable the third research question to be answered. This objective was designed to pursue emerging themes from the fieldwork which suggested that sexual behaviour was structured by local sexual norms around sex and exchange, and that this was an influence that was not necessarily related to mobility:

- Research objective five: understand local sexual norms, specifically around exchange in sexual interactions and informal credit arrangements

Table 5.1 summarises these research objectives and the research questions to which they are related. As this table shows, some research objectives overlap and are used to answer more than one research question. Further, as is discussed in the findings chapters below, it must also be emphasised that in practice, the information gathered in line with each research objective was in practice used to answer more than one research question. However, at this point, the main aim of this section is to establish the basis upon which each research objective was formulated.

Research Question	Research Objective
1. How do local socio-economic structures influence population mobility in general, and specific forms of mobility and/or migration?	<p>One: Understand the different forms of mobility that are engaged in by the population of the study site, and crucially, which forms of mobility are most important and/or common</p> <p>Two: Understand and document the socio-economic context of the study site, Mwanza and Tanzania</p>
1. How do processes of mobility and/or migration create risky sexual environments and influence individual risk behaviours?	<p>One: Understand the different forms of mobility that are engaged in by the population of the study site, and crucially, which forms of mobility are most important and/or common</p> <p>Three: Map these important forms of mobility as dynamic socio-economic processes at a generalised, systemic level, including information on how each process may influence risk behaviours</p> <p>Four: Document individual's experiences of these processes, and understand how engaging in a mobile process influences behaviour and HIV risk</p>
2. Are there other factors that are not associated with mobility that influence risk behaviours of mobile populations?	<p>One: Understand the different forms of mobility that are engaged in by the population of the study site, and crucially, which forms of mobility are most important and/or common</p> <p>Five: understand local sexual norms, specifically around exchange in sexual interactions and informal credit arrangements</p>

Table 5.1 – Research questions and research objectives

Having established the research objectives, we can now outline the methods used to gather the required information to fulfil each objective. The fieldwork was broken down into a series of phases which reflect the order in which these tasks were conducted.

Phase one of the project was designed to address the first research objective. It was decided to use focus groups as a forum to gather information on reasons for mobility. In these focus groups, a participatory ranking exercise was used to both explore the main reasons for moving,

and also to build some consensus on the most important forms of mobility, and hence allow the identification of the specific processes to be studied in later phases. Although the use of focus groups is not without its limitations (Gibbs 1997), it is an ideal research technique for initial exploratory stages. It enables the gathering of information in a setting in which individuals interact and build on others responses, and provides a forum for disagreement (Green et al. 2009). Additionally, it is a technique that can enable a range of different issues to be addressed simultaneously. In this case, whilst the key output was the identification of the most important forms of mobility, the process involved data gathered on why these forms of mobility are important and who engages in them. Phase one also included a pilot, in which research tools and consent processes were tested in an adjoining area to the study site.

The focus group technique was also used for phase two, which was designed to address the third research objective. The project was organised in this way as the output of the first phase dictated which mobile groups were to be studied. In this phase, produce process maps for each form of mobility were produced at a general level. Again, the nature of the data required to meet the research objectives made this an ideal technique. An additional strength of using focus groups is that they can provide an appropriate forum in which to introduce potentially sensitive subjects, in this case the sexual behaviour of those who are mobile, and is a technique that has been used in other projects that have addressed mobility and sexual behaviour (Nyanzi et al. 2005).

The third phase was designed to build on this analysis and addressed the fourth research objective. In this phase, in-depth interviews were used to gather information on individual's own experience of engaging in the forms of mobility identified and mapped previously, with participants sampled from those who participated in the focus groups. This phase helped to distinguish community views from individual experiences, and gave participants the chance to tell their own stories and to reflect on some of the themes that were discussed in the focus groups. It also aimed to give participants the space to highlight how their own experiences may have differed from the consensus view expressed in the focus group, and was a valuable opportunity for triangulating data with the findings of the focus groups. Phases one, two and three form a linear qualitative project, in which the results and output of each phase form the basis for each subsequent phase. This component was the most structured element of the fieldwork.

However, it must be emphasised here that the concurrent phase was also a vital activity that enabled these processes to be situated within the broader context. This concurrent phase gathered data in line with the second research objective. This phase was in part shaped by

themes that emerged during the main qualitative component described above, such as the need to investigate the land ownership system, but was also independent from it. The activities engaged in during this phase included, but were not limited to: the use of key informants; informal interviews with local farmers, village officials and relevant government employees; investigating secondary data sources and literature searches with which to validate and contextualise developing narratives; discussions and reflections on each phase with the research assistants and other researchers working at NIMR; and the authors own observations and familiarisation with the context. This phase was conducted alongside phases one, two and three.

Finally, phase four reflects the fifth research objective. This phase, which was predominantly exploratory, used focus groups in a similar way to previous phases to enable consensus views to be developed, and also to address themes around sexual norms and relationships in a sensitive manner. Table 5.2 summarises each research phase, research objectives and the methods used.

Phase	Research Objective	Methods
1	One: Identify important forms of mobility	Four exploratory focus groups
2	Three: Map selected forms of mobility out as processes	Four focus groups with selected mobile groups
3	Four: Document mobile individuals' experiences of these processes	In-depth interviews with sub-sample of phase 2 focus group participants
Concurrent phase	Two: Understand local socio-economic context	Informal interviews, secondary sources, key informants, informal discussions, own observations
4	Five: Understand local sexual norms	2 exploratory focus groups

Table 5.2 – Fieldwork phases, research objectives and methods

The methodology used here incorporates a number of innovations. Firstly, in contrast to other qualitative studies that investigated the relationship between mobility and migration (Douglas 2000; Campbell 2003; Nyanzi et al. 2004), this project was not conceptualised as a case study nor designed with a specific mobile population in mind. Therefore, the methods used here include the application of a ranking technique to enable the researcher to identify and select mobile groups to be included in the study. A further implication of not designing methods around the specificities of a mobile group is that the broad principles underpinning the three-staged process must be rooted in insights from a range of social theories, and are thus an example of 'mining the social sciences', and also of linking theory with practice. The result is a

systematic and coherent methodological approach to the topic at hand, which provides a high-level framework that can be adapted and applied to any given socio-economic context. However, the systematic and linked approach also incorporated a great degree of flexibility, as specific research tools and materials were not designed until the general findings of the previous phase had been established. This ensured an iterative approach in which the findings and methods were constantly evolving, but within a carefully constructed framework which enabled the aims and objectives to be realised.

5.3 The research team

Before reviewing the study design in detail, it is necessary to introduce the research team and its members' roles and responsibilities. This provides the background to why certain decisions arose, and the specific set of issues and challenges that needed to be accounted for. One important decision which influenced the design process was how the interviews would be conducted. As the vast majority of interviews would be conducted in Swahili or in some cases the local tribal language, Sukuma, the two options were that either the author would conduct interviews using the research assistants as interpreters, or arrange for the research assistants to conduct the interviews themselves based on pre-specified objectives. The author took daily lessons in Swahili over the entire period of the fieldwork, enabling him to understand the basic meaning of what was said during the exploratory focus groups that he observed and during informal interviews with local officials, and also to actively participate in discussions about how questions were translated from English to Swahili. However, particularly in relation to sexual behaviour, which is often discussed indirectly in most languages, his grasp of Swahili was not strong enough for him to conduct the activities himself. Of course, neither method is ideal, as they both create their own set of influences on and dynamics within the research process.

The pitfalls of being a western researcher in a developing country context are well documented (Gahagan et al. 2008). Important issues include the relational power dynamics that exist between researcher and research assistant, and researcher and participant. As this project involved asking men and women in a relatively rural setting about highly sensitive topics such as their sexual behaviour, it was decided that the presence of the author would not be appropriate, and would disrupt the process. Additionally, whilst it is necessary to acknowledge issue of unequal power relations, the author did not want the theme of this PhD to become centred on the difficulties encountered by a white, male researcher from a developed country asking black, poor, rural women from a developing country about their sexual behaviour. There is a large body of literature that addresses this issue from which the

author could draw to mitigate (as far as is possible) some of the most divisive influences on the process (Abraham 2001; Gahagan et al. 2008; Molyneux et al. 2008; Green et al. 2009; Molyneux et al. 2009). However, it is understood that these cannot be completely removed. From an ethical point of view, it was important to create the right environment when asking such sensitive questions, not only to provide a safe place where participants felt able to open up, but also to ensure that any awkward feelings or pressure was minimised. Therefore, the approach taken, which is not uncommon in this context, was for the research assistants to carry out all focus groups and in-depth interviews. In some cases, such as the exploratory focus groups in phase one, the author observed the process, but in later focus groups and in-depth interviews, especially when the topic of sexual behaviour was discussed, the author was not present. Other complementary discussions and interviews in the concurrent phase and when attempting to contact potential participants were conducted using the research assistants as interpreters.

Having decided on this approach, it is necessary to clarify the specific responsibilities of the author and the research assistants. All research activities were conceptualised and designed by the author, including the choice of methods, required outputs, and which questions to ask, as is discussed in the next section. This included a period during which the author educated and trained the research assistants in the topic under study, the issue of HIV more generally, and the specific research techniques involved. The research assistants conducted each research activity, with the author observing where appropriate. Following each activity, the author conducted a formal debrief to gather information on the main themes that emerged, and also to gain feedback on the workings of the process. Further training for research assistants was identified as necessary. The main findings at each stage were also discussed with the research assistants on an on-going basis, though the final analysis, framing, and interpretation of the data were conducted almost exclusively by the author.

One implication of the decision for research assistants to conduct all research activities was the need to ensure that they understood the aims and objectives of the study overall, as well as each the priorities and required output for each fieldwork phase. This was addressed through two weeks intensive training prior to any discussion of the research activities, at first on the general background to the HIV epidemic, and latterly on the research topic, along with on-going training on different research techniques. For all research activities, research assistants were provided with a research guide¹⁰, which had step by step instructions of what they needed to do, reminders to probe participants for additional information, and all the key

¹⁰ See appendices A to O for all research guides used

questions that were to be asked. Research assistants were involved in the creation and design of these tools. This helped to ensure that the tools were culturally appropriate, and that research assistants had a good understanding of the flow of the research activities and the timing of different activities. The overarching objectives were revisited at the end of each phase. The training process (along with the Pilot focus groups in phase 1) included a series of mock focus groups and interviews with volunteers from the NIMR Mwanza campus, and the recording of practice sessions so that research assistants could listen back to them and identify areas of improvement. Training continued throughout the project, and on reflection, was a vital yet often unacknowledged element of the research process (Mathee et al. 2010).

A second common challenge faced by the author and the research assistants was that the research tools were designed in English, and then had to be translated into Swahili and made culturally sensitive and appropriate (Jacobsen et al. 2003). Similarly, all discussions concerning the research were conducted in English, though as noted below, some of the key concepts, such as 'mobility', do not translate directly into Swahili in a straightforward manner. As language is such an important component within qualitative research, the author also wanted to understand how language was being used by the research assistants. One innovative way to gain an insight into this, and also for research assistants to begin to think about how they would discuss the research project in Swahili and explain this to participants, was for them to translate independently the information sheet and consent form, and then compare and contrast the different ways in which they had conveyed the meaning. Interestingly, but perhaps unsurprisingly, the research assistants used different language, and so through this process, research assistants began to agree on the most appropriate language to use, and the author gained an insight into alternative ways of framing the research, and to a limited extent could then be involved in deciding how questions would be posed in the context of the study site. To a degree, this helped to standardise ways of explaining ideas that did not have a direct translation, and also to identify which terms were ambiguous and needed extended explanations.

A third issue, linked to the study design, was the need to understand the output of each activity, including themes and topics of interest without having to wait for the lengthy process of transcription and translation. Therefore, following each activity, a debrief was conducted immediately after each research activity. This was done to maximise memory recall, and also sought to maintain ethical standards over potential distress in the in-depth interview phase. In the case of focus groups, this took the form of a general discussion, but for in-depth interviews a debrief form was used, an example of which is included in Appendix P. This helped to provide a rich set of data, as the authors research notes and debrief forms would later be completed

and compared with translated transcripts. The debrief process also enabled a reflection on the tools to identify areas of improvement, and on the research assistants' feelings about the research process.

The two main research assistants that worked on the entire project were Lucas Boniface and Penina Samwell, with a third research assistant, Grace Bulugu, involved in the third and additional phases of the project. Lucas is from a small village called Mwalinha, Malamabanza ward, Magu district, and is a Sukuma. Penina is also a Sukuma, and comes from another village in Magu district, Jisesa, Ngasamo ward. They are both fluent in English, Swahili, and importantly Sukuma, and understood the local context. Both had recently graduated from the University of Dar Es Salaam, with Lucas studying Sociology, and Penina graduating in Law, before being employed by NIMR. Grace originates from Mwanza city, and had been working as a secondary school teacher in Mwanza before being employed at NIMR. These three research assistants comprised the core research team. Three other research assistants, Mathius Shimo, Joyce Chuwa and Mpyanjo Chagu, were involved in the focus groups conducted in phase two and the additional phase, primarily as note-takers. Additionally, Dr Ray Nsigaye provided support in terms of establishing contacts and introductions with the local community. This role was necessary due to the cultural context in which age and gendered power relations were entrenched in local social hierarchies, and the need to access participants through local community leaders and gatekeeper. A reflection on the unique set of challenges arising out of this approach is discussed below. However, this brief background will enable the study design process, outlined next, to be better understood.

5.4 Study design and conducting the fieldwork

This section presents in more detail how the fieldwork was conducted, following the phases detailed above, and includes information on sampling, the specific design of each activity, and how key decisions were made.

5.4.1 Phase 1: Identifying forms of mobility

The primary objective of this first exploratory phase was to identify the most important forms of mobility engaged in by the population of Kisesa Ward. The output of this focus group determined which processes were mapped and studied in the second and third phases. A secondary objective was to understand which people in the ward engaged in which of the most important forms of mobility identified, and where they went. This information would steer the direction of later investigations and the specific forms of mobility to be studied.

Focus group design

The two main tasks in this phase were to decide how many focus groups would be conducted, and the design and structure of the focus group activity. Overlapping both these tasks was a concern over how power relations between different groups of people would influence the dynamics and output of the focus group discussions, for example between men/women, old/young and rural/urban groups, a common issue in the use of focus groups (Green et al. 2009).

In relation to the composition of potential focus group participants, it was suspected that gender power relations, which are relatively unequal in Kisesa (though of course negotiable and fluid to a degree), may skew the output of discussions if women remained unheard or overruled by male narratives, or they ended up deferring to male participants during extended discussions. This concern was sufficiently important for us to decide on running separate focus groups for men and women. An additional concern related to other potential sources of unequal power relations within the ward that may affect the outcome, such as the relations between those from the more remote rural areas of Kisesa, and those from the urbanised trading centre, as participants from the trading centre may be more educated, eloquent, confident and assertive of their input to the focus groups, with the result that important information from participants from rural areas may remain under-represented. With these important dynamics in mind, it was decided to run four separate focus groups:

- Urban Women
- Rural Women
- Urban Men
- Rural Men

The potential for power relations between old and young to influence the outcome was also considered. Whilst it was accepted that this is a particularly pertinent issue in the context of Kisesa and the Sukuma tribe, it was decided not to multiply further the number of focus groups by dividing participants into different age groups. It is acknowledged that this will to some degree influence the results. However, in the light of the objectives of the first focus groups and the exploratory nature of the process, time and budget constraints, and the additional value that doing eight (or twelve) focus groups¹¹ compared to four would add to the process, it was decided that four focus groups would suffice. It was also unclear to what extent relations between young and old would assert themselves – whilst respect and deference to elders is clearly established in the Swahili language, the reality of the concrete manifestations of these relations is less clear (though this can equally be said for gender relations and rural/urban

¹¹ Depending on how age groups were defined

relations). Lastly, due to the nature of qualitative work, the project design would never be able to remove completely these influences on the discussion. However, by documenting them prior to the focus groups and by attempting to build in as many mechanisms as possible to deal with them during the process, it was hoped to minimise their impact as much as possible. Additionally, when reviewing transcripts and data, these insights informed the interpretation of what participants reported.

Having agreed on the number of focus groups that would be held, the precise locations and composition of participants was discussed. Recent work on migration suggests that the poorest are often the least mobile, lacking both the resources, opportunities and access to infrastructure that moving requires (De Haas 2005). Therefore, it is likely that the most mobile people would live in the trading centre villages that border the main road, so Kisesa A was selected as a village from which to invite participants (both men and women). We then decided to conduct the remaining two focus groups in rural villages, as the inhabitants of the villages in the peri-trading centre, which included both more urbanised and more rural areas, may engage in a mixture of forms of mobility. It was also hoped to capture any significant differences in the forms of mobility engaged in by different sections of the population through a comparison of the two extremes. Therefore it was decided to conduct one focus group in Welamasonga (men), and one in Igekemaja (women).

In terms of inviting focus group participants to this exploratory phase, there were initial concerns over leaving the invitation and identification of participants to the Village Executive Officers (VEO). Some previous focus groups had been comprised of participants who were all related. Yet this remained the best way to begin the project and to ensure that influential people in the village were involved. To ensure that we got as broad a representation in each focus group as possible, the sampling strategy was to ask each VEO to invite participants using the following criteria:

- 12 participants (for group management reasons)
- 4 aged between 16-25
- 4 aged between 25 and 40
- 4 aged 40 and over
- No participants to be related

The structure of the focus group was designed as follows. With the objectives in mind, a participatory ranking technique was adapted for the current research setting (Rietbergen-McCracken et al. 1998; International HIV/AIDS Alliance 2006; Ager et al. 2010). The ranking exercise was divided into three main stages, followed by a more general fourth stage which aimed to capture more details on the main forms of mobility identified to help with the

identification of potential participants in the following phases of the project. The overall structure of the focus group was as follows:

- Ranking exercise
 - Stage 1 - Brainstorming exercise to identify all forms of mobility
 - Stage 2 – First Ranking - Group work to rank most important forms of mobility
 - Stage 3 – Second Ranking - Group discussion to agree most important forms of mobility
- Capturing further information on most important forms of mobility

Following the pilot focus group, it was decided to only record the second ranking stage, and the further discussions. However, in each focus group, one research assistant made notes¹². Therefore, along with the transcripts of recorded stages, information from research assistants' notes was also taken into account in the final analysis of the data gathered in this stage. This process was repeated in each of the four focus groups in this stage.

Ranking exercise stage 1

In this brainstorming stage, participants were asked four general questions, and, working in pairs, noted down all the different reasons that they could think of. In cases where both participants in a pair were unable to write (which was very rare), one of the research assistants facilitated for them and captured their points. Whilst additional concerns may have arisen if participants who could not write felt excluded from the process, the vast majority of participants could write, and it was observed that writing was an enjoyable element of the process. The questions, detailed below, were asked in such a way as to capture a range of different forms of mobility, and also because there is no Swahili word for 'mobility'. Although there is a word for migration (*kuhama*), this means something more specific and consequently if used may have narrowed the scope of participants responses. This is clear when thinking back to the main case studies reviewed in chapter three, and the interest in temporary and circular mobility. Whilst mineworkers are often categorised as 'migrants', this is not a description that would typically be applied to truck drivers, although they are mobile in the sense that they travel away from home for long periods of time.

1. Sometimes people leave their normal households, travel outside the ward and sleep somewhere else overnight. Does this happen in Kisesa? For what reasons do people do that?
2. Sometimes people move away from the ward they live in, and live somewhere else. Does that happen here? Why do people go and live somewhere else?

¹² For the male focus groups, a male fieldworker led the discussion in this phase, while a female fieldworker made notes (and vice versa for female focus groups)

3. Sometimes people travel outside their ward but return on the same day. Does that happen here? Why do people do that?
4. Lastly, do people ever move outside the ward to live permanently? Does that happen here? Why do people do that?

Following this brainstorming exercise, the research assistants collated all the reasons captured by each pair, and displayed them flipchart paper on the wall. In each focus group, this final list served as reference for the second and third stages.

Ranking exercise stage 2 – first ranking in two groups

In this stage, each focus group was split into two groups of six and asked to discuss and agree upon the six most important reasons for moving from the reasons brainstormed in the previous exercise. Initially in the testing and pre-pilot phase, we planned to ask participants to rank all the reasons, but found that when lists consisted of more than 10 reasons, ranking becoming quite arbitrary¹³, with the most and least important reasons easiest to identify. No definition of important was given to participants, so that this encouraged discussion and debate over which reasons were important and why. The output of this stage was two lists of six prioritised reasons for moving.

Ranking exercise stage 3 - second ranking

The two groups were then brought back together into one large group, and reviewed the two lists that each group in stage two had agreed upon. The research assistants reflected on any similarities and differences between the two lists, and then asked the group as a whole to discuss and agree together on a final list of six reasons. This stage was recorded to capture the debate and justification for why certain reasons were important. The output of this stage was a final list of the six most important reasons for leaving the ward as agreed by the participants of the group.

Further information

The last stage involved asking the group two questions to help us understand more about the six reasons for moving that they had prioritised in the previous stage, and included asking about who engages in these forms of mobility and the specific places that they go.

¹³ Pre test phase involved repeated ranking exercises with research assistants and members of the office, including topics such as favourite foods, activities etc

5.4.2 Phase 1 results

It is necessary at this point to present the results of this exploratory phase to help avoid the rest of the chapter being articulated in extremely abstract language. Additionally, although this was a very important phase as it set the agenda and direction for the rest of the project (the main reason as to why it is outlined in such detail here), once the forms of mobility had been agreed upon, this phase does not otherwise contribute greatly to the answering of the research questions.

Reason for moving (Swahili)	Reason for moving (English)	Frequency in sub-group stage 2	Frequency in final list stage 3
Biashara	Business	8	4
Kilimo/Ufynywa wa maeneo ya kulima	Agriculture/looking for areas to cultivate	5	3
Migogoro katika ndoa/kuvunjika kwa ndoa	Marriage Separation/Marriage Conflict	5	3
Masomoni/Elimu	Studies/Education	4	3
Matamasha ya injili/kuezea injili	Listen to the gospel/spread the gospel	2	2
Kazi	Employment	5	1
Umalaya	Prostitution	2	1
Uzinzi	Adultery	2	1
Kwenda kwenye matibabu	To go for treatment	2	1
Kesi	Legal case	2	1
Washarati	Fornication	2	1
Uvuvi	Fishing	1	1
Umasikini	Poverty	1	1
Mafarakano ndani ya familia	Clan conflict	1	1
Udereva	Driving	1	
Kitembelea hawara	Visit a partner	1	
Mganga wa kienyeji	Visit a traditional healer	1	
Ujambazi	Banditry	1	
Kuogopa kurogwa	Fear of being bewitched	1	
Kuolewa/kuoa	To get/be married	1	
Total (check)		48	24

Table 5.3 – Reasons for moving reported in phase 1 focus groups, by ranking frequency

In combination, the four focus groups identified a total of 63 different reasons for moving (see Appendix Q). From these reasons, 20 reasons appeared in the output of the first ranking carried out by the two sub-groups, with 14 appearing in the final list of reasons agreed by each focus group. The reasons and the frequency with which they were mentioned in both ranking stages are presented in English and Swahili in table 5.3. In this table, some reasons that are very similar and essentially capture the same process are combined, such as 'agriculture' and 'lack of land to farm', and 'marriage conflict' with 'marriage separation'.

This frequency table highlights engaging in specific livelihoods that involve mobility, and the associated lifestyles this brings, influences sexual behaviour and HIV risk a strong degree of convergence across the four focus groups, and with few apparent differences in the reasons forwarded between genders or rural and urban areas (see Appendices R and S for the breakdown by each focus group). Central to these reasons were those connected with livelihoods and economic survival, such as business, agriculture and employment, a focus on education which is a high priority for many households in Tanzania, relationships with partners or extended family such as marriage or clan conflict, and also some reasons that were explicitly linked to sexual behaviour, such as prostitution, adultery and fornication, understandable given the nature of the overall project which had been outlined in the consent process. As it was not possible to study every type of mobility due to time and budget constraints, the final decision over which processes to focus on was made by analysing the frequency that each reason was mentioned in both ranking stages, though with more importance attributed to identification in the final list of reasons. Looking at table 5.3, four reasons stand out as having been ranked as the most important. Business was ranked in the top six reasons in each focus group, with agriculture, studies and marriage conflict ranked in the top six reasons in three of the four focus groups. In terms of isolating the key processes, the ranking method employed here resulted in a large degree of convergence and agreement across the focus groups. With the different composition of each focus group in mind, this convergence indicated a strong degree of confidence that these were the processes that should be the focus of the study.

Following the ranking process, the next step was to finalise which groups were to be studied, in line with the aims and objectives of the project. Reflecting on the top four reasons, three issues were central to this decision. Firstly, the project aimed to situate population flows within the broader socio-economic context. For business, agriculture and studies, it was clear that these could all be conceptualised in this way, be that due to land prices/availability etc. for farming, local market structures for business, or the system of allocation for secondary school students. Whilst individual decisions and agency are involved, these are also shaped by

structural processes. However, for marriage conflict this role for structural processes is less clear, and in particular in terms of how marriage conflict might influence where people go.

Secondly, as discussed above, this project was primarily interested in addressing temporary and circular mobility which is generally associated with sexual behaviour and HIV risk. This application of this notion of circularity to business, agriculture and studies, was supported by discussions in the focus groups and other informal conversations within the community. However, this was less clear for marriage conflict. Whilst this may potentially be an important process, and one that remains under-examined, the influence that it will have on mobility and risk behaviours is more complex than with the other reasons, as marriage conflict is both a driver and outcome of mobility: risky sexual behaviour may be an *ex ante* reason for marriage conflict, as well as an *ex post* occurrence. Added to this, there is a clear role for understanding the other processes through the economic lens used in the project. Lastly, it was acknowledged that marriage conflict may be a theme that can be captured across other processes, making this a distinct form of mobility from the other three, so that it was finally decided to attempt to study three different forms of mobility in the project: Business, Agriculture and Studies.

Once this had been decided, the second task was to agree the type of business that would be studied, and which would be suitable for the aims and objectives of the project. The most common business mentioned in phase one was dagaa¹⁴ selling. However, as this business is strongly influenced shaped by the proximity of Lake Victoria, concerns were raised over the potential for the further application of any findings. Therefore, other local commodity chains, such as the tomato selling chain and clothes trading, were investigated to find out to what extent those engaged in them were mobile. In general, it was found that most tomato traders only travelled locally and did not stay anywhere overnight, whilst the mobile clothes traders were more likely to be based in Mwanza city, rather than Kisesa. Initial sampling of dagaa sellers indicated that this was a more mobile group, and as this was a group that also included many female sellers, it was decided that dagaa sellers would be one business type to study. In practice, tomato sellers were incorporated in the interview stage, as it became apparent that the dynamics of value chains, alongside the mobility issue, were important to capture.

A second business type, maize traders, were selected, as this was a visible group of businessmen who were reportedly highly mobile, and would complement the more context specific nature of dagaa trading by incorporating a crop that is traded widely across Tanzania,

¹⁴ Dagaa are small fish, discussed in more detail in chapter six

and hence any findings may be applicable to a broader range of situations. The final mobile groups to be studied were:

- Farmers
- Business people
 - Maize Traders
 - Dagaa sellers
- Students

However, in practice, it was only possible to study two forms of mobility, Business (which incorporated two processes) and Agriculture. These two forms of mobility had been prioritised as the first processes to study. This was because in the initial phase one focus groups, these processes had been identified as central to the livelihoods of the local population, and to which sexual behaviour had been explicitly and repeatedly linked. The linkage between studies and sexual behaviour was more anecdotal. Further, based on the national demographic data collected in the THISO7, it was shown that for all those who were under 25 years old, prevalence was in fact higher for those who had left education at the end of primary school or before (see Table 5.4), suggesting that mobile secondary students may not be a high risk group.

Result	No Education	Primary	Secondary	Higher
Negative	811.28	4266.15	967.71	30.32
Positive	35.53	105.08	10.06	0
Prevalence	4.38%	2.46%	1.04%	0%

Table 5.4 - HIV Test result by highest education level achieved for those aged under 25. Source: THISO7. Data is weighted hence the decimal places.

Two practical issues also contributed to the omission of this process. Firstly, a number of fieldwork tasks took longer than anticipated, leaving only a short period of time left. Secondly, it that proved difficult to sample mobile students, and to find a suitable time in which students going to school in other regions would be available to participate in a focus group as different schools had different holiday periods.

5.4.3 Phase 2: Mapping general processes

Objectives

The objective of this phase was to gather enough information about each form of mobility identified in phase one to enable the production of a process map. This was achieved by conducting a focus group with each mobile group. It was also an opportunity to discuss the

sexual behaviour of mobile groups in a more general sense in advance of the third phase in which individuals would be asked about their own behaviour.

Focus group design

The focus group design for this stage was based around questions drawn from a number of sources, such as theoretical work on migration theory and applied work on migration that had used a similar technique (Fawcett et al. 1987; Boyd 1989; Fawcett 1989; Nyanzi et al. 2004). Each focus group was organised under six broad headings, with each section focusing on a key element of the mobility process, and comprising of a number of questions that were designed to capture the minimum amount of information needed to enable the processes to be mapped out:

- Who moves
- Where they go and how they decide to go there
- Patterns of movement
- General experience while away
- Sexual behaviour while away
- Returning home

These sections were used in each focus group, though within each section some different questions were asked on the basis of the specificities of each mobile group. The questions were designed to ask participants to comment on the general or typical nature of the process, though inevitably, some responses would be based on their own experiences. Research assistants probed responses further as appropriate to provide a more comprehensive picture, and to address unanticipated themes. Research assistants were also provided with a checklist of questions to help ensure that all of the key points were covered (for an example, see Appendix T).

Sampling

During the screening phase, which straddled phases one and two, the researchers made contact and kept up communications with potential participants. Participants for each focus group were recruited in the following ways. For mobile farmers, it was intended to invite a broad range of farmers from different villages to capture any potential differences and ensure a heterogeneous, and hence more representative, group. Missing from this group were the very rich farmers, such as the local head of the ruling party who is rarely in Kisesa and difficult to get an appointment with, a common issue with many forms of sampling in which the wealthy are under-represented (Department of Economic and Social Affairs Statistics Division 2005). Mobile farmers were recruited from four of the main villages in Kisesa ward:

Welamasonga and Igekemaja (rural), Kitumba (peri-urban) and Kisesa A (urban). This was done through four main primary contacts: Two VEO's from the ward, a DSS fieldworker for Igekemaja, and a *balazi*¹⁵ for Kitumba who was contacted via another TAZAMA project worker. Each contact (who had all indicated that they knew a number of different farmers who left the ward to farm land) was asked to invite three male farmers to participate in the focus group. It was stipulated that potential participants of interest were those that farmed land elsewhere, and stayed there overnight. This screening question aimed to eliminate farmers who farmed land just outside the ward, as daily commuting to a field is not a process that fitted with the general project aims and the forms of mobility that are associated with risky behaviour in the literature, nor had there been any suggestions in the discussions in the exploratory focus groups that this form of mobility might be linked to HIV risk. Whilst visiting the villages and discussing the identification of participants, it also became clear that this was not a form of mobility purely engaged in by men. Though these discussions did not suggest that there were enough female mobile farmers to conduct a separate focus group, these contacts were noted, and were included in the interview phase.

For maize traders and dagaa sellers, participants were approached and invited by the project team, in contrast to relying on contacts to invite appropriate participants. This had a number of advantages, such as giving us the time to discuss what the aim of the research was, direct communication to arrange convenient times, and enabling the team to foster a generally higher degree of engagement with the research. In Kisesa trading centre, there is an area where all maize traders congregate to sell maize, along with one other area where there was a milling machine and a mixture of maize and *udaga* (dried cassava) on sale. This made the identification of participants relatively easy, and through talking to these traders, asking them who traded maize and whether there were other maize traders who were not currently present, we recruited seven male maize traders and three female maize traders. As with the farmers above, it quickly became clear that this was predominantly, but not completely, a male occupation, so we again ran a male focus group, with female maize traders incorporated into the in-depth interview phase.

The dagaa sellers were recruited in a similar way to the maize traders, from three main locations: the covered and more formal market in Kisesa, the informal open space, and the Friday market (which attracted a wider range of more mobile participants). This sampling process was intended to recruit a range of different sellers. Through making these contacts the team had become aware that not all dagaa sellers were mobile, so for the focus groups it was

¹⁵ Person in charge of 10 households within a village

decided to invite a mixture of mobile and non-mobile dagaa sellers to give us the broadest possible sample and hence views about the general process. In total, we invited eight female dagaa sellers (six had been invited directly, two through one of those invited). Of these, one of the non-mobile sellers had been mobile in the past, and there was also one participant who denied that she was mobile but that it was suspected was mobile, so that even those labelled as non-mobile (three out of eight) were in a position to talk about the process at a more general level. For male dagaa sellers, we invited seven sellers directly, who then knew of other dagaa sellers, in the end totalling 11.

However, there were significant challenges in arranging focus groups for times which were convenient for participants, due to the fact that most were mobile, and also had a range of the other activities that required attention, such as business activities or looking after the children. Whilst all the mobile farmers and male dagaa sellers that were invited managed to attend, this was not the case for the maize traders, with only three out of the seven invited in attendance, and for female dagaa sellers, five out of eight invited were in attendance. This had an impact on the sampling for the third phase in-depth interviews, discussed below, with as for these two additional interviews planned to compensate for the lower attendance in the focus groups, something that was particularly applicable to the maize traders. These discrepancies are detailed in table 5.5:

Activity	Phase 2 Focus Group		Phase 3 In-depth Interviews	
	Invited	Attended	Planned	Actual
Farmers	12	12	5	5
Maize Traders Focus Group	7	3	5	7
Dagaa Sellers Male	11	11	5	5
Dagaa Sellers Female	8	5	6	5

Table 5.5 – Planned vs. actual participants in phases two and three of the qualitative project

5.4.4 Phase 3: In-depth Interviews

Objectives

The research objective of the third phase was to gather information on the experiences of individuals who engaged in the mobile processes mapped out in phase two, including information on their own sexual behaviour, and for those that had attended the focus groups, how their own experience differed from what had been presented as the general process.

Interview design

The in-depth interview can be approached in a number of different ways. Initially, it was hoped to base the in-depth interviews on the life history approach (Plummer 1983; Personal Narratives Group 1989). This is a technique that is well suited to gathering information of individuals own experiences from their own perspective, and also to think about these experiences in a dynamic sense, with a timeline running through the narrative. Further, it is a technique that has previously been applied to the study of internal migration (Bertaux-Wiame 1979). However, for a number of reasons, including time constraints which made it difficult to visit participants several times, a general requirement of the life history approach, it was decided not to utilise this technique. Instead, it was decided to conduct structured in-depth interviews, which would be closely aligned with the structure of the relevant focus groups in the previous phase. This familiarity of the overall process combined with an understanding of the themes and findings from the previous phase also aided the research assistants, who were encouraged to try to conduct the interviews in the manner of a conversation rather than a strict question and answer session. A checklist was again used to help the research assistants cover all necessary topics.

Sampling

The sampling strategy was to interview a sub-sample of the focus group participants complemented with some additional interviews from other occupational groups¹⁶. The advantage of using this approach was that participants who had attended a focus group in the previous phase were already familiar with the questions that were asked. They may also have had some time after this initial focus group to reflect on the themes discussed, and also on what they would feel comfortable disclosing in the interview phase. Further, this approach also enabled cross checking and verification of data by comparing what participants said in the focus group with what they said in the interview, and aided the interpretation of focus group data.

To ensure that a range of farmers from different areas of the ward were interviewed, it was decided to sample one farmer from each of the main four villages (totalling 4). An additional farmer from Kisesa A was interviewed. The farmers sampled also reflected a range of ages, and those who had participated to varying degrees in the focus group. This ensured that the views of some farmers who were less comfortable talking in the group setting were captured. A similar process was used to sample male dagaa sellers from the focus group, taking into account age and background and different levels of participation in the focus group.

¹⁶ Thanks go to Joyce Wamoyi for this excellent idea!

As noted above, only three maize traders attended the focus group. Therefore, it would not have been possible to invite a sub-sample, so all three who attended were interviewed, alongside an additional four traders to widen the pool of participants, and ensure a more representative view. Additionally, three female maize traders who had not participated in a focus group were also interviewed.

In terms of the female dagaa sellers, to broaden general female participation, and to interview as many mobile dagaa sellers as possible, we interviewed three female dagaa sellers from the focus group, and two that had had been invited to but did not attend the focus group. An additional female dagaa seller that had been invited for interview was also unable to attend.

Finally, due to emerging themes that linked sexual behaviour to local value chains, the third phase was extended to incorporate a small sample of those involved in the tomato chain. Four female tomato sellers were recruited, in line with the sampling approach used for female dagaa sellers, from the two primary selling locations, the market and the open ground, with two tomato middlemen recruited from the open ground where they congregated each morning. Another mobile group that had been discussed in the phase one focus groups, cattle traders, who in general originated from the urban area, were contacted via one of the VEOs. However, as they were a difficult group to contact, it is unclear how representative the two traders we interviewed were. In total, 35 in-depth interviews were conducted in this phase (see table 5.6).

Group	No. of Interviews
Farmer male	5
Farmer female	2
Dagaa seller female	5
Dagaa seller male	5
Maize trader male	7
Maize trader female	3
Tomato middleman male	2
Tomato seller female	4
Cattle trader male	2
Total	35

Table 5.6 – Total interviews conducted in phase three¹⁷

5.4.5 Concurrent phase

This research phase ran concurrently with the other four phases, and was comprised of a number of elements. A number of informal interviews and discussions were conducted with

¹⁷ For a full list of research activities and coding, see Appendix U

the local Agricultural Extension worker and two of the ward's VEOs. Additionally, four farmers were interviewed about farming practices, to give the author a more thorough understanding of agricultural production in the ward, and specifically how these practices differed between larger and smaller farmers. These were structured around a number of questions that sought to uncover some of the dynamics of rural change based on previous work on class formation in rural settings (Oya 2004), such as how land holdings had changed over time, their participation in the land market, use of commercial inputs, and whether household production was expanding or not. Other discussions included many conversations with local research staff working at NIMR, some of whom could be considered as key informants, and with key informants such as my Swahili teacher. In terms of the specific methods used, whilst these interviews and discussions were important in understanding the context and background in the region, they were more spontaneous and ad hoc. Alongside this, there were on-going searches for secondary data sources as themes developed, and which aimed to search for evidence that either supported or refuted claims made by participants in the study, and also to validate emerging ideas and narratives.

5.4.6 Phase 4: Relationships and sexual norms

Objective

The objective of this phase was to explore themes around sexual relationships and exchange that had arisen out of the discussions in previous focus groups, and also to clarify meanings of words and phrases that had been used.

Focus group design

This focus group was designed by dividing the session into two specific sections. The first section addressed more generalised questions about relationships, with questions about sexual norms around sex for exchange and informal credit agreements covered in the second half. As with other phases, men and women were kept separate, so that two focus groups were run. In general, the mechanics of the focus group were based on the design of previous stages.

Sampling and invitations

The sampling procedure was similar to phase one. Participants were invited through two of the ward's VEO's, with the same instructions that ages should be mixed and no participants should be related to ensure that a wide range of different participants, and an urban and rural mix.

5.4.7 Measuring Class

Chapters two and three emphasised the need to incorporate an understanding of class into the analysis. Whilst uncovering and documenting class relations is no easy task, and could indeed constitute an entire PhD, information on social and economic status and roles was gained through asking participants a number of questions, as appropriate, at different stages of the project. In the phase two process mapping focus groups, participants were asked general questions about the characteristics of those who engaged in these processes, and in the in-depth interviews conducted in the third phase, drawing from Oya (2004) participants were asked to comment on the following themes:

- Whether they had any formal social position (such as *baloji*, village council member etc.)
- Whether they hired labour (farmers in particular)
- Quantity of land owned or rented
- Other assets owned (such as plots/ploughs etc.)
- Other sources of household income
- Size of business (maize traders and dagaa sellers) in terms of sacks purchased

The responses given by the participants in relation to these themes then enabled a picture to be built up in terms of the differences in relative class positions both between and within each group. Added to this, the theme of class and social relations more broadly was investigated through asking participants who they had sex with, ensuring that both parties were incorporated into the analysis.

5.4.8 Data analysis

Qualitative data analysis in many ways remains a 'black box' (Schiellerup 2008). Whilst the majority of qualitative studies conducted in recent times describe processes through which qualitative data is analysed, choosing from a range of different techniques or conceptual frameworks, such as grounded theory or narrative analysis, and computer programmes such as Nvivo or ATLAS/ti (Dey 2005; Schutt 2009), it is unclear to what extent more formal periods of analysis can be separated from on-going interpretation and analysis, which may incorporate events which go beyond the coding or analysis of transcripts (Schiellerup 2008). The data analysis in this project was comprised of two key components. Firstly, due to the integrated design of the research project which necessitated a degree of on-going analysis to inform the subsequent phase, the initial analysis was conducted in meetings, informal discussions, and

research activity debriefs with research assistants. These meetings produced the frequency rankings of forms of mobility, and draft process maps.

Secondly, Nvivo 9 was used to organise and code the translated transcripts, with categories derived on the basis of themes that had emerged whilst in the field, alongside new themes that had not been previously highlighted. This process included revisiting the initial narratives to validate whether they were reflected in the transcripts, and to also to triangulate what the research participants reported participants said with what they actually said. This process was aided by the clear aims and objectives for each phase, which had been carefully derived from the literature review, and the iterative nature of the integrated fieldwork design which encouraged constant reflection and analysis throughout the project.

5.5 Ethical considerations

As this research project involved at least two sensitive topics, the overarching theme of HIV/AIDS which is widely associated with social stigma, and sexual behaviour, itself not always openly discussed, alongside with more general ethical concerns associated with research in developing country settings relayed to unequal power relations, it was necessary to ensure that the methodology and study design addressed a range of ethical issues. Whilst the issue of ethics can itself be abstract, in some cases dealt with in a mechanical, procedural way, rather than as a reflection of the research process itself and the context within which the research takes place (Molyneux et al. 2008), it was the authors' intention to treat it seriously and build in as many mechanisms as possible to conduct this research project to the highest ethical standards possible. Exposure to the field setting in an initial trip prior to the finalisation of the research tools highlighted a number of issues that had to be incorporated into the design process and training of research assistants.

Important ethical considerations identified in the literature are the relations between researcher and researched, as well as the potentially extractive nature of research, especially in low income settings (Gahagan et al. 2008). This can be conceptualised in two ways, both linked to a concern with how participants benefit from the research. Firstly, how do participants benefit from the output of the research project? And secondly, how do participants benefit from the research process itself, how is the research carried out, and what is the impact of the process?

In terms of the research output, it has been noted that projects in the social sciences often do not have any tangible or obvious direct benefits for the populations that have participated

(Abraham 2001). This project can certainly be criticised on this basis. The conceptualisation of mobility as a social process used in this project is in part a critique of the biomedical/behavioural paradigm, and so by design will not necessarily lead to the suggestion of interventions to deal directly with sexual behaviour change at the level of the individual as central to the research output. Therefore, in the short term, participants may not necessarily benefit from the research directly, a common issue in this type of social science research. However, this does not mean that this type of research should be ruled out on the basis of its perceived lack of immediate benefits to participants, as social science research can often provide the platform on which more concrete, practical policies can be formulated by deepening our understanding of the complexities associated with social issues.

One approach in the literature to dealing with these concerns is for an intervention component to be added to the research programme in cases where there is no direct observable benefit for participants (Abraham 2001). Whilst there is a degree of theoretical conflict between an intervention component and the overall project approach, it was decided that it was appropriate for the research assistants, at the end of each interview in phase three, to give participants information on the free STI treatment clinic, and Voluntary Counselling and Testing clinic, both situated at the health centre in Kisesa, and to answer any questions that participants may have on accessing these services. This provided a direct benefit to participants who had shared personal and potentially sensitive information, and also supported the on-going aim of the cohort study without compromising the project aims. In practice, whilst participants did not always ask for this information, on at least two occasions those concerned about their sexual behaviour were given information about HIV counselling and testing services. A second approach to this was to be honest with participants about the research aims and objectives, and to take seriously questions about how the research would benefit them. In each research activity, participants were informed that we could not guarantee that there would be any immediate benefits for them, explained the longer term objectives of the study, and also communicated that we were grateful for their participation. An additional benefit of this honesty about direct benefits was to emphasise that participants did not have to take part and that there were no direct incentives to do so.

In relation to ethical concerns over the research process itself, there are a number of issues to address with regards to ensuring that participants are treated with respect, minimise any physical or emotional harm, involve them in the research process as much as possible, gain meaningful consent to participate, and that research is culturally sensitive. Firstly, as noted above, all in-depth interviews were carried out by a local Tanzanian researcher of the same sex. The aim of using same sex researchers was to minimise the social or emotional discomfort

of participants, and given the unequal gender relations that exist in Kisesa, it was a particular aim of this project to ensure that the voices and stories of women were not lost or mis/under represented.

Secondly, the topic of sexual behaviour was broached in a sensitive manner. In the focus group phase (detailed below) information was captured on sexual behaviour in a safe and unthreatening forum, by asking participants to talk about 'sex' in generalised terms, without having to refer to personal experience, a technique used previously when talking to specific occupational groups in sub-Saharan Africa (Nyanzi et al. 2004). This helped to reduce issues around confidentiality (people did not have to reveal personal details) and stigma surrounding HIV/AIDS (researchers created a non-judgemental environment in which HIV/AIDS and sexual behaviour could be discussed). In relation to in-depth interviews, the questions on sexual behaviour were asked towards the end of the interview. Interviewers informed participants that they did not have to answer any of the questions if they did not want to. This was emphasised before questions about sexual behaviour, in a non-threatening, non-judgemental way. Participants were also reassured that anything they said would be treated confidentially, and it was acknowledged that the issue of HIV/AIDS and sexual behaviour could sometimes be difficult to talk about. Of course, in the research setting it is hoped that interviewers are able to create a comfortable, secure environment, and build the necessary rapport with the participant to enable them to discuss the topics under investigation. To ensure that this was done in an ethical way, research assistants were instructed to approach this topic with the highest degree of sensitivity. It was made clear that if at any point during the interview the participant became upset, the research assistant would immediately stop the interview and comfort the participant. The interview would not continue unless the participant felt able to continue, though they would be reassured that they were under no obligation to continue. Research assistants were also authorised to end the interview early if they felt that further questioning would cause further emotional distress to the participant. To ensure that this was monitored on an on-going basis, the debrief process for each interview included a discussion on the feelings of the participants whilst talking about HIV/AIDS and sexual behaviour, and how the research assistant handled the situation. These safeguards, though not perfect, highlighted the fact that ethics is not limited to gaining permission from the relevant authorities, or designing appropriate tools, it is something that needs to be considered and monitored throughout the project. In this project, ethical standards were achieved through constant discussion and training of the research assistants, which included preparation on the kind of answers that participants may give and periods of reflection.

Alongside a consideration of the benefits of the research process, another main ethical consideration is the issue of informed consent. In relation to developing country settings, this can further manifest itself as an obligation to participate in the research, due to pressure from the researchers, or social pressure more generally. This is difficult to avoid, especially in situations where participants can feel a sense of pride at being invited to attend a survey, or to be interviewed about their life/experiences. In line with standard practice informed consent was gained before every focus group, with each participant given an information sheet and consent form (for an example see Appendix V) which they were asked to sign if they agreed to participate. The consent forms and information sheet had been drafted in English and then translated into Swahili with appropriate amendments. This process also included requesting permission to record research activities where appropriate. All information on each consent form and information sheet was read out loud to ensure that those who could not read very well were in a position to give their consent, and consent was also recorded verbally on the tape recorder. Time was set aside at the beginning of each research activity for any questions relating to the project overview or consent form, which enabled participants to clarify what we were asking them to sign.

This formal process fulfilled the ethical requirements, but it was unclear to what extent this procedural form of consent amounted to substantive informed consent, with this lengthy process experienced by all involved in the focus group as a hindrance in terms of the overall flow of each activity. It also seemed to be more for the benefit of the researcher than the participants, and was a process that was largely unfamiliar and alien to many. This is an area of international research that needs serious attention. A greater degree of informed consent was, however, achieved in other ways, and which point to the potential for concerns around consent to be incorporated in research design and execution. In terms of the process, a more appropriate time for gaining consent was when potential participants were invited. This is a more appropriate time to discuss the project in a less threatening setting. Secondly, the integrated design of the qualitative fieldwork meant that the majority of participants were not put in a position in which they were asked to disclose potentially sensitive details about their own sexual behaviour until they had attended a focus group that addressed this issue in a more generalised way. This also demonstrates that it is possible to build a qualitatively richer degree of consent if the consent procedures are well thought out and incorporated in the overall process and not just at the moment of the research activity. This insight should be of interest to the broader research community and is applicable to a wide range of projects that gather sensitive information.

A third key ethical issue, alluded to above, is the maintenance of confidentiality, to ensure that participants do not suffer any recriminations from their involvement in the research process. Again, due to the sensitive nature of the topic in which participants would, in some cases, be asked about extra-marital sexual behaviour, this was extremely important. Confidentiality was addressed in a number of ways; in all focus groups, participants were asked to choose different names to be used during the focus groups (unless, as happened in one case they decided they did not want to), and were reminded not to mention any names of other people when talking about those who were not present. In the in-depth interviews, recordings were started after the introduction so that they did not record the names of the participants. All recordings were coded and kept secure. In all published work, the necessary steps will be taken to ensure that participants are not identifiable through the information presented.

Ethical considerations must also be considered in relation to the participation of local researchers/research assistants. The approach taken in this project was to include and involve researcher assistants in the design, planning and analysis phases. The project plan had ample time built in for researcher training that went beyond the mechanics of the interview/focus group, to the sociological and epistemological underpinnings of the project. The quality of interviews and focus groups improve if researchers understand the project in its entirety, and this can also contribute to local capacity development. In practice, the two primary research assistants were recent graduates with no experience of qualitative research, so extensive training was undertaken throughout the process.

A final consideration concerns how the information participants provide is used and interpreted so as not to misrepresent their experiences (Green et al. 2009). This has in part been tackled by involving the research assistants in the analysis process and the involvement of participants in the research process through participatory approaches. It is hoped that the author will have an opportunity to return and present the findings of this project, which would also provide an opportunity to check whether this has been achieved.

In terms of the formal ethics process, ethical approval for this project was granted by the School of Oriental and African Studies, the London School of Hygiene and Tropical Medicine, and the Ministry of Health and Social Welfare, Tanzania.

5.6 Some key reflections on the process

This section captures some reflections on the fieldwork process, highlighting some of the challenges faced as well as successes in the field. This will allow the reader to understand more

about the collection and interpretation of data. In general the challenges and successes are related to three separate but interrelated issues; conducting research in a developing country context, in a language that the author is not fluent in, and on a sensitive topic

5.6.1 Talking about sex

The numerous difficulties in collecting accurate data on self-reported sexual behaviour across a range of research techniques are well documented (Fenton et al. 2001; Nnko et al. 2004; Bujra 2006; Anglewicz et al.). As can be expected, this project faced similar challenges. Whilst some reviews suggest that in-depth interviews illicit the most accurate data compared to other research techniques (Plummer et al. 2004), the project met with mixed success using this method. Participants were comfortable talking about sexual behaviour in a more general sense during focus groups and interviews, but in the interview stage, there were highly gendered differences in the amount of sexual behaviour reported. Men appeared to be more open about revealing their sexual behaviour while away, and were willing to respond to questions over why they did it, with whom and whether they used protection. In some interviews, male participants were so eager to discuss their sexual behaviour that, instead of this being an issue that was discussed towards the end of the interview, they introduced the topic themselves relatively early on. However, this was markedly different for women. There were only a few instances in which women shared information on non-marital sexual activity, and no women said that they had sex while they were away, though reporting that other women did. A change of female research assistant was made to see if this made a difference, but this appeared not to have done so. Of course, due to the relatively small number of women interviewed, it is quite possible that they were actually telling the truth, and had not had sex. The gendered differences in the reporting of sexual behaviour were anticipated, and were broadly in line with the epidemiological data from Kisesa presented in chapter three (Kishamawe et al. 2006).

This issue was addressed by the design of the study and the specific techniques used. During the exploratory focus groups in the second phase, when participants were talking about sexual behaviour in the focus group phase, the lines between what happens in general and their own experiences can become blurred, and so the behaviour of participants is revealed indirectly. In the in-depth interviews during the third phase, it was decided to ask female participants about the sexual behaviour of others, with the intention that it would enable participants to talk about their behaviour indirectly. In a number of cases the research assistants suspected that when female participants were talking about sexual behaviour in general, they were revealing information indirectly about their own behaviour. This was not the case for every interview,

but is again an additional dynamic that has helped to frame rigorous interpretation of the data. This was done in a sensitive manner, and was not intended to 'trick' participants into revealing things about themselves that they did not want known, rather as a less direct form of questioning.

This issue must also be understood within the context of the overall aims and objectives of the study, which were to understand more about how mobility processes and/or context influence behaviour, not to quantify the amount of sexual behaviour that takes place. Therefore, the information gathered on sexual behaviour in general can be used to reveal some of these underlying mechanisms.

5.6.2 Working with research assistants

The decision to use research assistants to conduct the research activities, rather than to act as translators, raised a number of challenges and observations that are important to document. It is undeniable that this research project would not have been possible without the research assistants. The research assistants contributed to the research in a number of ways that are not always formally recognised, and perhaps not necessarily acknowledged by the research assistants themselves. Firstly, through the debrief process, the research assistants were not only asked about what had been said, but what they thought it meant, i.e. about their own interpretation of what they had heard in the interviews and focus groups. Clearly it is natural for anyone involved in the research process to have an opinion about what they are being told, particularly when the data being collected is qualitative in nature, but this process went further by actively encouraging the research assistants to reflect on each focus group or interview. Therefore, as emerging themes were discussed in the debriefs, alongside the staged nature of the research process in which later phases were designed on the basis of the output of previous phases, the research assistants were implicitly, but not necessarily explicitly, involved in the on-going analysis of the data. Their own reflections on the topic are likely to have influenced the themes that they followed up on in later activities, so that the research assistants, rather than being seen as conduits through which data flows, play an important role in shaping the very nature of the data. This influence needs to be recognised, though the precise influence is impossible to quantify.

The approach also puts the researcher in the hands of the research assistants in terms of the quality of the research, as qualitative data is not just something that is extracted, but it is formed through the interaction between researchers and participants. A reliance on probing for further information at the right point in time in research activities gives research assistants

a central role in the framing of the entire project. This is not always a comfortable position for the researcher to be in, and it can be a frustrating and stressful experience. However, at the same time research assistants can ask questions which the author may not necessarily have asked. As such, the research assistants are intimately involved in the data and outcomes of the project

A second key but unanticipated issue relates to how this approach influences power relations between researcher and participant. One of the strengths of the overall approach was that to a certain extent the influence of the unequal power relations that exist when researchers from a developed country work in a developing country context were controlled for. However, the unique position of the research assistants did not completely overcome this issue. Although the research assistants came from the same background in terms of region and tribe as the participants, they were generally relatively younger than the participants albeit with higher education levels, and it is also likely they had relatively higher incomes as a result of their employment with NIMR. Whilst this suggests that the research assistants had a higher socio-economic status, status is not purely related to wealth, but also to age, particularly in the Tanzanian context. Therefore, this produced a situation with unique power dynamics at play, which again may not necessarily be fully understood. One example of a concrete manifestation of this was that one younger female research assistant was finding it difficult to get women to discuss their sexual behaviour in the in-depth interviews, women who were in general older than her, in some cases by upwards of ten years. Whilst this could be due to a large range of reasons, it is thought that in part this was related to the unequal power relations between researcher and participant shaped by age, though in this instance it was the researcher who was in an inferior social position.

A related challenge stemming from the shared cultural background of research assistants and participants was that whilst the research assistants could identify with participants and understand the local context, they had the challenge of trying to remain in an objective position due to the unknown specificities of the study site, and also because they had to ensure that they were working on the authors behalf. During research activities, the research assistants had to be careful to ensure that it was participants, and not them, who provided definitions and explanations for either slang or local concepts/phrases. This was not always straightforward for the research assistants, who at times had to ask participants to explain certain words whilst at the same time acknowledging that they knew what they meant. Of course, during the preparation and training it had been emphasised that the research assistants had to clarify what participants meant when using ambiguous or local language, and that the research would be compromised if they provided these definitions. We rehearsed

how they would deal with this situation. However, this also highlighted the reliance on the research assistants to notice when to ask for more specific definitions of words, and it is likely that other words which had a shared social and cultural meaning may have been missed.

5.6.3 Researching in a foreign language

Closely related to the above issue was the experience of researching in a foreign language, an issue that is particularly pronounced in qualitative fieldwork. The detailed description of the design of the methodology above has shown the many ways that this was taken into account, such as the reframing of questions about mobility, the careful translating of all research documents and discussions about the different forms of language that research assistants could employ to ask questions, the piloting of phase one research activities, the phased nature of the research project which enabled a large degree of flexibility to the way activities were designed, and the on-going involvement of the research assistants, in line with standard recommendations in the literature (Rubinstein-Ávila 2009; Casale et al. 2011). However, it has been noted that, when considering linguistic issues ‘it is hard enough for one person ever to understand another, even if they are of the same gender, class, race, nationality, sexual orientation’ (Andrews 1995), highlighting the difficulties inherent in this form of research. Therefore, it is accepted that many of the nuances will not be fully appreciated by the author, or, as noted above, will be mediated through the interpretation of the research assistants. However, the on-going discussion of the research activities minimised any potential misunderstandings, and care has been taken to ensure that the findings presented in the next chapter are rigorous and do not rely on the author’s own tenuous and out of context use of quotations. The triangulation of the author’s fieldwork notes and the debrief with research assistants in combination with focus group and interview transcripts gave an added depth to the overall analysis, so that there was not an overreliance on reading transcripts devoid of many of the other elements involved in communication.

5.6.4 The use of incentives

The use of incentives in encouraging participation is a common issue faced within most research programmers (Grant et al. 2004), not least because it is vital to ensure that participants are not coerced, and that the data gathered is not influenced by any incentive that is regarded as ‘payment’ in which participant feel obliged to provide data in line with the researchers expectations. However, there seems to be a general agreement that some form of token compensation for participants time is appropriate (Emmanuel et al. 2006), though it is acknowledged that the choice over what and how much to give to ensure that it remains a

recognition of this, rather than coercion or payment for information, is important to consider (Casale et al. 2011). In this project, participants were given 5,000 Tshs at the end of the research activity, with refreshments that included soda and, in focus groups that took longer, some local bread or cake. On reflection, the author felt that 5,000 shillings, approximately £2, was perhaps too much, though this is the standard amount provided in all NIMR research activities, so that the author did not have direct control over the amount or form it took. Of course, the value of this token amount would not be perceived in the same way by all groups, so that even if the author had control over this 'compensation', there are still tensions which are difficult to resolve.

In practice, the key issues are whether this compensation created a situation where participants were pressured into doing something they did not want to, or saw this as payment for information, which would compromise the data. In the later stages of the project, once control was gained over the invitation process, it was made clear that participation was voluntary, and that there was no payment offered, so it is hoped that this 'compensation' did not create coercion to participate. However, in earlier focus groups in phase one in which we were reliant on the VEO's, it was felt that some participants had been invited by VEO's as 5,000 shillings would have made a significant difference to them. This did not influence the overall composition of focus groups, which all had a healthy mix of ages and different socio-economic backgrounds, though it is clear that whenever there is some form of compensation, this issue will never be completely removed. When conducting research in an area over a period of time, and especially somewhere that has experienced numerous research activities, residents talk, so that even if there is no explicit communication that compensation will be given, potential participants may come with their own expectations of what they may be given at the end of the activity.

This issue of compensation, which may have been very damaging to the project, was highlighted at the end of the phase two focus group with farmers. When the mobile farmers began to argue that the money we were 'paying' was not enough, saying that they had to pay for transport to get to the focus group and also had other income activities that they would have rather done, and so as a group refused to leave until we gave them more. To deal with this issue, it was agreed to give them a little extra to cover their transport costs. This raised a number of concerns over their expectations prior to attendance, the perception over being paid rather than receiving compensation, and of more concern to the rest of the project, that a precedent had been set where the local population would also expect this. However, during the activity debrief the research assistants noted that this view was not necessarily the view of all farmers, and that the request for additional money was primarily instigated by two of the

farmers. This issue was followed up with them a few days later, when it was discovered that they were both *balazi*, and had thought that they had been invited to a dissemination seminar, which the TAZAMA project also run, when local community leaders are paid 10,000 shillings to attend the seminar and disseminate the information to their group of villagers. The author is satisfied that this was a genuine misunderstanding, but the experience did highlight the expectations and perceptions of potential participants. Subsequently, the invitation and communication process was improved to set clear expectations that participants would not be paid for their attendance.

5.6.5 Focus group and interview dynamics

The focus groups conducted in this project were all unique in their own way, shaped by the interaction of different research assistants with a wide range of participants, but broadly speaking were a significant success of the project. Of course, as with any research method, there are some pitfalls which need to be accounted for, and whilst some influences can never be completely removed, a reflection on some of the dynamics of these focus groups will demonstrate how the interpretation and analysis of the output involved considerations regarding the process of data collection.

One of the most common criticisms of the use of focus groups is the issue of group dynamics and how they can distort or influence the output, often through the dominant voices of the wealthier, more educated, more articulate or older participants, leading to what can sometimes be an artificial consensus. Evidence of this was apparent during a phase one focus group with rural men, as the final ranked list of six reasons clearly reflected the points that the most senior participant had mentioned in the brainstorming session, and which were relatively obscure in comparison to other reasons that were under discussion.

In contrast, during one female focus group in which it was unclear whether a genuine consensus had been reached, it became apparent that this groups' members were very supportive of each other, and whenever questions were asked, a degree of mutual support was evident, as participants found it difficult to disagree with each other directly in what was a more public forum. This was an interesting dynamic, as the influence over the output was not rooted in unequal power relations, but something that was more akin to a degree of solidarity displayed between female participants. In other focus groups, women managed to disagree with each other with careful use of language, in which they started by stating that they agreed with what their fellow 'sister' had said, but then preceded to make a different point, a more subtle form of communication which maintained the harmony of the group.

In other focus groups, challenges to stylistic notions of unequal power relations between young and old were observed, with younger male participants vigorously defending their points, often in a situation when they were outnumbered by elder participants. One example of this was when older participants blamed the spread of HIV on the promiscuity of the youth, an argument vehemently rebutted by the two younger participants who in no uncertain terms pointed out that the youth were not the only ones having sex in Kisesa, and therefore they should not be the scapegoats. This suggests that power relations that are framed as heavily entrenched in society may be significantly more complex and fluid once subjected to closer scrutiny.

An additional dynamic of note was that, in the phase one focus groups, following the consent process and explanation of the overall aims of the project, there were differences in the way in which respondents took these on board. In some cases, discussions towards the end of the focus group were, with little prompting from the research assistants, strongly oriented towards issues concerning HIV and sexual behaviour, whilst in other cases participants seemed to make few links between the topic under consideration and these broader aims. As these were exploratory and repeated focus groups, this framing by participants did not influence the eventual outcome, but this is an important current to recognise and identify, as if it remains undetected has the potential to give undue importance to relatively marginal issues.

One of the strengths, as noted above, of the research design, was the method of interviewing a sub-sample of focus group participants. This enabled some comparisons between what participants reported in different activities and settings, and also helped with establishing validity, through a crude and informal triangulation. In many cases, participants reported similar things in interviews as they had in the focus group, although there were, of course, situations in which this was not the case, one example being a male dagaa seller who discussed in great detail the promiscuous sexual behaviour of dagaa sellers, but when interviewed said that he was deeply religious and had never himself engaged in extra-marital sex. Whilst these two positions are not necessarily at odds, this enables earlier comments to be better interpreted. In other situations, participants who were shy and found it difficult to contribute in the focus groups were sometimes talkative and open in their interviews, highlighting how important the sampling strategy was in terms of ensuring that it was not only those who spoke confidently in the focus groups who were interviewed.

5.7 Conclusion

This chapter has discussed in detail the methodology used in this project, including information on how decisions were made, the challenges faced in the field, and how a range of practical and conceptual issues were dealt with. The research process itself is a unique organic process that is often overlooked or made light of in academic papers, in part due to the issue of space, but also the complexity and ambiguity of conducting qualitative research. Here, a more complete discussion has been conducted, with the primary aim of demonstrating the rigorous nature of the project and to help frame the presentation of the data and analysis in the following chapters.

Chapter 6 – Research Question 1: How do local socio-economic structures influence population mobility in general and specific forms of mobility and/or migration?

6.1 Introduction

This chapter addresses the factors that shape population mobility in Kisesa. It draws from and integrates a number of different sources, including primary sources from the phase two focus groups conducted for each form of mobility, the in-depth interviews conducted in phase three, and other informal interviews conducted with the village executive officer, the agricultural extension worker for Kisesa and local farmers. The main issues reported by participants in the study are also triangulated with secondary sources, and situated within the broader literature on economic change and the transition from socialism to capitalism and the resulting liberalisation of the economy from the mid 1980's onwards, outlined in chapter four. The chapter firstly outlines and discusses the structural factors that shape mobility in general, which is followed by a discussion of what drives mobile groups to go to specific places. The chapter finishes with some concluding remarks, including a reflection on the migration theory discussed in chapter two.

6.2 Structures shaping mobility in Kisesa Ward

6.2.1 Land: prices, shortages and productivity

It is well documented that the vast majority of the economically active population in sub-Saharan African countries are engaged in the agricultural sector, which is also the case in Tanzania (Ponte 2002; Salami et al. 2010), though it must be emphasised that this is not always the only economic activity that households are engaged in as non-farm incomes increase (Mueller 2011) (Barrett et al. 2001). Therefore, access to land is still of vital concern, with household survival and income at least partially, if not predominantly, dependent on agricultural production. This is reflected in one of the main reasons for moving reported by focus group participants in the initial exploratory phase, which was to engage in agricultural activity, and more specifically 'Ufinyu wa maeneo ya kulima' (constraint on areas for farming). The following quote from a male farmer brings together the three main reasons that farmers reported as to why they leave Kisesa Ward to cultivate land elsewhere; access to land, (relative) land prices, and (relative) land productivity:

- “Those with lands are very few, now if you get even about an acre to rent they can tell you a lot of money, or eighty or one hundred thousand. However in

some areas, for example, me, I used to go to Bariadi, there you can rent an acre for twenty thousands and harvest/get seven or eight sacks in one acre, but here you rent for high cost, you rent for one hundred thousand but come up with two sacks which is only enough for the family use, with this it is difficult to get rid of problems/poverty” (male farmer, FG-FARM)

This narrative is representative of the views of all the farmers who participated in this study, and neatly summarises a situation in which mobile farmers from Kisesa travel to areas that are more remote from Mwanza city to access land that is cheaper and more productive. The pressures that stimulate this population flow, and which are also relevant when considering the structural forces that underpin the movement of maize traders, are a result of changes in structural relations, historical economic and demographic processes associated with economic liberalisation and the extension of capitalist relations of production, and the way in which these combine in the specific context of Kisesa.

Land prices and the development of property relations

Participants reported that land prices, both purchasing and rental, have increased significantly in Kisesa over the past 5 years, with one estimate that the increase is as much as between 50% and 100% (VEO). However, alongside this, it is also clear that this is a relative increase in comparison to other areas: “You can buy one acre...you can buy it for one hundred and fifty thousand, but here they can sell you for one million per acre” (FM3). Therefore, it is necessary to understand the structural elements that have contributed to the increase in land prices in general, and then investigate the forces that influence the trajectory of land prices in Kisesa, and why they may be increasing to a greater extent than other areas.

The increase in land prices in general across Tanzania can largely be attributed to changes in the structure of property relations which have accompanied economic liberalisation and transition from a socialist to market based economy, embodied in the Village Land Acts No.4 and No.5 in 1999, the first major land reform legislation since independence (Shivji 1998; Tsikata 2003). Prior to this, the post-independence land regime was strongly influenced by the Land Ordinance act of 1923 and the amendment in 1928 which were introduced under British colonial rule. The 1923 act decreed that all land in Tanganyika was effectively vested in the state as “under the control and subject to the disposition of the Governor to be held and no title to the occupation and use of such lands shall be valid without the consent of the Governor” (Shivji 1998). The 1928 amendment established a dual land tenure system called the Right of Occupancy (Tsikata 2003; Hayuma et al. 2006), with two forms of land rights defined: “Granted occupancy rights” were legal grants of tracts of land made to non-indigenous populations that conferred the right to occupy and use the land for a period of 99

years, rights which formed the basis for the legal transfer of indigenous land to foreign corporations and immigrant settlers, and “deemed occupancy rights”, which acknowledged local customary tenure systems and the rights of land use of the indigenous population, though importantly without conferring upon them statutory (legal) status (Hayuma et al. 2006).

The immediate post-independence period saw few changes to the land regime, which was essentially a continuation of colonial land policy and existed relatively unmodified until the 1990's. Under this regime, all the land in Tanzania was now vested in the president, though this time under the flag of nation-building and the new presidents' wish to combat the commodification of land (Tsikata 2003; Komu 2012). The president also had the power to annexe land for public purposes ranging from the creation of wildlife reserves or national parks to the creation of plantations and extensive parastatal agricultural production (Land Tenure Study Group 1995). Compensation for land appropriated for these purposes was limited to the non-exhausted improvement that had been made to the land, as in line with colonial policies, usufruct land rights conferred no intrinsic value in land (Kironde 2000). In line with the new president's theme of African socialism, the buying and selling of land was forbidden, with all freeholds previously created under German rule converted into leasehold terms of 99 years, so that, in theory, all land available to indigenous Tanzanians remained held under customary tenure systems (Shivji 1998).

Following a period of villagisation in the 1970's and early 1980's (Okoko 1987), the Land Acts of 1999 aimed to provide security of land tenure, enhance access to land, and to promote and regulate land markets (Parliament of the United Republic of Tanzania 1999; Pallotti 2008) through a number of significant changes to the structure of property relations. Firstly, deemed occupancy rights and granted occupancy rights were given equal footing under statutory law, with villagers now able to gain formal titling of their customary occupancy rights, in effect moving the category of customary occupancy rights closer to individual private property rights. Secondly, whilst villagers do not 'own' the land, the act allows them to trade their right to the land (Wily 2003), in effect creating a situation which is more akin to buying and selling land, and also enabling land to be used as collateral to gain access to credit. The land market is administered through the local village council, and to prevent too much concentration, each village has a ceiling on the amount of land that can be possessed, usually 20 hectares (Wily 2003). Thirdly, whilst the land remains vested in the president, who retains the power to appropriate land for other uses, if he does so the act makes provisions for, 'full, fair and prompt compensation' calculated on the principle of opportunity cost, rather than only un-exhausted improvements made to the land. However, as critics point out, this still maintains

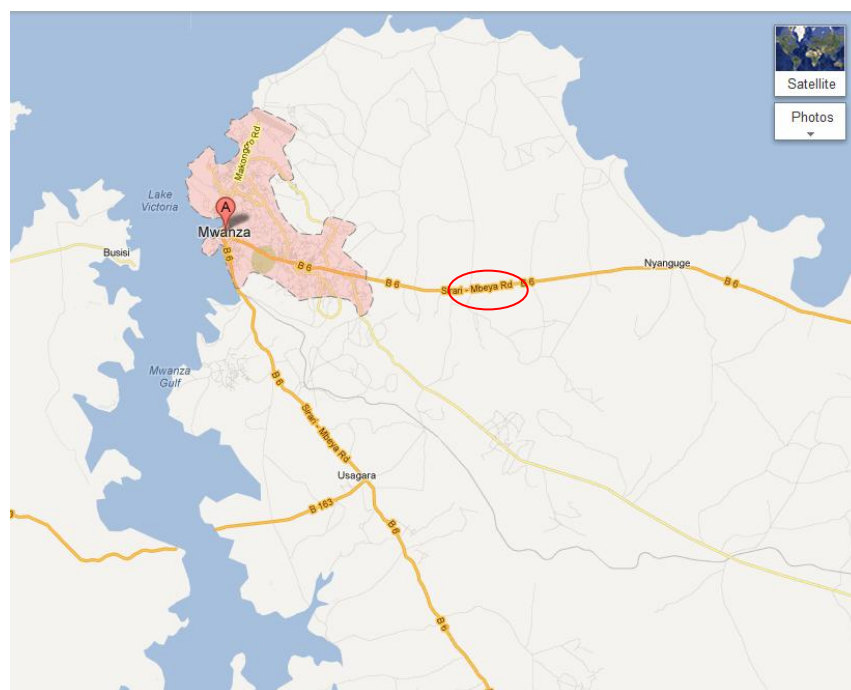
the dual tenure system, with customary occupancy formalised alongside granted occupancy by the president (Shivji 1998; Odgaard 2002). Underpinning these developments, and central to the Village Land Act, is the aim of creating an efficient and transparent system for land management. Under this act, there are a set of definitions as to the types of land that are to be classified as 'village land', with each village council receiving a certificate confirming this. The village council are then viewed as trustees of the land, and are responsible for the administration of this land, including all registration and titling, the allocating of unused land or land that has not been defined as communal or for individual use, dispute and conflict resolution, and overseeing the buying and selling of rights to land (Parliament of the United Republic of Tanzania 1999).

The underlying thrust of this legislation is to facilitate a transition from communal and customary tenure systems to a land regime characterised by the assignment of individual property rights that to all intents and purposes work in a similar manner to western private property rights. The case for this rests on economic theory expounded by institutions such as the World Bank that view markets as the optimal allocator of scarce resources (Skarstein 2005), which views individual property rights as the basis for stimulating economic development through creating incentives to invest by granting land owners exclusive control of the benefits of agricultural investments, extending access to credit through the use of land as collateral, and promoting efficient land use through the market mechanism that transfers land from less to more economically efficient land uses (World Bank 2003) though it is unclear to what extent these benefits have been realised (Skarstein 2005).

One outcome of these changes in property relations is that it is now acknowledged that land itself has intrinsic value, with one local government employee involved in the approval of all local land transactions noting that "People in the past did not want to hold/ accumulate land for themselves because they were scared that it might be taken freely at any time, but after these laws they realized that, the land is a very important resource/property, that is, even the government will need to use it for a certain service... and it can't be taken from you without being compensated" (VEO). This has underpinned general increases in land prices as knowledge and understanding of this implication has filtered through, with evidence from other regions of Tanzania suggesting that land transactions are now common in both informal and formal markets in urban and peri-urban areas (Kironde 2000).

The dynamics of the land market, and by extension land prices, in Kisesa are heavily influenced the proximity of Mwanza city, with some participants remarking that "It is the city here, can't be compared to the village" (FM4), illustrating that some already consider Kisesa to be part of

the city, with many other participants expecting it to be so in the near future (FM3, FG-FARM). The authors own observations from travelling between Mwanza city and Kisesa confirm this, as for the majority of the journey there are buildings either side of the road, with only a short section bordered by open fields on either side. Additionally, with the lake constraining expansion to the west, it is likely that the city will continue to expand eastwards along the main road which goes to the western Serengeti and on to Kenya, and around which the urban centre in Kisesa is located (see map 6.1).



Map 6.1 – Mwanza City expansion along main road. Source: Google maps, accessed April 14th 2013. The author has added in the approximate location of Kisesa urban centre

One outcome of this geographical location is that participants report that land is being purchased by those coming from ‘town’ (this is how Mwanza City is referred to in Kisesa and the area more widely), for either speculative purposes, as land prices are expected to increase further as the city expands, or as plots on which to build houses as out of town residences. This is directly linked to the high land prices by many participants:

- “That is why the price for plots here in Kisesa has increased a lot; one can’t get a plot for two hundred thousand, even for five hundred thousand. People starts from...can sell you for one million, only if he is your relative thus will consider/have mercy on you, Up to twenty or thirty million... the reason is those people from town. They do come here, they are the ones caused the land or plots increases in price” (male farmer, FG-FARM)

This phenomena has been noted in other regions of Tanzania, with speculation in peri-urban areas on the increase, often by wealthier individuals and civil servants (Kombe et al. 2001;

Kombe 2010), and reflects the outcome of processes of class formation and differentiation, which are developing at pace in urban areas. It is clear from the statements above that these prices are prohibitive for most farmers in Kisesa who are looking to expand production, and whilst there are reports of land ownership concentration due to the purchasing of land by wealthier farmers as result of this commodification of land in other regions (Sokoni 2008), this does not seem to be the case in Kisesa, with the majority of land purchases and land ownership concentration attributed to those from outside the ward (VEO). This is one key explanation as to why land prices are increasing in Kisesa compared to other areas that are further away from the direct influence of Mwanza city.

Added to this, due to the decentralisation of the management of land transactions noted above, progress in implementing the provisions of the new land act has been uneven (Pederson 2011), with the process of formalising access to land remaining mediated through embedded social relations and local power structures (Odgaard 2002). In Kisesa it was reported by the VEO that the district land commissioner was planning a land survey, so that villagers were expecting to be able to receive formal land titles on the basis of the survey, and so land prices have increased in anticipation of this (VEO). This may lead to an increase in relative land prices compared to other areas where implementation, or even the prospect of implementation, is lagging, though it also suggests that the land market is developing before individual farmers gain formal titling to their land.

Population pressures and land distribution

A second distinctive aspect of the context in Kisesa is that it is a ward with high levels of in-migration, with participants reporting that the local population is growing, particularly in the urban centre which is expanding as the population concentrates. One of the reasons for this growth is that Kisesa is seen as an attractive place to live, as “it is easy to access social services, Yes, there is electricity power; there is guarantee of water and so on. There are good roads, ee and as you know many youth goes to school” (VEO). The ward also has a health centre in the urban centre and two dispensaries in rural villages, and along with a number of primary schools, there is also a secondary school in the urban centre. The quality of local services and health infrastructure are also influenced by the proximity of and access to Mwanza city, with Kisesa a stepping stone for rural to urban migrants, as well as a ward where in-migrants can still engage in agriculture but have the benefits of better services and transport infrastructure. As noted earlier, the growth of Mwanza city is predominantly driven by in-migration (Muzzini et al. 2008), with evidence from a case study in Kwimba district (which is also in Mwanza region) supporting this theme, suggesting that up to 30% of residents were born outside the

village. Whilst rural migration has been in part shaped by the villagisation project in the late 1960's and 1970's, this study also reported high levels of more recent short distance movements (Madulu 1998).

This has caused additional pressure on land, with participants reporting that “the lands are so few because there are a lot of people” (FG-FARM) and that “to be honest, people move from their areas because of shortage of land” (FG-FARM). This was another important factor that most farmers agreed upon as creating the stimulus or even necessity to search for other areas with more accessible land. The expanding urban area and population growth also influences land availability for agriculture, as more land is being converted for house building (FMF1). Whilst this shortage is also related to the buying up of available land by the urban classes, it was also apparent that land is distributed unequally in Kisesa, something that has been noted in other studies across Tanzania (Madulu 1998; Mueller 2011a). For example, one older farmer interviewed informally stated that he had accumulated 63 acres of land, land which he had not purchased recently but had accumulated over the years of his residency in Kisesa, in comparison to the other farmers interviewed in phase three who typically owned between 1 and 4 acres in Kisesa. Although the precise dynamics of land accumulation and class formation in Kisesa were not fully explored during the fieldwork, one theme that emerged was that land ownership and distribution differed between those who were indigenous residents of Kisesa, and those who were in-migrants: “The lands are so few because there are a lot of people; you can find some families own even three acres of land. The three acres is for the natives, or of somebody living there for a long time, mostly they just have some plots” (FG-FARM). This is not to say that all indigenous residents of Kisesa have large farms, as some farmers from Kisesa reported having access to as little as half an acre. This may be either due to poorer farmers having to sell land in times of economic distress (Sokoni 2008), or as an outcome of historical processes of land distribution and accumulation under customary tenure system that, despite the apparent communal nature of land holdings and allocation mechanisms based on need, have enabled the establishment of large disparities in land holdings. Therefore, the current pattern of land distribution is mediated by both class and residency category. A number of the mobile farmers interviewed were not originally from Kisesa (FM1, FM5, FMF1), evidence which supports claims that those who are mobile are often in-migrants. However, it is suspected that, despite a developing land market, the size of land holdings for most farmers living in Kisesa, regardless of residency status, are fairly static, as locals find it difficult to expand their farms due to the high land prices, with most acting in the market as sellers. Therefore, expanding production is difficult for both in-migrants and residents who have not accumulated large land holdings, or who have inherited smaller holdings when land is sub-divided amongst

siblings (FM3). Whilst these tensions have not been fully articulated here, and would require significantly more research, what is clear is that the pattern of land distribution and the lack of available land are central to shaping population flows from Kisesa.

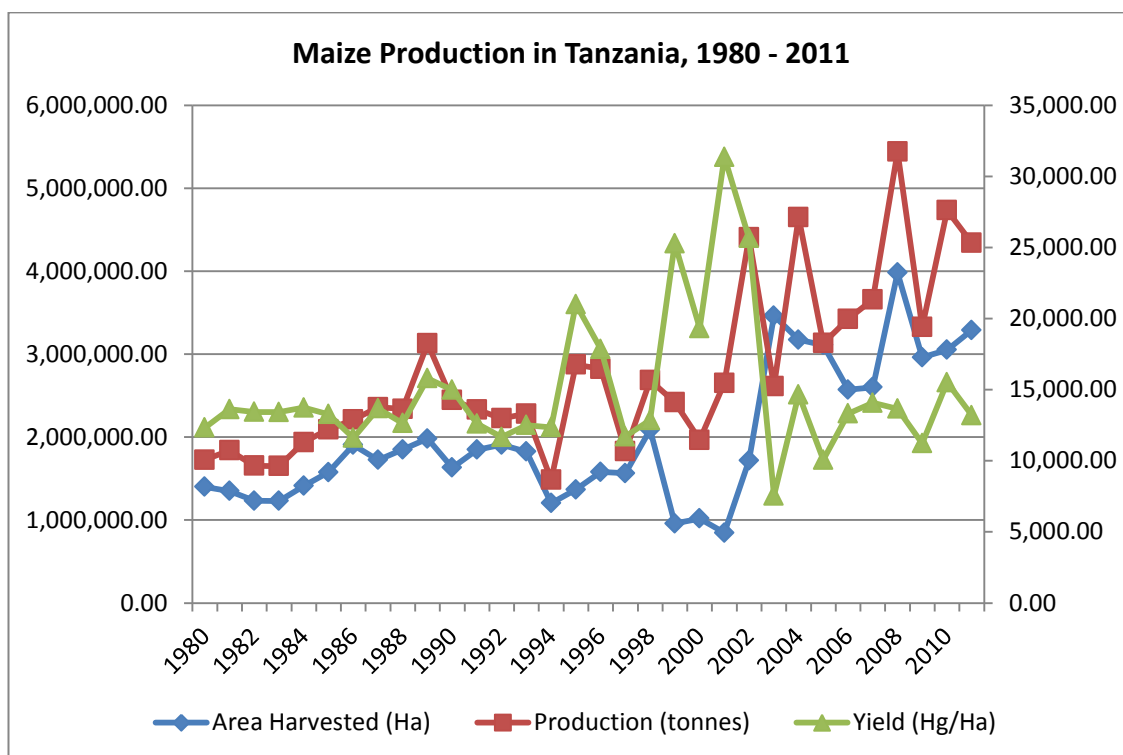
Land productivity: Ardhi imechoka!

A third theme in relation to the land issue was the claim that “*ardhi imechoka*” (the land is exhausted). This is a phrase used by farmers in Kisesa to describe the state of the land, and has also been noted in previous studies, such as Mueller (2011a) and Ponte (2002), and refers to declining land fertility and, as a result, overall productivity. These issues are emphasised by the following quote that captures the main themes related to differences in fertility that shape mobility:

- “The advantage is changing of the environment, out of the environment you visited and that they are attractive for agriculture. Still those areas are fertile due to preservation of trees, it is still raining, he must get profit. He was to get two sacks of maize here and twenty sacks there. Because of fertility of the land.”(male farmer, FG-FARM)

Participants report that the exhaustion of the land is due to a number of factors. One dominant theme is that “it is because of long time farming on the same land” (FG-FARM), and in particular without improvements to the land which will lead to a gradual decline in land fertility over time. All farmers report that they do not use industrial fertilisers, with the application of manure the only means of restoring land fertility. This is related to the increased prices of inputs following liberalisation and the removal of state marketed and subsidised inputs which has resulted in lower levels of input use across Tanzania (Skarstein 2005). The Tanzanian Poverty and Human Development Report of 2007 confirmed the low use of agricultural inputs, with 87 percent of Tanzanian farmers not using chemical fertilizers, and 77 percent not using improved seeds (Salami et al. 2010), and an informal conversation with the local agricultural extension worker confirmed that use of fertilisers was rare in Kisesa. Without significant soil improvement, farmers are aware that overall land productivity will decline (FG-FARM). In relation to maize production, one of the crops of interest in this study, recent productivity data show that maize yield in tonnes per hectare is lowest in the lake zone, which incorporates much of Mwanza region (Stahley et al. 2012). Data on trends on maize production in Tanzania as whole between 1980 and 2011 shows that in terms of productivity, despite significant fluctuations over time, yield per hectare in 2011 is at a similar level to 1980. Conversely, the total area harvested and absolute production levels, although also experiencing some fluctuation, are generally on an upward trend (graph 6.1). In particular, the

area harvested has increased from around 1.4 million hectares in 1980 to over 3.2 million hectares in 2011.



Graph 6.1 – Trends in maize production in Tanzania, 1980-2011. Data source: FAOSTAT, downloaded April 2013

This suggests that absolute increases in production volumes are more likely to be attributed to the expansion of the production area as opposed to productivity gains. This trend is reflected in the production strategy of the mobile farmers in Kisesa, who are attempting to increase household production through the expansion of land cultivated, rather than investment in agricultural inputs to enhance productivity. They do this through moving from an area where land is viewed as relatively exhausted, to other, often more remote areas, where they can access land that is more fertile either due to less intensive farming or that it has not been farmed before.

The issue of land fertility is also influenced by a number of other factors. Whilst it is acknowledged that the land requires improvement, there are also constraints in the use of manure, as one farmer noted: “While there is plenty of manure, ee...it is true that there are cows, but you can’t fulfil the...I mean...some acres of land, you can perhaps afford Terraces, it is impossible to do it in even half an acre, that is, if everybody wants to apply manure, it is impossible” (FG-FARM). This highlights that there is demand for manure, and that the local farmers are more than aware that the land requires improvement, but also that there are limits to the area of land that it can be applied to. Another theme that farmers report is that

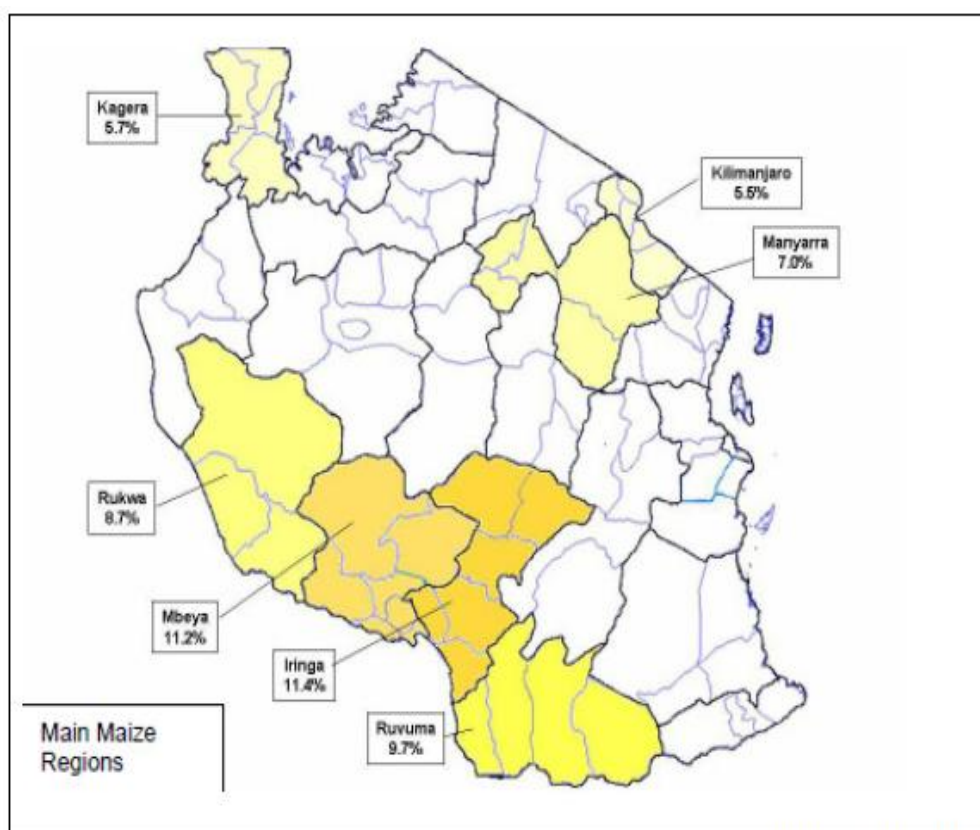
land is also used more intensively because of small farm sizes, which do not permit periods of leaving the land fallow, with additional pressure on the land related to increases in the population due to the in-migration noted above. Other farmers lament the fact that land fertility has been influenced by de-forestation, with observations that “the trees have been cut down a long time ago” (FG-FARM), which farmers understand has an impact on soil quality. Finally, the issue of land productivity is compounded by changes in rainfall, with farmers reporting that it no longer rains as much in Mwanza (FG-FARM). This is supported by evidence that shows the only statistically significant decline in average rainfall across Tanzania was found for Mwanza Region (Skarstein 2005), suggesting that there is some truth to this, though it is unclear how this varies across Mwanza region, as some destinations that farmers and maize traders go are within the region. For example, one farmer who travelled to cultivate in Sengerema district, Mwanza region, also reported low harvests to due lack of rainfall (FM4).

This section highlights the importance of identifying general themes, but also how they manifest themselves in a specific context. The apparent paradox of declining land productivity and increasing land prices can therefore be understood in light of the purchasing activities of the emerging urban classes who are investing in land in the hope that prices increase further as Mwanza city expands or for building houses, rather than for agricultural purposes. Further, the issue of land scarcity in a ward in which it is clear that large areas remain uncultivated is also in part related to pre-existing unequal distributions of land, and the barriers to participation as buyers in the land market by local farmers.

6.2.2 Physical and social structures of production and consumption

The previous section which addresses land fertility and productivity has, amongst other things, begun to develop the idea that spatial differences in the factors of production are one of the main factors that shapes population flows from Kisesa. However, it is important to recognise that these structures of production are not only physical, but also socially produced. We have seen how, in the context of Kisesa, land productivity has been impacted by the intensive use of land, in part due to the difficulties in accessing land and unequal land distribution, and also due to increasing population pressures. Additionally, we have also examined the importance of underlying changes in property relations, economic liberalisation, and urban class differentiation which has exerted an influence over the dynamics of production in Kisesa relative to other areas. These are clearly social in nature, but manifest themselves in physical spatial differences too. In this section, we will address the structures of production and consumption that underpin the movement of maize traders and dagaa sellers, and which to some extent overlap with and reflect these themes.

Whilst it is argued here that productivity in Kisesa is in part an outcome of historical social and economic processes, in relation to maize production, there is a physical structure of production that underlies population flows. Maize is one of the most important crops in Tanzania, serving as a food staple/subsistence crop that can also be used as a local cash crop or even an export crop to bordering countries (Ministry of Agriculture 2008). Whilst evidence suggests that maize was introduced to Tanzania in the 16th century, it was only under British Colonial rule that maize cultivation was promoted, and maize established as one of the primary food staples (Fourshey 2008). Since then, Tanzania has become heavily reliant on this crop, as it now accounts for around 75% of cereal consumption, 31% of total food production, with around 85% of the population relying on the maize production chain for income generating purposes (Otunge et al. 2010). Tanzania has seven major agro-ecological zones (Soil-Water Management Research Programme 2007), which represent a range of diverse climates and environments, so that the production of many crops is concentrated in specific zones.



(SOURCE: USAID 2009)

Map 6.2 – Main maize producing regions in Tanzania – Source: Tanzania Value Chain Synthesis and Analysis, USAID 2009, in (Chemonics International Inc. 2010). Legend – regions coloured in yellow are the primary maize producing regions. Percentage values indicate the proportion of national maize output.

For maize, over 40% of national production originates from four regions: Iringa, Mbeya, Ruvuma and Rukwa (see map 6.2) (Chemonics International Inc. 2010). This is to be expected, as the soil type and climate in some regions will be more suitable for maize production than others, reflecting differences which are clearly physical. Map 6.2 illustrates the uneven distribution of maize production output. However, this is not a recent trend, with mapping of maize distribution flows from 1990 showing a similar pattern (see map 6.3), which illustrates that whilst the regional distribution of crop production may fluctuate over time, the structure of production for maize has been relatively static over the past 20 years.

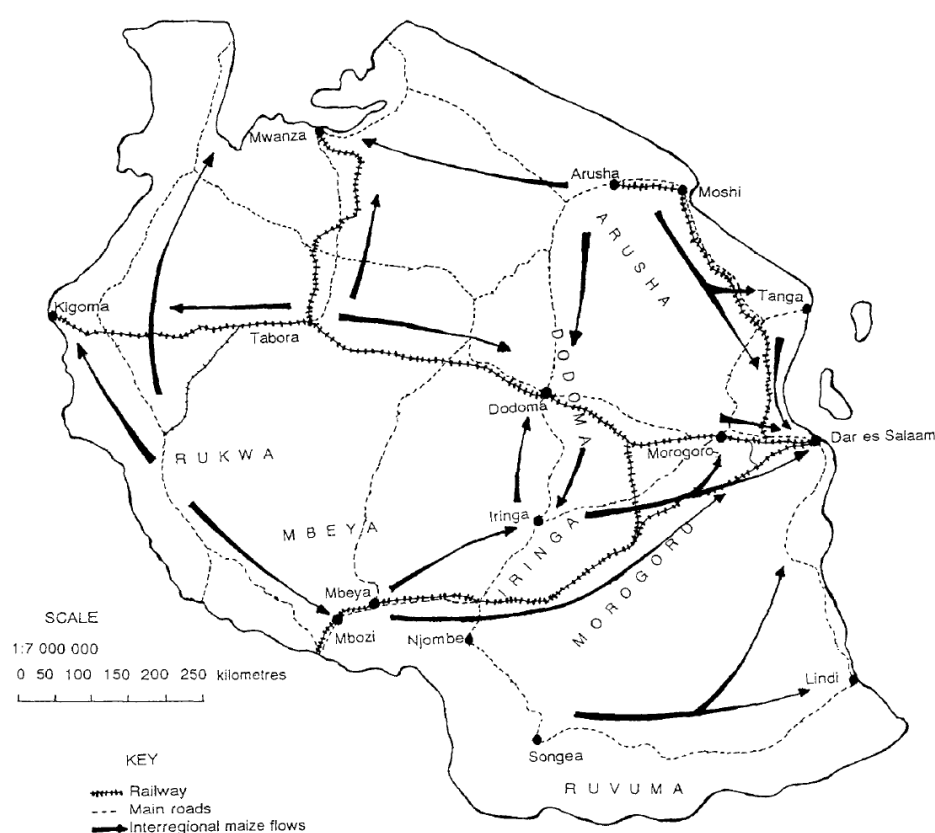


Figure 1. The maize trade in Tanzania.

Source: Adapted from Henry Gordon, 'Household participation in markets and household food security in Tanzania', paper prepared for the World Bank, 1990.

Map 6.3 – Trading patterns for maize in Tanzania – Source: Gordon, H (1990) 'Household participation in markets and household food security in Tanzania, in (Santorum et al. 1992)

As a result of this physical structure of production, Mwanza has long been a maize-deficit region and dependent on transfers from other regions (Bryceson 1993), so that the development of the network of private traders can be traced back to the colonial period. Historically, the trade in maize has escaped state control to a greater extent than other cash crops or staple crops. Following bumper harvests in the mid-1950's when the colonial and then

newly formed post-independence state allowed period of permissible trading of maize across the country, maize was incorporated under state control in 1964 with the establishment of the National Agricultural Products Board (NAPB). However, under the 1968 NAPB Marketing control act, in which trade in both maize and maize flour by unauthorised persons was made illegal, two important exclusions were made: “First, it was permissible for a maize producer to sell his own product at retail; second, it was permissible for anyone to sell at retail whatever quantity was needed for the consumption or use of the purchaser” (Temu 1984). This was in part aimed at maintaining local markets and enabling the distribution of crops across dispersed family networks (Bryceson 1993), but in effect enabled a black market to be established, and to a large extent undermined the aims of the NAPB and state control over crops (Temu 1984). The parallel maize market was further strengthened in the late 1970’s in some regions. Due to high transfer costs and a breakdown in infrastructure, the parastatals responsible for procuring and distributing maize, such as the National Milling Corporation, were not able to meet demand in maize-deficit regions (Bryceson 1993). The liberalisation era, from 1984 onwards, witnessed the transfer of the maize marketing to private traders, and by 1988, 83% of total maize sales were handled by the private sector, a rapid transition which was no doubt aided by the pre-existence of extensive parallel marketing systems (Santorum et al. 1992).

This brief overview demonstrates that whilst the liberalisation period formalised trade in maize through private traders, there has long been a historical need for maize imports to Mwanza region. Nevertheless, the maize deficit in Kisesa is exacerbated by social processes that have lead to declining land fertility, and hence low levels of maize availability in Kisesa (MTM1). This is reflected in the need for maize imports into Mwanza and Kisesa:

- “There is nothing in this year; we didn’t get anything from maize. It means that we have to go for them at other places and bring to people of...to Kisesa people; hence we have to go for them at the places where maize is much accessible” (male maize trader, FG-MAIZE)

Additionally, the social organisation of how these imports of maize from other regions are fulfilled, and how this has developed over time, has also contributed to the establishment of this population flow.

Complementing the structure of maize production is a spatial structure of demand and consumption, which is to some extent shaped by urbanisation and urban class formation. Although there is evidence of some urban agriculture in the city (Flynn 2001), it is clear that most of the population of Mwanza city are dependent on the maize market for their consumption needs. This reflects in part the expansion of capitalist relations, as more of the urban population are reliant on purchasing food and hence engaging with the market as

opposed to relying on household production to meet basic subsistence needs. By extension, the local population in Kisesa are also reliant on imports of maize from other regions, so that demand in the immediate vicinity of Kisesa is high. Processes of class differentiation and increasing urban incomes in comparison to rural areas push prices up, with residents of Kisesa even claiming to feel the impact of price increases due to those from town purchasing maize there (FG-FARM). Evidence for price differentials suggests that prices are lowest in surplus producing regions such as Rukwa and Mbeya, and higher in maize deficit regions such as Mtwara (Minot 2010), whilst other evidence suggests that maize market integration remains incomplete, with prices taking a number of weeks to adjust, and hence providing the opportunity for traders to take advantage of differentials (Van Campenhout 2007). When considered together with the structure of production, the conditions exist for private traders to exploit differences in prices and availability to make a profit, whilst at the same time fulfilling an important economic function, and it is these structures that underpin the mobility of maize traders.

A final element that also underpins this form of mobility is the organisation of maize production, as maize is mostly produced by smallholder farmers, who account for around 98% of total annual output (Minot 2010) as it is a market in which production has not concentrated. Foreign capital investments in Tanzanian agriculture have not been attracted to maize as it is not generally regarded as an export cash crop, with as little as 2% of total production exported, and due to it being an important staple food crop, exports are controlled and sometimes banned by the State if there are concerns over the size of the harvest which may impact food security (Minot 2010). Additionally, agricultural economic policy to date formulated by global development institutions such as the World Bank has viewed protecting and enhancing smallholder production as the key to poverty reduction (World Bank 2008), and when complemented with arguments around the relative productivity of small farms vis a vis large commercial farms (Collier et al. 2009) and the nature of land reforms discussed above, there has been little impetus for production concentration in this sector. As a result, the maize value chain remains complex, and is characterised by high numbers of independent producers who market produce via local and inter-regional traders and intermediaries, which maintains market opportunities for high numbers of different size traders. Minot (2010) reports that around 4.5 million households, which represents around 82% of all Tanzanian Farmers, grow Maize (Minot 2010)

Physical structures of production and consumption are also evident in the dagaa market that structure population mobility. Dagaa are small fish, similar to sardines, and on the mainland indigenous only to Lake Victoria and Lake Tanganyika, known as dagaa Mwanza and dagaa

Kigoma respectively (Gibbon 1997). Whilst fish such as the Nile Perch are predominantly processed for the export market, dagaa is an important food stuff which is transported for consumption across Tanzania, with low quality dagaa also used for the production of chicken feed (Gibbon 1997). Total production in 2007 in Mwanza region was estimated to be in the region of 40,000 tonnes (Msekela 2008). Mwanza city, and specifically Kirumba market, is the main market through which dagaa Mwanza pass (Gibbon 1997), with the value chain extending from Mwanza to both other regions via larger mobile traders, and through local areas through a network of smaller mobile traders (Gibbon 1997). Therefore and perhaps to a greater extent than maize, the population flows from Kisesa are shaped by the physical structures of production through the location of landing sites and urban markets on the lakeshore and in Mwanza city, and demand for dagaa in rural and urban areas further away from the lake. Whilst there is little data on spatial prices differences within the dagaa chain (Legros et al. 2011), it is anticipated that there will be price differentials that can be exploited between geographical areas where dagaa is landed and relatively abundant, in comparison to interior markets which have limited access to the lakeshore and which rely on traders for supply. Having said that, as with the maize trade, dagaa has long been consumed and distributed through trading networks in northern Tanzania (Gibbon 1997). However, due to the low value of the good and also the reported low margins which as a consequence relied on quick turnaround of stock to enhance profits (FG-DAGAAF, FG-DAGAAM), the market structure remains fragmented and characterised by high volumes of sellers and relatively little market concentration, particularly with limited international trade (Legros et al. 2011).

This section (5.2) has presented the main structural elements identified in this research project that underpin economic mobility. These are the change in property relations, the process of economic liberalisation and marketisation, and the dynamics of class differentiation, alongside spatial physical and social structures of production and consumption, and the way in which these broader systemic forces manifest themselves in the study site to create systemically produced spatial differences in prices, land productivity, land availability and the demand and supply of vital staple foods. This is also influenced by the geographical and economic relationship with Mwanza city. However, whilst this provides an assessment of the structural drivers of mobility in Kisesa, this level of analysis is unable to help us predict precisely where it is that those engaging in these forms of mobility go.

6.3 Who moves and where do they go?

6.3.1 Kinship, community and information networks

Having established the main structural influences on mobility, we now turn to the question of who moves and where they go. In relation to the mobile farmers, the answers to these two questions are intimately related. The main destinations for farmers reported in the focus groups and in-depth interviews included Katoro, Sengerema, Ushilombo, Geita, and Bariadi, areas that are generally far enough away that journey times necessitate an overnight stay, and some closer destinations such as Kwimba, Ng'weli and Bugando Island, which also require overnight stays due to the requirements of farming activities (discussed in more detail in chapter 6). For a number of the mobile farmers interviewed, the places that they go are structured by kinship and community networks (Boyd 1989), which also facilitate access to land:

- *(Interviewer "Aa, now perhaps if it is...if I am not mistaken, you said that...therefore at every season you go there, are you just cultivating the same three acres farm?")¹⁸ "Aa, I have a family farm, thus I combined it with mine, also as I said that, inheritance properties. In the side of my father as I said that, I am a lone from my parents, that I was lucky that I am a lone from my family. Thus nobody will come to disturb me on various things...it became so as I joined them. Ee, I have acres for...those I bought are three acres, the rest are five acres" (male farmer, FM1)*
- *"Thus, I went there because there was my mother in-law" (Interviewer: "Was your mother in law living there?") "Yes, and she is still there up to this time, Thus she told me that; you should come here; there are plenty of lands here." (female farmer, FMF2)*
- *"Later I got a friend there at...from there...ahead of Sengerema, whom I went with there. This person has big/enough land thus he gave me a place to cultivate maize" (male farmer, FM3)*

These quotes are illustrative of three main factors that drew people to specific areas, which were either because they were originally from there, had other family connections through marriage, or had a friend who already lived there. These reasons are closely related to the ways in which land was accessed. Whilst the changes in property relations were outlined in the previous section, a number of farmers reported that they went to a specific place as their parents-in-law or friend had large farms which they could use a proportion of. For example, one farmer remarked that his parents-in-law gave him three acres of their 20 acre farm (FM4). Whilst some farmers reported buying some land (FM1) or renting some land (FM2), it was

¹⁸ Interviewer comments are italicised, and will be throughout the thesis

striking that many did not access land purely through the market (or did not admit they did). This emphasises the point made above, which pointed to the fact that although legal provisions have been made to facilitate market transactions, land access is still very much mediated through local institutions, which may prevent an obstacle to outsiders from the community. The one farmer who reported purchasing land was originally from that community (FM1). Reflecting on these dynamics, this supports the proposition above that farmers from Kisesa are to a large degree not participating in the land market, due to prohibitive prices and availability at home, the complexities of market transactions whilst away and a reliance on family support to make farming away economically viable. Kinship or community networks are also a source of knowledge about land fertility and productivity, as well as practical help by providing them with somewhere to stay and facilitating the process of moving back and forth between areas (FG-FARM). One exception to this general theme was a farmer who travelled outside the ward, but to a place that was much closer than the others. He related the reasons that drew him to that area in the following way:

- “At the time we were still schooling at Welamasonga, we were sent to buy fish there as there is a lake providing fish. You pass by bushes when going there to buy fish to use at home, you get interested with the area,” my God! This area is very good” ee ...you see it when returning from buying fish. “When I get the age of having my own life I will be aware of the area” (male farmer, FM2)

Whilst this suggests that kinship/community networks will not structure destinations for all farmers, it emphasises the role that the unique relationships that individual farmers have with specific places are essential in understanding why and where they go. This theme was also reflected in the reasons that maize traders gave for why they travelled to certain places to buy maize. Initially when asked how they made a decision to go to a certain place, the response emphasised price and availability, and transport considerations:

- “First of all, is the availability of maize. Then transportation is not a problem. It means that you are sure of travelling at any time if you have completed buying the luggage, I will go there at Nyehunge to buy the product, if I find that it is sold at a high price, I have to go somewhere else, that means, I can make a call even there at Buziku asking how the situation is there, that is, I go to buy there if the situation is somehow good do you see, that is how we do, that is, if I find that it is difficult to get the luggage there I go to another place until I get the amount I want for me to go back home” (male maize Trader, MTM2)

This is clearly an issue of utmost importance, with buying trips driven by the need to find quantities of maize available for purchase at a price which will allow a profit, once buying trip costs have been accounted for, to be made when sold back in Kisesa and Mwanza. Some of the physical and social structures underlying this mobility have already been explored in the

previous section. The destinations that maize traders reported going include Nyehunge, Buseresere, Bukombe, Katoro, Chato, Bariadi, Sengerema, Sumbawanga, and Geita, whilst one trader reported going as far as Rukwa, destinations which are in line with the physical distribution of maize production, and flows of maize highlighted above in map 5.3, so that even if they are not going as far as the main maize producing areas, they are travelling to local urban centres through which maize is routed. However, when asked how they find out about the market situation in other areas, maize traders reported that they do so through networks and contacts that they have established and maintained over time:

- “Because if you go to Tarime or at other places you do meet with other fellow businesspeople and build a friendship. Therefore you must get the information that cassava or maize are available somewhere. Or just there, because....for example there in Sengerema, Geita and Tabora, We have got hosts there, after we have been going there regularly. Therefore, they are the ones giving us the information; “you should come now, the products are at a certain price” thus you....you go” (male maize trader, MTM4)
- “After been informed of a certain place that, somewhere....firstly, you will have made friends as you go there for the first time, yes, you will go there for the second time, it is just slowly, if you get a friend of the place you use to buy, there in Kigoma, You will have to go with him/her and you will have to trust each other. Mm, you go there, and because he is used to the place, you will depend on him/her...that, this is my host, He will be leading you everywhere you go, If he leads you once, you will become familiar [with the place]” (male maize trader, MTM1)

Therefore, the places that maize traders go will also be influenced by these networks and the relationship that they have with specific places, although this does not preclude them from going to other places that they have not been to before in order to gain a competitive edge. The importance of local networks was also mentioned by dagaa sellers, who gain information about prices and availability through contacts they have at different markets (FG-DAGAAM), though due to the proximity of Kisesa and the limited number of buying locations, which include Kayenze, Kirumba, Mwaloni, Igalagala and Igoma, dagaa sellers tended to visit the same locations, so that these are more predictable than buying destinations for maize traders.

In terms of selling trips that require overnight stays, the mobility of dagaa sellers is influenced by the timetable and locations of local, largely weekly, markets which they attend. These local markets and auctions take place on different days of the week, and for those able to leave the ward or who do not have a bench allocation in the permanent market in Kisesa, are essential selling destinations. Dagaa sellers are the only group interviewed in this study that travel significant distances outside the ward to sell their goods, with most maize traders selling in Mwanza city or Kisesa on their return from buying trips (FG-MAIZE).

6.3.2 Who moves?

A final issue of note with regards to the structures that influence population mobility are related to who it is that moves. Whilst there was initial disagreement in the farmers focus group as to which farmers moved, with the poorest, those with standard income and the rich all linked with farming land elsewhere (FG-FARM), it became clearer in the interview phase that those moving were in general a group of socially upwardly mobile farmers – the poorest do not have the means, whilst the wealthiest have sufficient land in Kisesa and do not need to look further afield, reflecting more general themes in the literature that show that it is rarely the poorest that are mobile (De Haas 2005). For example, three male mobile farmers aged between 30 and 36 years reported that they were *balози* (ten household leader) (FM1, FM2, FM4), whilst one mobile farmer was a member of the village (FM5), and one female farmer reported that she was both a *balози* and a member of the village council (FMF2). Additionally, all farmers interviewed reported hiring local labour to help with cultivation and also to look after the crops whilst they were gone, though the amount of labour that each hired varied (FM1, FM2, FM3, FM4, FM5, FMF1, FMF2), illustrating that these farmers are engaged in an employer-employee relationship, and accumulating on that basis (Oya 2004). This supports the notion that the dynamics of class formation are an important consideration, as farmers are not only employing labour, but also need to have the capital to pay them in advance of the harvest. The sources of this capital were other additional income generating activities such as construction (FM4), taking photographs (FM1), making and selling bricks (FM5), or selling land or cows (FM1), suggesting that these farmers were in a position to be able to diversify their livelihoods, or had accumulated assets that could be sold to fund agricultural expansion. However, as noted above, the farmers interviewed in this study primarily accessed land via kinship networks, and in particular through relatives that had accumulated enough land so as to be able to allow the farmers use of a proportion of it. Therefore, class relations also shape who it is that moves through mediating access to land, as this form of opportunity will not exist for all farmers. Class relations also influence mobility through shaping who cannot move. When participants were asked about the reasons that prevents farmers travelling outside the ward, the main response was that if a household was primarily reliant on casual labour for survival (FG-FARM), the male household head could not leave them without an income for the time that it would take to cultivate crops, suggesting that this was not an option for landless casual labourers.

Developing class relations are also reflected in those who engage in maize trading. This business requires an initial outlay of capital on transport and the maize itself which presents a

high entry barrier to this occupation. In general, traders reported buying between 50 and 200 sacks on a buying trip, though this varied by gender, with female traders operating at a lower level of capital (Croppenstedt et al. 2013). Typical buying prices reported per sack (including transportation costs and a cut for local collectors) was between 45,000 and 50,000 Tshs, meaning capital outlays of upwards of two million Tshs (approx. £800), a sizeable sum in a country in which average income per capita is \$1,383 (in PPP 2005 dollars) (UNDP 2013). Maize is also viewed as more profitable than dagaa and tomatoes, other locally traded foodstuffs, and is therefore a business that other traders aspire to, again emphasising the barriers to engaging in this market, and the status that this confers. Additionally, and in a dynamic sense, the profits that maize traders earn are such that they can invest in other income generating activities to diversify income sources. For example, two traders owned a milling machine, which generated further value to the maize that they sold as an additional related service (MTM1, MTM4), with one of them investing in purchasing 12 bicycles which he hired (MTM1). Another trader had managed to purchase a motorcycle for which he received a daily rate from the person who operated it (MTM3), whilst another trader had purchased three plots in Kisesa on which he was building houses (MTM6). These examples emphasise that those engaged in maize trading are consolidating their class position and expanding household income through investment in capital goods or land and renting assets.

For dagaa sellers, the relationship with class is less clear. Traders engaging in this business operate with much lower levels of capital and also smaller profit margins, with a number of female dagaa sellers reporting that some days they do not even make a profit. In general, dagaa sellers, and particularly female dagaa sellers, are viewed as having low levels of income, with suggestions that most female dagaa sellers have failed school or have little education (FG-DM, FG-DF). Additionally, it was noted that some male dagaa sellers often have other occupations, such as farming, with their dagaa business a supplement to agricultural income, whereas for female sellers, the dagaa business is often their only economic activity which is a supplement to other sources of household income. In relation to mobility, those with higher levels of capital may travel to the islands where they can buy direct from the fishermen in bulk at lower prices, whereas those with lower levels of capital travel to closer markets which can be accessed by bicycle (FG-DF, FG-DM). In terms of mobility related to selling, the poorer sellers do not travel outside the ward to sell, so that even within this group that are relatively poor compared to maize traders and mobile farmers, mobility is heterogeneous and strongly influenced by wealth.

6.4 Concluding remarks

This chapter has highlighted a number of structural relations and processes that shape population mobility flows, and that are linked to on-going developmental change, the development of class relations and differentiation, and the dynamics of economic liberalisation and government policy. For farmers, changes in property ownership relations and the impact that this has had on the land market and land prices, unequal land distribution, urbanisation and in-migration to Kisesa, and declining land productivity combine to provide a strong stimulus to look for cheaper, more fertile land elsewhere. The land productivity issue is also linked to the physical and social structures of production of maize, which are characterised by spatial inequalities in demand and supply reflected in spatial price differentials, and which shape the mobility of maize traders. The maize market is also strongly influenced by government policy amid concerns over food strategy, which has also exerted an influence over the lack of penetration from foreign capital. The mobility of dagaa sellers can also be conceptualised through spatial differences in production, and consequently supply and demand, of dagaa, with the proximity of Kisesa to the lake meaning that these inequalities are not as socially produced in comparison to maize. As with the maize markets, the local dagaa market has also not attracted foreign investment, with exports limited to neighbouring countries. However, it has also been emphasised that it has been necessary to understand how these structures combine in the specific context of Kisesa, an approach which draws from the nuanced theoretical construction of the notion of 'structure' discussed in chapter two.

The research has identified three temporary circulatory mobility processes which originate in Kisesa, and tend to move in a direction away from Mwanza city to other areas that are outside of, or further away from, the sphere of influence of the city. To some extent, they represent counter urban flows which are themselves stimulated by in-migration and continuing urban expansion of Mwanza city and Kisesa ward. However, precise categorisation is problematic. When thinking about the mobility of farmers, categorising this as rural-rural mobility would fail to capture important differences between rural areas, such as the varying degrees of urban influence discussed above, whilst the heterogeneity of this process that involves multiple different destinations, which will also have divergent characteristics, adds further complexity. It is also unclear how individuals who live in Kisesa urban centre but farm land in the rural area of Kisesa and go on to travel to a rural village would be categorised – is this urban to rural, or urban-rural to rural?

Similar difficulties apply to the mobility of maize traders, who in general travel between Kisesa urban centre and urban centres in destination areas. A standard urban-urban classification will again fail to acknowledge differences in their relative characteristics, which is also exacerbated by the range of different destinations that maize traders visit. Whilst this issue will not be resolved here, it emphasises that the use of these broad categories is not always helpful when trying to conceptualise the nature of population flows, and that ideally, research on mobile populations should be conducted in both sending and destination areas to better enable the formulation of appropriate categories.

The analysis presented here also emphasises the need to use different migration theories to shed light on general systemic influences on mobility and how they manifest themselves in a specific geographical and historical context, and also to predict where it is that mobile populations actually go. Reflecting on the theories of migration reviewed in chapter two, we find evidence to support theories that stress systematic spatial imbalances as stimulating population flows. However, in line with the political economy approach to understanding migration, these are not politically neutral imbalances which are brought back into equilibrium by population flows (Wood 1982), but rather systemic imbalances rooted in and exacerbated by processes of differentiation, accumulation and the deepening of capitalist relations of production (Johnston 2012). We found that those who are mobile are rarely the poorest, and in many cases come from more upwardly mobile social classes. However, these theories, when applied to the study site, did not easily enable the prediction of specific destination sites, which for farmers, and to a lesser extent, maize traders, were shaped by community/kinship networks in line with migration network theory (Boyd 1989). Therefore, a more complete picture of the structures that shape population mobility and migration can only be gained if broader systemic analyses are combined with an exploration of the role of kinship and community networks. Of course, some of the quotes above by farmers that emphasise the role that spatial differences in land prices, availability and productivity play in their mobility risk reduction to models that are based on individual choice and optimisation (Harris et al. 1970). However, this approach would provide only a partial and static analysis, as it ignores the important systemic factors that shape, inform and constrain individual behavioural decisions, and would also make precise predictions about destinations difficult.

This chapter has laid the foundation for the following chapter in which each mobility process will be outlined in more detail. The structures identified here that shape both population flows, who moves, and where they actually go, play an important role in helping us to understand the experiences of those engaging in these processes, and how this links to risk, in terms of both the contexts that individuals move into, and their sexual behaviour. In particular,

the different forms of kinships networks, and more broadly the relationships that mobile individuals have with specific places, are issues that we will return to, and which are central when thinking about how structures influence behaviour, and how the process of engaging in economic activities that involve mobility influences HIV risk.

Chapter 7 – Research Question 2: How do processes of population mobility and/or migration create risky sexual environments and influence individual risk behaviours?

7.1 Introduction

This chapter builds on the themes developed in chapter six, and assesses the relationship between mobility and HIV risk, both in terms of understanding mobility as a general process, as was argued necessary in chapter three, as well as documenting individual's experiences of these processes. The narrative outlined here draws upon the four focus groups conducted with each mobile group which produced process maps for each form of mobility. These process maps are also informed by the in-depth interviews conducted in phase three. Where appropriate, these have been triangulated with secondary sources, but as these are processes that have not been mapped out before in great detail using the mobility lens, the analysis predominantly relies on the primary qualitative data collected. These process maps will be outlined in section 6.2, and provide the background and themes which allow a full analysis of how engaging in these processes influences risk in section 6.3, which follows. The main findings are then assimilated in section 6.4 through a comparative analysis of the experiences of mobile farmers and maize traders. This enables the development of a more formal framework which can be used to guide future research. The chapter ends with some brief concluding remarks.

7.2 Mapping out mobility processes

This section presents an outline of the three mobility processes. Each process map is organised around a number of main thematic areas, presented in more detail in Appendix T, but worth repeating here:

1. Who moves
2. Where they go, and how they decide where to go
3. Patterns of movement
4. Experience while away
5. Sexual Behaviour
6. Returning home

These broad themes were used as tools to help document each process, and capture information on the missing elements identified through the literature review in chapter three. They reflect the main sections of the focus group activity, and were further refined for the in-

depth interview phase. Themes one and two have already been addressed in chapter six, though the key elements are included in each process map, as they exert an influence over the other thematic areas, and are necessary to account for in the final analysis. However, what is of importance in this section is unpacking the process of 'doing' each economic activity, and the role that structures play in this. It is also important to note that each process, as it was recounted in the research activities, is extremely heterogeneous, and so the high level process maps are an attempt to produce a stylised but relevant account. Nevertheless, these process maps are to some extent an oversimplification of complex forms of mobility that are influenced by many different factors. This was one of the main challenges of this research project, as individual's experiences will always differ from more generalised processes. Having said that, these process maps are an important and useful step in the analysis – the fact that processes are complex and do not easily conform to set categories should not preclude attempts to capture common elements.

A second challenge which needs highlighting here is the manner in which the qualitative data is presented. As noted in the introduction, these processes have not been documented in this way before, so that this chapter is reliant on the accounts of those involved in the study. Unlike the themes discussed in chapter six, there are fewer instances in which these accounts can be triangulated with secondary sources. Therefore, the narratives developed below are based on what participants reported they did. The extent to which these narratives represent what actually happened is a common issue for qualitative studies, and will be reflected on in the conclusion.

The first process addressed here is that engaged in by mobile farmers, who travel outside the ward to cultivate land. The farmers of specific interest in this project were those that travelled to destination areas that were far enough away for them to stay away overnight. As noted in chapter five, it was viewed as an important form of mobility, with participants in the focus group estimating that it is engaged in by a significant proportion of farmers, ranging from 55% to as many as 75% of farmers (FG-FARM). This type of mobility, in which the pattern of movement is circular, as farmers oscillate between Kisesa and the destination areas across the year, reflects the type of movement that is of epidemiological and public health concern, and is a theme within the dominant case studies, truck drivers and mineworkers, reviewed in chapter three. The process map has been distilled from discussions in the phase two focus group (FG-FARM), which was attended by 12 male farmers, and is also informed by insights from seven interviews with mobile farmers conducted in phase three. Of these seven interviews, five were conducted with male farmers, and two with female farmers (FM1, FM2, FM3, FM4, FM5, FMF1, FMF2).

In general, the focus group participants noted that it is predominantly married men between the ages of 18-45 that leave the ward, though they also agreed that women did so too, sometimes alternating with the husband, with one person staying to look after the children while the other went away. Therefore this population flow is partly, but not entirely, gendered, and in a number of cases can be considered as a household strategy that entails both partners moving. Most farmers reported having land in Kisesa as well as accessing land away, highlighting this mobile process as part of a broader livelihood strategy, and some also reported engaging in other forms of income generating activities in the dry season (FM1, FM4, FM5). As discussed in chapter six, the decision of precisely where farmers go is strongly linked to kinship networks, the means of accessing land, and existing relationships with a specific place. The main destinations for farmers listed by the group included Ushilombo, Geita, Bariadi, Kwimba, Ng'weli, with further destinations such as Katoro and Sengerema reported in the in-depth interviews. These destinations are in areas that are far enough away that journey times would necessitate an overnight stay, particularly those areas located beyond the inlet.

Farmers reported that the precise pattern of movement between Kisesa and the destination area is influenced by a range of factors, including distance from the ward, the cost of travelling, the tasks that need doing and how long they take, and other issues relating to the family, such as how long the household can survive with the head of household away (FG-FARM). In general, farmers reported travelling on their own, leaving the family behind in Kisesa so as not to interrupt schooling and to enable their land in Kisesa and any livestock or other animals they own to be tended. With these variations in mind, a typical example involved three visits per year, one each for planting, weeding and harvesting, with visits lasting anywhere between two weeks and three months (FG-FARM). However, if they had saved enough money so that they could leave their family at home with enough to live on, some farmers stated they stay for six months or the entire growing season before returning (FG-FARM). However, in the in-depth interviews, most farmers reported a number of repeated trips to the destination areas rather than staying for the whole season (FM1, FM2, FM3, FM4, FM5, FMF1, FMF2). The precise time of year the cultivation cycle begins depends when the rain comes, something farmers claimed is becoming less predictable (see discussion in chapter six), though a typical cycle begins in October/November and lasts until July (FM1). Therefore the pattern of movement, while mediated by a range of factors, is strongly influenced by the demands of cultivation, which can be divided into three main tasks which require labour; preparing the land and planting; weeding; and harvesting. The crops grown away include maize, cassava, tomatoes, rice, beans and groundnuts, though these did not differ significantly from the crops that were grown in Kisesa. This may be due to the similar climatic and geological conditions of

the region, and the dual nature of most of these crops which are both staple foodstuffs and locally tradable for cash.

An example of this process as experienced by one farmer is summarised in Box 7.1. The narrative was developed from an interview in phase three of the project, and is formulated on the basis of piecing together a number of the participant's responses from different sections of the interview. It serves to highlight a concrete example of this generalised process, and focuses on how these structural and systemic elements combine to shape mobility in practice, rather than sexual behaviour. In this example, the farmer reported that he spent six periods away from home to engage in a range of tasks, and accessed land through a friend with whom he lodged. It brings to life the themes that have been developed here and in chapter six, and is recounted to add depth to the analysis, and also to emphasise the heterogeneity of this process.

Box 7.1 - Recent experiences of FM3 (male mobile farmer) - summary of an in-depth interview)

More recently, he has been accessing land in Sengerema for the last four years, where a friend had a large farm and helps him cultivate around 5 acres. One of those acres was given to him by his friend, and he rents an additional four acres, on which he plants two acres of rice and two acres of maize. The rent is 30,000 shillings per acre for land which is fertile, which compares favourably with a price of around 60,000 in Kisesa. He travels to Sengerema alone, leaving his wife and children to look after the farm in Kisesa, though he is thinking of moving them somewhere like Sengerema where he could buy a large farm. He said that in Kisesa, an acre of land costs one million shillings, whereas you can buy 20 acres for four million in Bukoba.

In the last agricultural cycle, which typically lasts from August to July, he went to Sengerema six times, staying between one week and one month each time. The first four trips entailed staying for a month at a time to prepare the land, plant, and two weeding trips (maize requires one weeding period only, but rice requires two), whilst towards the end of the growing cycle, he went for a week to slash, and for two weeks to harvest. The harvest period was shortened as some local people helped him in return for some food. At other times of the year, he hires some labour to help him, but in general he relies on his own labour. While he is in Sengerema, he stays with his friend. He eats and sleeps for free there, and in return he works for two days each week on his friend's farm, which whilst making it economical for him to stay there, also lengthens the time he is away.

Continuing the outlining of the general process, in their time not engaging in agricultural activities, farmers reported resting, drinking alcohol, and playing games, and in particular relaxing on a Sunday. The method of land access through kinship networks determines where farmers live and stay, which, unsurprisingly, is with family or friends in rural villages near their

farms. This has important implications in terms of the relationship that mobile farmers have with the local community which are discussed in more detail below. However, at this point it is sufficient to highlight the role of structural forces on mobility, such as kinship networks and land regimes as having a direct influence on the lived experience of these mobile farmers.

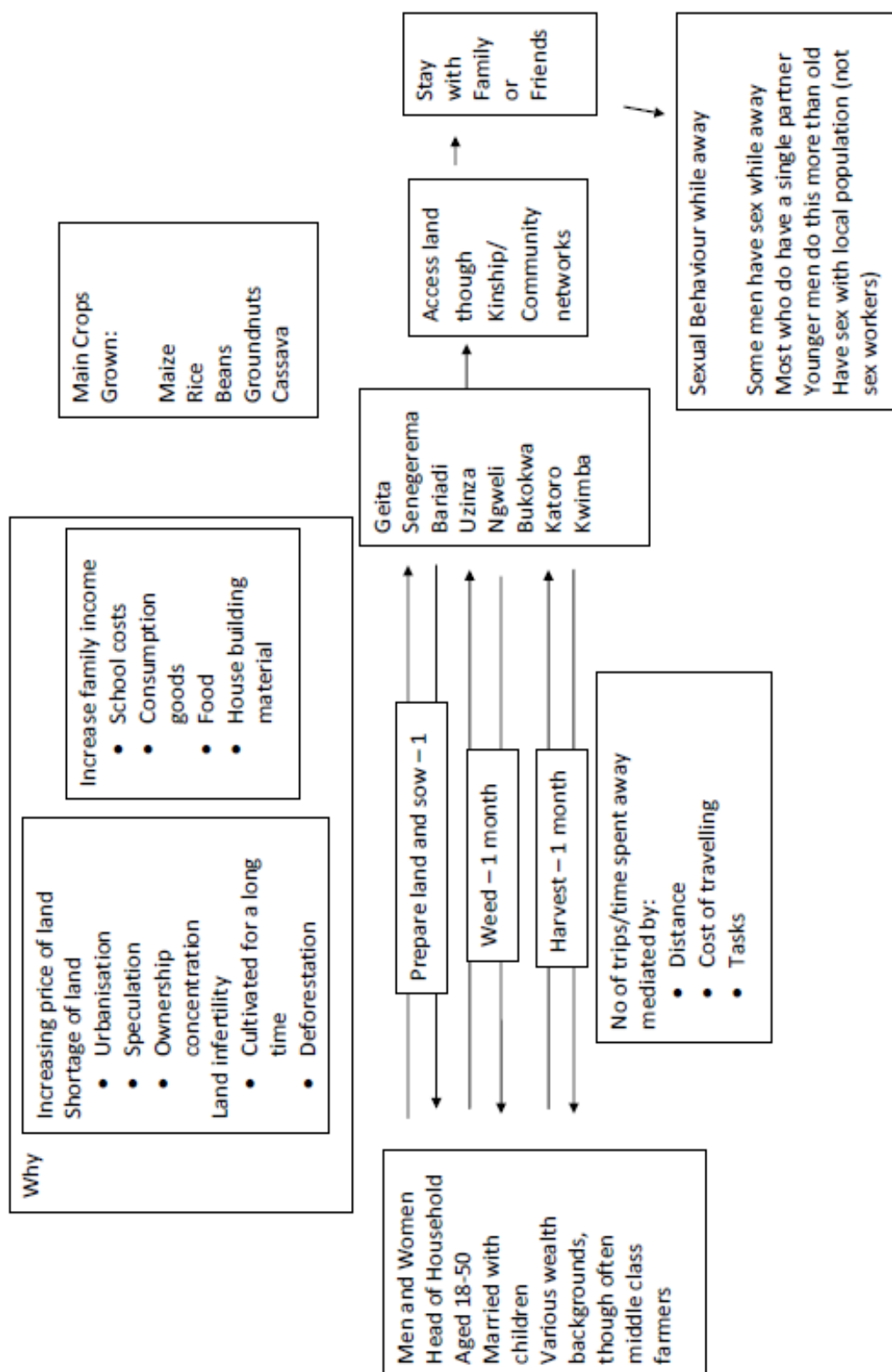
In terms of sexual behaviour, farmers in the focus group said that farmers had sex while they were away, though they were unclear as to how common it was. One theme that came out at this stage which was also mentioned in the in-depth interviews was that when farmers have a partner while they are away, they often have just one partner:

- “Somebody can leave here...because s/he; leaves alone, has stayed for a long time and as a human being those weaknesses are necessary (they) must be interested in women or to men if they are women, S/he must engage in that at least two or three times a month with his partner he got there, it is two or three times he can do it to the same woman. Thus you will continue with the same woman even if it is four times until you finish your activities. Even if you go there for the second time you will go to stay to your partner” (male farmer, FG-FARM).

Others suggested that farmers may have more than one partner, but in general the predominant view was that of having one partner while away. Of course, this will not necessarily apply to every farmer, as one participant noted that whether or not a farmer has a partner while away will be in part down to his own preferences, noting that “if I had a certain behaviour since home I will do the same even there” (FG-FARM), and the acknowledgement that some farmers manage to ‘control’ themselves. The main reasons for farmers having a partner while away are reflected in the quote above, which concern both individual preferences and also the length of time that farmer stay away from home, with sex something that farmers need and find hard to go without. This was a recurring theme across most mobile groups when asked about sex, often described in terms of physical need, desire and control, and to some extent supports the central narrative in the epidemiological and public health literature around the sexual behaviour and relative promiscuity of mobile individuals (Caldwell et al. 1997; Hope 2001).

When asked about whom farmers have sex with, they reported that it was just women from the local population, women of their own age, or that it could be anyone as farmers are not selective (*hawachagui!*) (FG-FARM). One group of potential sexual partners that was mentioned was female farm labourers, who get to know the farmers through working with them closely, and who try to seduce them so they could get more money (FG-FARM). This is a theme that is explored further in chapter eight. Participants reported that unsafe sex is engaged in in rural areas, in part due to lack of access to condoms. Whilst there was

Process Map 7.1 – Farmers who farm land away from Kisesa



acknowledgement that condoms are available near the city, and that people travelling to rural areas can take condoms with them, one participant emphasised the difficulty in predicting that condoms would be needed “because you didn’t prepare for that, you went there for cultivation, yet these things happen” (FG-FARM). This emphasises the spontaneity of sexual interactions, and reflects a theme found in the literature that suggests condoms are not always used in casual sexual interactions because that are not planned or predicted (Agha et al. 2002).

Finally, when asked about how being away from home influences relationships with wives left at home, male farmers agreed that this could cause marriage conflict, even marriage breakdown. It was acknowledged that whilst farmers may have sex whilst away (in secret), their wives may be also be having sex with other people in their absence (FG-FARM), highlighting that farmers are aware that this might happen, and also that this introduced the possibility that either them or their partner could become infected with HIV during this time. This process is summarised in process map 7.1, presented above.

The second mobile process is that of maize traders, who travel to other parts of Mwanza region and beyond to buy maize and other cereals such as *udaga* (dried cassava) or rice, which they then transport back to Kisesa to sell (at a profit). The process presented here is based on discussions in the focus group in phase 2 which was attended by three male maize traders (FG-MAIZE) and also informed by in-depth interviews with ten maize traders, of which seven were male (MT1, MT2, MT3, MT4, MT5, MT6, MT7, MTF1, MTF2, MTF3). Due to the nature of the business, there are a limited number of maize traders in Kisesa, estimated at around 20 or 30 and above (FG-MAIZE), with 26 members in the local maize traders association (MT2) so that the sample of ten traders is considered as largely representative of all maize traders in the ward.

Maize traders are predominantly male and typically aged between 20-50 years old, though there are a small number of female maize traders, (FG-MAIZE). The maize trade is also highly seasonal, with profitability peaking towards the end of the dry season as household stores from the previous harvest run out (FG-MAIZE), so that most, if not all, maize traders reported that they rely on other forms of income-generating activities, including agriculture, to tide them over times when trade is slow.

Where maize traders decide to go is also subject to a number of structural factors. As discussed in chapter six above, there are some geographic regions which are more suited to maize cultivation, and which supply other parts of Tanzania, with specific destinations decided upon through information in price and availability. Whilst some maize traders reported going as far as Rukwa (see Map 6.3) most travelled to closer rural areas or other urban centres and

markets (MT1) with many travelling across (or round) the inlet to markets which, along with locally produced maize, may also include maize routed from maize producing regions such as Rukwa. The places mentioned include Nyehunge, Buseresere, Bukombe, Katoro, Chato, Bariadi, Sengerema, Sumbawanga, and Geita (MT1, MT2, MT3, FG-MAIZE)

In terms of patterns of movement, typically maize traders reported making between one and two buying trips per month often to different destinations, with the trips lasting anywhere from a few days to a few weeks (MT1, MT2, MT3). They noted that the frequency of buying trips is determined by how quickly maize from the previous buying trip is sold, as maize traders are reliant on selling their last load to refresh their capital (MT1, MT2), though some traders have relatives who help them sell (MTF1), so in some cases they can leave before it has all been finished (MT3, MTF1). The number of buying trips is also influenced by the seasonality of business, which fluctuates over the year in line with the dry season and harvest periods (FG-MAIZE). The length of time spent away is determined by the distance they have travelled, and also by how quickly the buying process is completed. The main reasons reported that delay coming home or extend the time spent away are that the maize is not available when they arrive, problems with negotiating and buying the maize from local collectors and middlemen, and waiting for transport (MT1, MT2, MT3). As with the farmers above, the demands of the economic activity exert a strong influence over the patterns of movement, though in this case the time spent away is shorter, with more destinations.

As described by all traders, a buying trip typically comprises of a number of tasks. Local transport is used to get to the planned destination, with traders generally travelling on their own, though one group of women travelled together (MTF2, MTF3). On arrival, the main task is the buying of the maize itself. This can be from local markets, but more frequently traders reported either travelling round the local villages and buying directly from farmers or negotiating with local middlemen and village collectors (MT4). In cases where village collectors and middlemen are involved, this may entail agreeing on a price and then giving them some money in advance for a certain quantity of sacks, and waiting for them to return, a process that is not always unproblematic. Once the trader is in possession of the maize, it is then checked, weighed and stored, ready for transporting back to Kisesa (MT1, MT2). Transport is arranged when the trader has either run out of money or there is no more maize available. In general, this involves transportation with a lorry, as traders purchase between 30 and 100 sacks per trip (MT4), and either have enough to warrant hiring a lorry alone, or in combination with other traders. A concrete example of the maize process is provided in box 7.2, which summarises the recent experiences as reported by one of the maize traders interviewed in phase three, and is a useful illustration to complement the general narrative developed here.

Box 7.2 – Recent experiences of MT2 (male maize trader) - summary of an in-depth interview

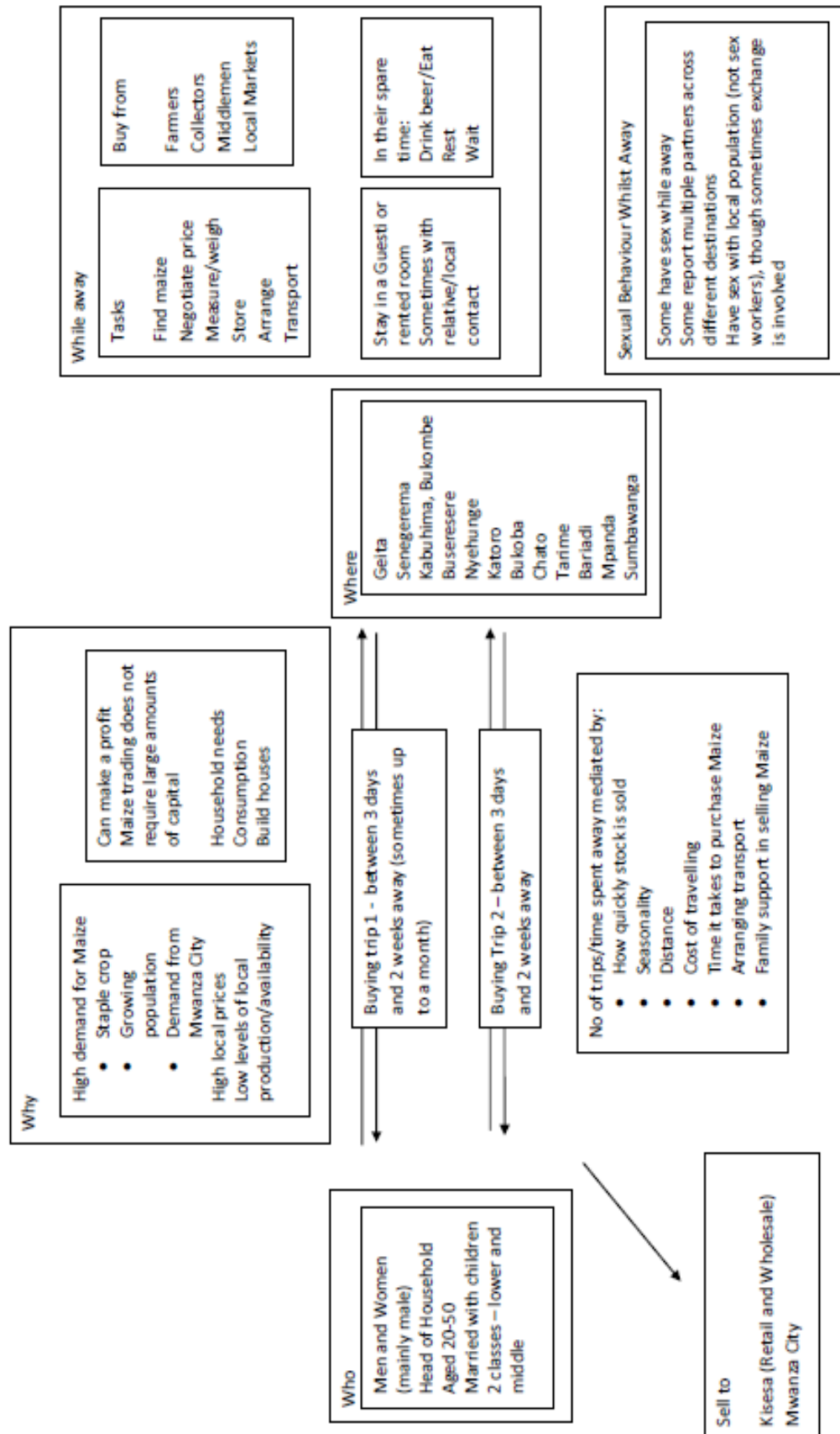
After engaging in a number of different income-generating activities, he began his maize and cassava trading business in 2005 with 300,000 shillings that he had earned through agriculture. He has engaged in trading before, so that by now he has had around 11 years experience in this form of business. Whilst maize trading is the primary source of income for his household, he also engages in agriculture during the growing season when trade is slow.

At the time of interview, he had just returned from a buying trip to Kabuhima, where he stayed for four days, and in the previous month has been to Buziku, where he stayed for five days so only travelled away roughly once a month. During each trip, he buys from middlemen who buy from local farmers, which entails giving the middlemen money in advance and waiting for them to return with the agreed number of sacks. In the most recent buying trip, he purchased around 30 sacks of udaga and 45 sacks of maize, and despite only recently returning, he had already sold all but three of the sacks of maize, and hoped to go on another buying trip in a weeks time. His main customers in Kisesa buy around five sacks from him, often on credit with an agreement to pay him by a certain day, which they then sell at the consumer area in Kisesa. Therefore, he is acting as an additional middleman, though at smaller volumes than can be considered wholesale. He sometimes sells in Nyehunge and Mkuyuni, but in these locations he does not give customers credit, he just sells them the quantity they can afford.

Traders typically reported staying in a *guesti* (guesthouse), as for the most part they are businessmen travelling to places where they are not known (MT4, FG-MAIZE), unless they have friends, relatives, or contacts that they have made in regular destinations (MT1), though this seems to be a more rare occurrence. In the case of the female maize traders that described travelling together, they shared a rented room for the duration of their stay (MTF2, MTF3). Typical evening activities include resting and eating and drinking in the local urban centres, and making any necessary preparations for the next day. Again, it is important to emphasise that the physical and social structures of production and consumption shape where maize traders go, and hence where they stay and how they fulfil daily sustenance requirements.

When discussing sexual behaviour in the focus group, maize traders said that some traders had sex when they were away from home (FG-MAIZE). The main reasons for this were reported as being due to the temptations faced by maize traders in local urban centres where they meet many different people, particularly in the evenings when they have finished their activities for the day, being away from the family for a number of days or weeks, or during days waiting for transport when all buying activities have been completed (FG-MAIZE). Whilst the traders found

Process Map 7.2 – Maize Traders



questions regarding whom maize traders have sex with while they were away difficult to answer, as with the farmers they said it was just the local population, who could be students, farmers, married women or fellow businesspersons (FG-MAIZE). Maize traders reported that they encouraged each other to use condoms, but recognised that ultimately, the choice of whether to use it or not will be down to the individual (FG-MAIZE). It was also reported that female maize traders also have sex while away, sometimes to increase their capital or to maximise the benefits from a buying trip, (MTF2,MTF3) an issue often referred to as transactional sex, and which is discussed in more detail in chapter eight.

On return home, maize traders identified customers as located in both Mwanza city and Kisesa, through both wholesale and retail channels (FG-MAIZE). When talking about whether their mobility creates conflict with their partners, most maize traders reported that this was not an issue, that their wives understood that they needed to travel to do business, and that they did not always know how their wives felt about the time they spent away (MT1, MT6, MT7, MT5, MT4). The main source of conflict is when traders return from trips empty handed, or are not providing for the family (MT1, MT7). The main themes of this process are captured and summarised in process map 7.2.

The third mobile group studied in this project is dagaa sellers. Although it has already been acknowledged that each process is very heterogeneous, this is even more applicable to this group, which is comprised of both men and women who engage in varying degrees of mobility, including some who do not travel routinely outside the ward to engage in this occupation. Additionally, some dagaa sellers leave the ward to both buy and sell dagaa, so that they engage in a more complex pattern of mobility. Therefore, it is more difficult to outline a general process that will account for all differences, and consequently, the experience individuals have of this general process may be markedly different. The inclusion of a range of mobile and non-mobile sellers in the study was deliberate, as it was hoped to understand the extent to which their mobility (or not) was related to risk, though in practice the dagaa sellers sampled at interview stage were not as mobile as was initially thought. The process detailed here is based on two focus groups conducted in phase 2, with the all-female focus group attended by six dagaa sellers (FG-DF) and the all-male focus group attended by 12 dagaa sellers (FG-DM). This is further complemented by insights from the in-depth interviews conducted with five female and five male dagaa sellers (DSM1, DSM2, DSM3, DSM4, DSM5, DSF1, DSF2, DSF3, DSF4, DSF5), though the focus groups are the primary data source at this stage.

Dagaa sellers included in this category are both male and female (FG-DF, FG-DM), though it was reported in both focus groups that women dominate this type of business. Typically, male dagaa sellers are middlemen who also sell at weekly markets or auctions, while female dagaa sellers tend to predominantly sell to retail consumers at both weekly markets and more permanent markets, though there are some exceptions, as it was reported that some women operate as middlemen (FG-DM). Therefore, although this local value chain is characterised by the involvement of both men and women at the selling stages, other roles such as fishing, the initial drying and trading, street sellers, and consumers are highly gendered. For example, it was made very clear that end consumers are always women, as ‘we don’t expect to see men at the vegetables section¹⁹’ (FG-DM). Therefore, in general, this local value chain is comprised of a number of gendered interfaces. This gendered division has been reported in relation to other value chains for fish (Bene et al. 2008; MacPherson et al. 2012), though in a study on the dagaa value chain in Tanzania, Gibbon (1997) reported that in some instances, over a third of dried dagaa traders were women, though this was in relation to the larger, more formal markets, and traders dealing in higher volumes. One complicating factor in attempting to differentiate roles is that in some cases, it was noted husband and wife work together, with the husband responsible for buying the dagaa, and the wife responsible for selling, whereas in other cases, they work independently (FG-DM). This may have a significant influence on how engaging in the dagaa business shapes both sexual behaviour and risk, and is explored below. The local dagaa value chain, and the precise roles fulfilled by participants in this study are outlined in more detail in chapter eight.

The mobility of dagaa sellers is influenced by both the buying and selling of dagaa. In terms of buying dagaa, sellers reported that they travel to the lake-side or other main dagaa markets, the physical location of which is influenced by the source of dagaa supply (Lake Victoria), though it was noted that where it is they go at any given time is influenced by the price and availability of dagaa (FG-DM). Availability is strongly influenced by the weather and the season. Dagaa are fished for at night, and catches are down if bad weather makes fishing conditions too difficult (FG-DM), or if the moonlight is strong as this discourages dagaa from coming near the surface (FG-DF). Additionally, dagaa need to be dried before being sold onto middlemen (FG-DF)(Gibbon 1997) , so that supply is also constrained by the amount of required sunlight, with availability lower during the rainy season (FG-DM, FG-DF). In terms of travelling outside the ward to sell, dagaa sellers attend a number of weekly markets and auctions, including one in Kisesa which takes place every Friday, which can sometimes necessitate an overnight stay

¹⁹ Dagaa are often described as ‘mboga’, which is the Swahili for vegetable, as dagaa are viewed as a daily staple, and also often sold together with other products such as tomatoes

depending on the distance travelled (FG-DM), though many are stationed more permanently in Kisesa and do not travel.

The precise patterns of movement reported by dagaa sellers are highly variable. For mobility associated with buying, dagaa sellers who travel to the lake side recounted that they may go between two and four times a week, whereas for those travelling to the islands, it may be only one trip per month (FG-DM). The number of trips is contingent on a number of factors, such as how quickly they have sold their stock from their previous buying trip, the availability of dagaa to buy, the seasonal nature of the business, and how far away the buying destination is (FG-DM).

Box 7.3 –Recent experiences of DSM2 (male dagaa seller) - summary of an in-depth interview

DMS2 is 45 years old, is married and has four children. He began his *dagaa* business in 2002, using capital that he had saved while working as a carpenter in Mwanza city. He chose the *dagaa* business as he thinks that it is a necessary requirement for society, and that the business does not cause much nuisance. He is also a farmer, with three acres of farmland in total, spread across two places which are a short distance away, on which he cultivates maize, cassava and rice. He purchased this farmland with some of the profits from his *dagaa* business, along with four cows, and two plots upon which he has built houses.

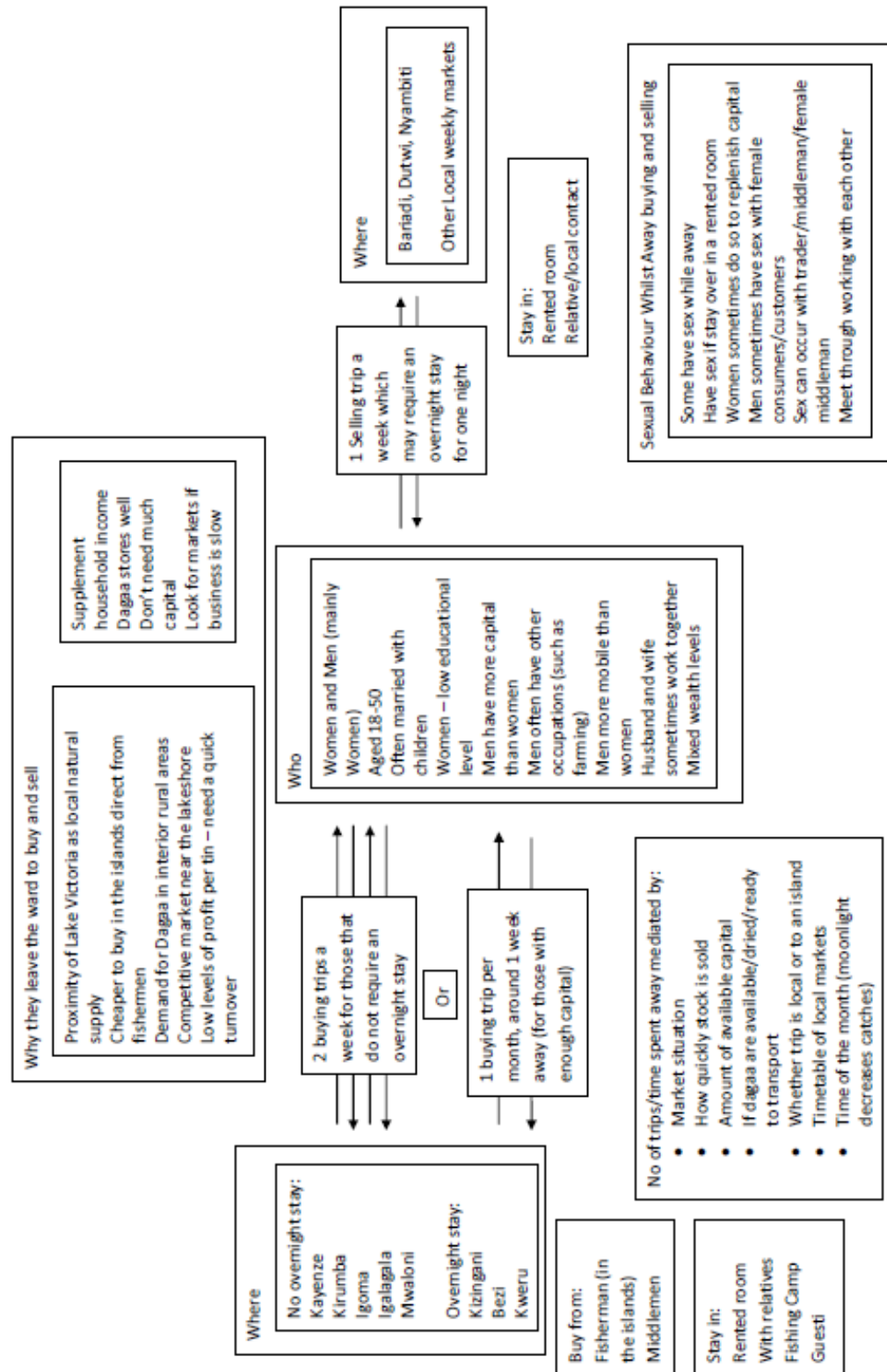
He buys *dagaa* from either nearby islands, such as Bezi or Kweru, or from areas on the lakeshore, such as Kayenze, Igombe and Nyakasenge. When he purchases *dagaa* from the islands, he buys direct from the fishermen, whereas when he buys at the lakeshore, this is from middlemen who buy from the fishermen and dry the *dagaa*. He sells to directly consumers, and has space at the permanent market in Kisesa, as well as sending *dagaa* to the local weekly markets in Kisesa (Friday), Igoma (Saturday), and depending on the price he expects to get, either Sumve or Nyang'holongo (Sunday). Members of his family help him with the selling, though it is only him that goes to buy the *dagaa*. Each time he goes, he buys around 18-20 tins, depending on price. For example, In July, he purchased 20 tins at 6,000 shillings each, and sold them for 8,000 each, making 40,000 shillings profit. Whilst it is difficult to know precisely how many times he has been away in the last two months, he estimated that he went to Igombe four times and Kayenze 17 times, which is between two and three times per week, with the destination dictated by information on price and availability that he receives from other businessmen he talks to. Kayenze and Igombe are close enough to Kisesa that he can go by bicycle and return the same day. He has not been to the islands recently, as he said that people from the regions are going there at the moment, which has pushed the price up because those from more remote areas are used to paying higher prices.

It was also suggested that the amount of capital and consequently how much dagaa was being purchased would also influence how often someone goes to buy dagaa, as 'somebody can be going there buying only two, three tins, this one can go even four times in a week' (FG-DM). A final factor identified in the focus groups, and discussed in chapter six, that influences the pattern of movement associated with selling is the timetable for the weekly markets where they sell (FG-DM). Box 7.3 illustrates an example of the general process from the point of view of a male dagaa seller, and as with the other individual narratives presented above, seeks to provide a concrete illustration of the generalised process.

Dagaa sellers report that if they go to buy at the lakeside, it is rare to stay there overnight, as these places are close enough to Kisesa that a return journey can easily be made within a day. However, it was acknowledged that there are some situations, such if the dagaa are not available, they have been paid for but are not yet dried and ready to transport back to Kisesa, or the fisherman have moved camp, that may require the seller to stay overnight and wait (FG-DM). If they go to one of the Islands to buy, depending on the distance, an overnight stay is often necessary, and in some cases sellers note that they can stay away for up to a week (FG-DM). When dagaa sellers stay overnight, they report either staying in a *guesti* or in the fisherman's camps or informal settlements, particularly if they are in the islands (FG-DM). As with the two other mobile processes, we can see how the demands of the economic activity shape patterns of movement.

In relation to questions about sexual behaviour, this was discussed by participants to a much greater extent than with the other two mobile groups, with a number of themes identified. Firstly, sexual behaviour is influenced by the structure of the dagaa chain. Male dagaa sellers reported that the majority of women who worked in the markets drying and selling fish were not married (FG-DM), and it is these women which male dagaa sellers purchase from. Sex can become involved in informal credit arrangements between middleman and street seller if the female street seller is trying to increase her capital, profit or make up a loss (FG-DF, FG-DM). Female sellers noted further that having a partner who is a fisherman also guarantees access to fish (FG-DF), a theme that has been noted in previous work on 'fish-for-sex' (Merten et al. 2007; Bene et al. 2008; Nagoli et al. 2010; MacPherson et al. 2012). However, the dagaa industry also brings men and women together in the same working environment, and hence is a context which brings people of the opposite sex into contact, leading to the formation of relationships which are thus not necessarily linked to exchange or the dagaa chain (FG-DM, FG-DF). A second theme related to money is that women have sex in exchange for money, though this occurs outside of the dagaa selling chain and is not always considered as prostitution (FG-DM, FG-DF). Of course, it is necessary to ensure that these situations are not viewed as overly

Process Map 7.3 – Dagaa Sellers



deterministic, as there is also an element of personal choice, as ‘some people can’t do sexual intercourse purposely to get money’ (FG-DF), and ‘it [sex] depends on individuals’ (FG-DF). Whilst it is important to mention these issues at the juncture, they do not necessarily reflect mobility per se, rather the structure and operation of the value chain, and so will be fully explored in chapter eight.

The main ways that both male and female dagaa sellers linked mobility with sex are through the fact that buying trips take seller into contexts where there are the bars and other establishments that sell alcohol on the larger islands and lakeshore. These attract prostitutes, and also other women who are looking for a partner on a transactional basis (FG-DF). Sexual activity may also be related to mainly female bar workers or other women who provide supplementary services in these areas, such those who cook and sell food at kiosks (FG-DM).

Sexual interactions also occurs when a male dagaa seller stays away and needs somewhere to sleep for the night. When dagaa sellers stay away, they have a number of options over where to stay, such as in a guesthouse, which is the preferred choice as it is secure, in the fisherman’s camps (particularly while they are in the Islands), or with a *kimada* (literal translation in English is ‘concubine’), a woman who will share a bed for the night as if cohabiting (FG-DM), or a local woman who will in return expect a contribution to household expenses. However, it was reported that dagaa sellers may use the excuse that the dagaa were not ready if they want to stay and have sex with someone at the lakeside (FG-DM)

In general, dagaa sellers did not associate having sex away with selling trips, though one situation in which this might happen was mentioned. This was associated with the process of doing business, when (male) dagaa sellers interact with female customers, and build relationships with the initial purpose of attracting business, but which can sometimes develop further (FG-DF). The dagaa seller’s process is summarised in process map 7.3.

This section has introduced each process at a generalised level, and provides the background for the analysis below. It has also emphasised the links between the systemic issues discussed in chapter six, and how these influence the conditions of mobility, and particularly the reasons that draw mobile groups to specific places, and this impact this has on the conditions of mobility. Further, it has also been emphasised how patterns of mobility are influenced by the different demands of each economic activity, whether that be tasks related to agriculture or the price and availability of traded commodities.

7.3 Mobility and risk

Having outlined the general processes, and identified a number of broad themes that relate to sexual behaviour, we now turn to an in-depth analysis of how these processes of mobility influence risk contexts that mobile individuals experience, and also how engaging in these processes influences individual risk behaviours in terms of extra marital sexual partners and condom use. The elements of the processes mapped in the previous section that are directly related to mobility are the focus in this section. Other factors highlighted by the research that are not related to mobility, such as the role of the dagaa chain mentioned above, but that are relevant to later assessments on the extent to which mobility is a key explanatory factor of risk, are discussed in chapter eight. It must be emphasised that we will not be able to address every aspect of sexual behaviour, as this is a complex issue involving a broad range of factors, including psychosocial factors as noted in chapter two. At this stage, each process will be considered in turn, with section 6.4 providing a synthesis of the farming and maize trading processes.

Mobile farmers

One of the standard explanations in the literature for mobile individuals having sex while they are away is due to long periods of separation from spouses (Weine et al. 2012). Findings from this project support this explanation, with one of the main reasons reported by farmers for having sex while away was their sexual need and time spent away:

- “As I tried to say that, it is very difficult for us youth, to control oneself that I should not do this until...that is not easy. I remember it was a very long time; I spent about two months, Now... I failed to control myself that aa...I can't take it any longer, I really got a woman” (FM1)
- “There at the farms, I used to go there at the farm, and cut our thirst there” (FM3)
- “Mm let me say that, at the first year, firstly; I did not get a partner from there to calm me when I am there. But this year I stayed there for a long time, I got someone to [calm me] fall in love with...” (Interviewer: ‘Now perhaps let's say that...mostly what made you make these decisions, of falling in relationship with another woman?’) “Let's say that, everybody has his/her feelings, Or we can say everybody has his/her desires, I had no desires; rather it was because of the time I stayed there” (FM5)
- “My friend , in fact you cannot abstain that until I go back home, in fact you have to get someone with whom you can have sex with while waiting for the time to go back home.”FM5

This framing of sexual needs was embodied in the language which participants used to describe having sex, which, for example, including ‘quenching a thirst’. Of course, when related to risk, having an extra martial partner does not preclude the use of condoms, which would

mitigate the risk of contracting HIV, so on its own 'being away' does not shed much additional light on how engaging in this process may influence risk, suggesting the need to unpack this further. However, it does point to one of the factors that may influence sexual activity.

An important factor that remains unaccounted for in the statistical analyses is the pattern of movement associated with the process of farming and the tasks associated with the agricultural production cycle, outlined above. To briefly recap, this requires farmers to travel back and forth between Kisesa and their destination area around three times a year, and spending extended periods of time away, often around a month, during each trip. Further, these farmers decide not to move their families to destination areas, for a range of reasons that include enabling their children to attend school, meaning that this is a circular pattern of movement between sending and receiving area. This specific pattern of movement influences the form of extra marital sexual relationships that mobile farmers engage in while away, which was for them to have one regular partner in the destination area, rather than multiple sexual partners. A number of farmers reported that they had a partner while they were away (FM1, FM2, FM3, FM5), though for one farmer, this was only the first year that he travelled away, rather than every year (FM2). The other three male farmers reported that they had one partner while they were away, and that they went back to this partner each year/trip away, rather than having lots of different sexual partners:

- "Aa, to be honest, in those four months, I had some one there, especially in the second year, ee, I just got that one...mm...She is there at any time I go there, is also a good farmer" (Interviewer: 'Mm, she was also a farmer isn't it?') "Ee, she is a farmer" (Interviewer: 'Therefore it was in your second year, the first year just passed...') "Was just passed free" (Interviewer: 'For...what about this third and the fourth year?') "It is the same woman" (FM3)
- (Interviewer: 'Aa, now this woman you have been making love with, is it the same woman or you do...') "It is the same woman" (FM1)

This is perhaps understandable, as farmers have time to build relationships in the destination area when they travel to the same place over a number of years, and also as their relationship with this place develops. This influence is not conceptualised as deterministic in the sense that every mobile farmer will have a relationship while away, as the exact nature of the sexual relationship engaged in will be mediated by a range of other factors, some of which will be discussed below. However it does illustrate how the experience of engaging in specific patterns of mobility linked to the requirements of the economic activity has an impact on the nature of relationships that farmers form while away, which for farmers are regular, rather than one-off, sexual interactions.

In relation to HIV risk this precise form of relationship that male farmers have while they are away has important implications. Firstly, having a regular partner, rather than a one-off partner, while away suggests that mobile farmers engage in overlapping (concurrent) sexual partnerships, a factor that is considered a key determinant of risk (Mah et al. 2010)²⁰, as they are having sex away and at home with different partners over an extended period of time. In this situation, if HIV is introduced into the sexual network, or if the farmer is already infected, the virus will be more easily transmitted to other participants in that network.

Secondly, mobile farmers who have regular extra marital partners while they are away may experience risk of infection through not using condoms, as evidence in the literature reports that in many situations, for a range of reasons, condoms are often more likely to be used with casual or one-off partners rather than regular partners (Waithaka et al. 2001). One farmer reported that he did not use condoms the second year as he trusted that his regular partner was safe, i.e. not infected with HIV as his friend had reported that she was carrying out her farming activities:

- (Interviewer: *'therefore, perhaps during aa...when having sex with her, did you use protection?'*) "Yes, I used a protection; I used protection for one year. Later things turned upside down, now one year later, I found it nonsense. That friend of mine told me that; "aa this one is good, she is also spending her time doing activities". I trusted that she is ok/ safe" (FM3)

Whilst this demonstrates an educational issue to some extent, as one cannot tell if someone else is infected just looking at them, it also indicates that the dynamics of the relationship had changed over time, with the farmer more cautious, and hence reporting condom use, in the first year of the relationship. This supports the general notion reported in the literature around the difficulties of condom use in longer-term partnerships.

Closely related to this, and an additional factor that also explains the inclination towards regular partners, is how this process of mobility shapes access to local sexual networks. Prior to fieldwork, it was expected that whether an individual is moving into an area with a pre-established community/kinship network or not would influence how they meet potential partners and who they have sex with. However, it was unclear whether this would reduce or enhance opportunities for sexual activity. As noted in chapter six, the primary factor that determined the choice of destination area for mobile farmers was kinship/community networks, which was parents, parents-in-law, or friends. The experience of male farmers suggests that this helped them access local sexual networks, either through having potential sexual partners recommended by a friend, or through staying in communities in which they

²⁰ Though this is disputed by some authors, see Lurie, M., S. Rosenthal and B. Williams (2009).

were already known or had contacts through whom they would be introduced. Interestingly, living with parents or in-laws did not prevent farmers from having extra marital partners, though, as will be discussed below, this did require a degree of deception to maintain secrecy. In general, male farmers reported having relationships with women from the local community, which may also be an influence on the longevity of relationships:

- “She is a farmer , Yes, she is a resident of that area” (FM1)
- “Ee, I just got that one...mm...She is there at any time I go there, is also a good farmer, mm” (Interviewer ‘Mm, she was also a farmer isn’t it?’) “Ee, she is a farmer” (FM3)
- (Interviewer: ‘Aa, therefore was that woman a farmer or was she a businesswoman?’) “Aa, she is a farmer” (FM5)

However, there was one exception in which a farmer reported that he had sex with a hired labourer:

- “There at our agricultural activates, especially to those we are employing, those casual labourers, because you can’t employ men only there must be women. Now if you employ women there must be temptations, the women will seduce you, so that can pay them more, you have agreed ee, she wants you to make love with her so that you can pay her more through making sex with her” (FM2)

This quote illustrates that sexual relationships can in some cases be influenced by local sexual norms around giving money, as discussed in chapter three. In this case the farmer reported that the female labourer (successfully) tried to seduce him so that he would increase her wages. This is an issue that is discussed in greater detail in the next chapter, as it is not directly related to the experience of mobility.

However, moving somewhere through a kinship network does not necessarily guarantee access to local sexual networks, and in some cases can be prohibitive, illustrated by this quote from a female farmer who felt she could not risk damage to her reputation.:

- “Yes, I use to stay there for a long time, however I have never be in love with anybody ...[Laughter], aa.... there are many people adoring you but because you want to maintain your status, Yes, it is not good to do that thing while you are at foreign land. Moreover, it is not good there at in law’s home land” (Interviewer: ‘How do they become an obstacle to you?’) “Aa.... you can also ask yourself about that, it is not good, there must be a respect” (FMF2)

This suggests that, moving into a pre-established kinship network may enhance or inhibit sexual behaviour and that it is an important area for further research. Additionally, this example suggests that experiences of engaging in this form of mobility may likely be highly gendered, with fewer opportunities for extra-marital activity for women, though this

statement is made on the understanding that female sexual behaviour is often underreported (Nnko et al. 2004).

A final factor associated with risk which brings together some of these themes is related to the practicalities of having an extra marital partner while you are staying with family. The experience of one farmer illustrates the impact that this has on condom use. This farmer accessed land in the destination area through his parents in-law, and so he also lived with them while he was there. He indicated that he did not want his in-laws to know that he was having a relationship, so he took precautions to ensure that they did not find out, such as making excuses to leave the house, and arranging to meet his partner at the farm:

- “I mean the environment...at the first time; we went to a guesthouse, Yes, we took a breather there and in doing sexual intercourse I used a condom, we did use. Fortunately we were not living far to each other, she was also living in the village I am living. I didn’t know at which village she was living, thus we used to see/meet each other, as we were doing it secretly. For us to meet, we have to go to...to incur cost going to the center, we realised that aa...it doesn’t bring a good picture, thus we should do everything here [in the village, not the urban centre] for sometime then we leave each other. Thus we used to do unsafe sex, we were not using condom ... now I was leaving the house secretly by telling them that I am going to buy plastic bags for...to preserve my maize, thus you leave by a transport to somewhere and she will have already gone there before me. We just give each other time and the timetable, “I am at the farm thus you have to come here, when it is eleven, you will find me at the end of the farm” [they inform each other] we finish everything there” (FM5)

This secrecy made it difficult to use condoms, as he could not buy them in the local village, which was the only place that they were available. This questions one of the main reasons forwarded in the literature for why men have sex when they are away, which is because they are freed from traditional community or social controls over sexual behaviour, as in this context these controls still exist. The lack of condom use is related to the need to find creative ways to conform to these controls by avoiding detection. This provides a stark contrast to psychosocial approaches discussed in chapter two which would seek to explain lack of condom use in terms of an individual’s perceptions over the risk they are taking.

Not all farmers reported having sex while away. One mobile farmer who travelled with his wife reported not engaging in any extra marital sex as he did not have the opportunity too.

- “Perhaps for...mostly is that, maybe because I travelled with my wife, with my partner, I had no desire that, I am not so desperate to have sex [Laughter]. Ee, I think it is what made me....return without doing it” (FM4)

This was due to the fact that this farmer's mother-in-law lived with them in Kisesa, and so could look after the children while he travelled with his wife. However, all other farmers reported travelling on their own, with the partner staying at home to look after the children for schooling purposes, though in some cases farmers indicated that they alternated travelling away with their partners. This alternating pattern of movement has implications for the risk that mobile farmers face, as for those who do alternate trips away with their partner, they will also spend extended periods of time at home without their partner and in theory subject to the same sexual needs and desires that link with being away. If being separated from a spouse or partner for a period of time is considered a risk factor, then many of these mobile farmers will also face this risk at home when they are not mobile, a finding which may help to shed light on the inconclusive epidemiological analysis conducted in Kisesa, and suggests a challenge to the simplistic narrative of 'being away'. In fact, depending on the precise timeframe that the demographic surveys in Kisesa were conducted, some of these mobile farmers could quite conceivably be categorised as resident with mobile wives if it was their turn to stay at home, though any extra marital sexual partners they reported in the last year may have occurred while away. These implications are returned to in the conclusion

Having looked at how this process of mobility shapes risk through its influence on sexual behaviour and condom use, we can also see that it plays a role in the geographical spread of HIV, the other primary mechanism through which mobility is theorised to shape the dynamics of the epidemic. As was discussed above, this form of mobility is difficult to categorise. However, it was argued that Kisesa ward is within the sphere of influence of Mwanza City, and that the standard classification of rural-rural migration, does not capture qualitative differences between areas, particularly how remote they are. The relevance to transmission is that farmers are generally moving to more remote rural areas which are likely to have lower levels of prevalence, so that this mobile process links separate geographical epidemics and areas with different background prevalence rates, which will contribute to the spatial spread of the virus. The circulatory nature of movement will intensify this link.

Maize traders

The requirements of the process of maize trading and associated pattern of movement, which is for short stays at a range of different destinations, and the relationship that maize traders have with destination areas, also influence the qualitative nature of the sexual relationships maize traders engage in while away. In general, those that did report having sex away did so with a number of partners across different geographical locations (MT1, MT2, MT5, MT7),

though the timescales over which they reported this varied from recent sexual encounters (MT2, MT7) to an estimation of the number of partner in the past few years (MT1).

- “It is a long time, mm; however they are not more than eight” (MT1)
- “I can say that, for these two in this year I have made love with them, I engaged in love affairs one time with one of the women and two times with another one, In March....in April to June” (MT2)

One male maize trader reported only having sex in one of the places he went (MT3), with older maize traders saying that in the past, they used to have sex while they were away, but do this rarely or not at all these days (MT4, MT5). One male trader said that he was religious and hence did not (MT6). Again, this is not to be interpreted in an overly deterministic manner, as maize traders do not report having sex on every buying trip, indicating that a range of factors are involved in sexual activity. As with the mobile farmers, one reason forwarded for why they have sex while away was due to sexual needs or being young and virile:

- (*Interviewer: ‘What convinced you to have a woman there?’*) “Mm ...something convinced me, If you are virile man, you must have a woman. Even if you try hard not to do it, if you are a virile man [laughter] you must do it, you have to find even one” (MT1)
- “And, at that time, adolescence was driving us” (MT4)

Again this is a theme that is common in the literature, (Otutubikey Izugbara et al. 2007; Leclerc-Madlala et al. 2009), and whilst this may be an important behavioural aspect, it is not necessarily related directly to mobility. However, if virility is an important sexual norm in Tanzania, then this may explain why the epidemiological data presented in Kishamawe shows extra martial sexual activity by married men across all mobility groups.

As discussed above with reference to farmers, the nature of the relationship has strong implications for condom use, with all maize traders reporting that they used condoms in recent sexual interactions, and hence suggesting that this may not greatly enhance their risk of infection, though there remains a small degree of risk based on whether condoms were used correctly or did not split.

- “Ee ...it is usual to have a woman, mm because you can’t stay there without having a partner, I ever have, however I was using condom, Mm, because you can’t just have sex without using condom” (MT1)
- (*Interviewer: ‘What forced to think that it is better I use protection?’*) “Aa ...to use protection is...because we see in announcements the way we can protect ourselves, from sexually transmitted diseases, to avoid sexually transmitted infections” (*Interviewer: ‘Alright, therefore, you learned through the announcements’*) “I got those announcements when I was attending TANESA seminar” (MT7)

- (Interviewer: 'Perhaps what convinced you to decide to use protection?') Respondent: "Aa ...it is just because I just met her there and that I do not know her past...how is her life in that village, whether she ever got married or not in her young age before I met her, or if she ever go to other places out of her ward" (MT3)

Whilst these statements must be carefully interpreted and may in some cases represent socially acceptable answers, rather than what actually happened, maize traders generally have good access to condoms, and consequently the opportunity to use them. This is due to the fact that their accommodation on buying trips is located in local urban centres, where condoms are easily available. Additionally, because they are generally staying in places where they are not well known, secrecy is much less of an issue, so that purchasing condoms is less of a risk in terms of spouses or other family members finding out. However, whether they do or not will also be influenced by individual factors such as education and personal views on condom use which are not necessarily influenced by whether they are mobile or not.

Another prominent theme related to the conditions of moving and the factors that draw maize traders to specific places is the role of context in creating situations in which maize traders face temptations, and also how they would access local sexual networks. As most maize traders stayed in a *guesti* in the local urban centre, and hence went to the local hotel for something to eat and drink, they reported that this was an environment in which they would meet women, and are places where prostitutes can also be found:

- "Such things does exist, do you see, they are mostly available that the center. Yes, around centers is where those temptations are found, however when you are there in the villages such things are very rare, ... they are not very much entertained there" (MT3)
- "You just go, thus everything depends on somebody's thoughts, that means if you have.....if you have many things to do, thus you will close the business going to bath, you will go looking for food at the hotel, after that, you will go to the grocery for a rest while drinking some soda, if there is somebody drinking alcohol, ... now because there is a crowd of different people there, that means, it depends on everybody's thoughts, you can find somebody there telling you that;" this is your sister in law" "I see, thus this is my sister in law," And those happens during the journey depending on what somebody have in his head" (MT2)
- "And there are many women there at Buselesele, Mm, even those doing prostitution are many too, yes, that is why I am saying that, it depends on how committed/strong you are" (MT1)
- "Ee, the thing is, that situation, When one is in movements ... it targets where there are crowds. The important thing is that, the situation of been tempted, I mean, this is at many places in our country, and fortunately you are also in Tanzania and you see how things are, and also you can see how people of this place are, To the extent that in these crowds, there are a lot of temptations. What is important is for an individual

to know what....what sent you there, if you are not committed with what sent you there, you will fall under those temptations'"(MT5)

As they visit many different places for short periods of time, and do not often have local contacts with which they can stay, maize traders eat and drink at local bars, restaurants and hotels at the end of the day. These environments facilitate interactions with the local community and access to local sexual networks, as they are places where men and women meet. In particular, local bars or other establishments that sell alcohol are contexts in which maize traders may meet local prostitutes or other women who are interested in engaging in sexual relations for exchange, risks which are enhanced through alcohol consumption (Kalichman et al. 2007). This does not mean that maize traders will have sex with every available woman they meet, as a range of other factors will be involved in determining whether they do or not. However, it highlights the circumstances and locations in which sexual activity is most likely, conditions which are directly related to the process of maize trading.

The issue of sex for exchange is also reflected in the fact that maize traders felt they were targeted by local women, as once their purpose was known, women realised that they had capital with them (on their buying trips), and so were a potential source of money and hence desirable sexual partners. It also suggests that some sexual behaviour might be related to the fact they are businessmen, rather than entirely down to their mobility per se.

- "Yes, as you know in those years, as a business person you can just find yourself seduced by a woman" (MT4)
- "At the places you use to go, you can go at night clubs/entertainment places, somebody may come while resting telling you that; "can you buy me a drink" and because they know you that you use to go at their places to buy maize" (MT2)
- "Because every woman sees you think that, it is her opportunity to get money." (MT1)

This is linked to the relative inequality of income between maize traders, who have capital available to use for purchasing maize, and the local population, an inequality that may also be exacerbated by travelling to other areas. This echoes the experience of other occupational groups such as truck drivers and mineworkers, discussed in chapter three, who are often viewed as desirable sexual partners due to their relative level of wealth. Whilst this factor is not entirely linked to the mobility of the traders per se, mobility will play a role if traders are moving from wealthier to poorer areas, and thus enhancing their desirability as sexual partners. Maize traders are often moving to more remote areas where prices are lower than in the towns and villages close to Mwanza city, as outlined in the structural analysis above. Nevertheless, it is important to note that this is a primarily male experience, as women are traditionally the recipients of, as opposed to givers of, money in transactional sexual

interactions. Female maize traders also tend to operate with lower levels of capital, so that inequalities in wealth with the local population are less pronounced.

Female maize traders experience risk in other distinct ways, which are related to inequalities in gender relations, and also to the dynamics of being from another place. A group of female maize traders who travelled and lived together reported being harassed by local men, and that to some extent, the local male population viewed having a relationship with them as prestigious, as if winning the girl from out of town was a form of competition.

- “He can just say; “this, these people coming from Mwanza, s/he says, ok you madam as well” [Laughter] (*Interviewer: ‘He wishes that; these women are coming from all the way from Mwanza, therefore, are they just from there?’*) ‘Ee, some are just from there, and some...’ (*Interviewer: ‘Is it a prestige to have a woman from Mwanza?’*) ‘Ee’ (*Interviewer: ‘They are competing to see who will get a woman from Mwanza’*) “Ee [laughter] who will win/ get a woman from Mwanza” (MTF3)
- “There people of that kind, he can tell you that, “I love you madam”, but we are scared because people nowadays are not faithful. You tell him that; guy, I am here just for my business, I am not here for those things. Thus you will have left him, another one will also come to you telling you the same thing and you will tell him different things, because it ever happen to a certain girl who had a husband, but somebody else loved her” (MTF2)

Although the female maize traders did not report succumbing to this pressure, it is questionable whether all women put in this position will have the power or protection to reject unwelcome advances, especially when they are staying away from home in areas about which they expressed doubts over their own personal security.

A final note on how the general process of maize trading influences sexual behaviour and HIV risk concerns the fact that maize traders often engage in sexual activity when they are waiting for transport back to Kisesa:

- “Aa, temptations are necessary to be there, for example when buying these products, as you will have finished purchasing activities, You will have staying doing nothing as you have finished buying, You have satisfied purchasing /the products are sufficient, temptations are necessary, because you are through with other duties” (MT7)
- “I didn’t have a partner, because even the chance, I did not have it, because I am saying so depending on the place, that is, there, it was the place we used to go, but it was not protected to the extent that you will make sure you buy the crops as quick as you can so that you can go back home” (MT3)

This can be a frustrating section of the process for traders, especially if the transport is delayed, as it often is, and as a result they sometimes have to wait for a number of days before they can return to Kisesa. During this waiting period they have little else to do, as by that time

they have generally completed their buying and packing activities. This is one of the points in the process when they report having sex, whilst conversely it was reported that when business activities are concluded swiftly, they have little time to think about or engage in sex.

Along with lack of opportunity of having sex due to the lack of security and completing the buying trip quickly, other reasons for not having sex were due to religion (MT6), and a combination of age and responding to the arrival of the HIV epidemic:

- “First of all, they were many in the past, yet after these diseases, it was must to change the life style to avoid those temptations, And, at that time, adolescence was driving us, a youth who is in puberty age ...For instance, the HIV AIDS disease, although we don’t stop doing that, however we reduce the frequency” (MT4)

Lastly, maize traders recognised that there is a degree of individual agency, ensuring that this is not an overly deterministic narrative, as even though most maize traders reported being tempted while away, they do not have sex away every trip. The quotes reproduced above highlight that someone may have sex if this is something ‘in their thoughts’, with many instances of maize traders talking about overcoming or resisting their sexual urges, reflecting one of the themes reported by farmers above (MT1, MT2, MT3, MT5, MT6).

Dagaa sellers

The role that this process has in contributing to HIV risk contexts and behaviour is primarily related to the gendered power relations embodied in the local dagaa commodity chain (see (MacPherson et al. 2012)). This will be addressed in chapter eight, with only factors that are related to mobility discussed in this section. The dagaa process involves two different forms of mobility, associated with both buying and selling, but that do not always involve a night (or more) away from home. In contrast to the other mobile groups, dagaa sellers reported relatively little recent sexual activity, so that the themes developed here are based on participants’ views of past relationships, or their thoughts on what other dagaa sellers or friends do. At the time the research activities were conducted, this was surprising, as the dagaa business is stigmatised as inherently risky (as it is in other countries, see (Westaway et al. 2007), but also may reflect the challenges of gathering self-reported data on sexual behaviour. However, it is entirely possible (and in some cases suspected) that on some occasions, participants were talking about their own behaviour when describing what others do. One dagaa seller recounted having sexual partners in different locations before he became religious (in 2005), though he said he only had one partner in each place to avoid conflict:

- “Aa ...I had only one friend, I also use to have one when I go Bezi, as well as when I go to Kwelu. It means that, you just have only one friend to welcome you, when you

leave...it is the same person to welcome you when you go back there, you can't have two friends at the same island, and you will cause conflict" (DSM2)

This quote illustrates the standard view of mobile individuals in the literature as being promiscuous while they are away. However, this was only mentioned in relation to buying trips to the islands, in which periods of time are spent away from home by wealthier dagaa trader sellers, and not visits to the lakeshore, which is relatively close to Kisesa. In contrast to buying from the lakeshore, those who travel to the islands in general buy directly from the fishermen, rather than middlemen, as prices are lower. In order offset higher travelling expenses and make a higher profit than if purchasing at the lakeshore, it is necessary for dagaa traders to buy a certain volumes. In these situations, dagaa sellers spend periods of time away from home, with sexual behaviour linked to being away from spouses or regular partner. This reflects the standard narrative in the literature (temporary separation from partner) discussed above. The dagaa sellers interviewed in this study all reported that nowadays they only buy from the lakeshore, in part because they did not have the capital to justify going to the islands, which may also explain why they did not report having sex while away. This is another example which adds to the debate on HIV and poverty, as poorer dagaa sellers are less likely to go on overnight buying trips.

In terms of how this process contributes to risk, the main issue is the environment into which dagaa sellers move. This often includes areas where there are bars, hotels and even nightclubs, which serve alcohol, and are contexts which are strongly linked to sexual activity. Additionally, the markets where dagaa sellers buy are places in which men and women mix. This can apply to both dagaa sellers who travel to the islands and dagaa sellers who buy at the lakeshore.

- "They are mostly available there at the market, because we have different customers there, especially customers buying anchovy, it is women at the market," (DSM1)
- "Ee, starting from there at the lake where I was, the temptations, When you are at the lake, the temptations...even if you are just resting, You can't just have a rest as a baboon, even if it is a baboon, it should be within a group of other baboons, [laughter]. There is a conversational relationship. Now, you can have a conversation, and because you can't choose which sex to speak with, now when talking to the female sex, you never know the intention of somebody you are talking to, thus you can find that this person puts you in the position you didn't intend to be, now if you are not committed, thinking of the future effects, you can find yourself engaging in nonsense" (DSM2)

This reflects general concerns in the literature about the risky context around fishing markets and permanent or semi-permanent fishing camps (Gordon 2005; Bene et al. 2008). This theme has some similarities to the mine-working narrative discussed in chapter three, as the dagaa chain is also a geographically situated primary resource from which a wide range of people can

gain an economic benefit. People attracted to these areas include those actively involved in the dagaa business (in a range of different functions), those providing supplementary services, as well as prostitutes. Therefore, when considering the role of mobility in shaping risk through the dagaa process engaged in by the population of Kisesa, the mobility of other groups of people that reflect spatial systemic inequalities in the social and material structures of production and distribution, and how these processes come together to create risky sexual environments, is a vital piece of the puzzle. This highlights that, unlike the two other mobile processes discussed above, the mobility process of the dagaa sellers, and how this contributes to risk, is intimately linked with a range of other groups of mobile individuals who participate in and around the dagaa industry. To provide a more comprehensive picture, these other forms of mobility need to be incorporated in future research.

A second aspect of this process that leads to risky situations is the need for dagaa sellers, when they stay somewhere overnight, to find accommodation. Whilst staying in a guest house does not by itself contribute to risk, other circumstances in which dagaa sellers are staying in local communities or in less formal setting such as fisherman's' camps, may lead them to share shelter with a woman:

- “There are seasons, as I said at the beginning, because it is a...rainy season, because you have to stay at the guest house during rainy season. It means that [because] it is cold as well at the guest house [laughter]. Now when she comes to you, you keep yourself busy doing different things...the...a woman like this, to console me in this cold” (DSM2)

Sometimes, the woman may also provide them with other basic requirements that they need, such as food, known locally as ‘kimada’. This issue of mobile dagaa sellers staying with women in part to get their sustenance and domestic needs fulfilled is an area that requires further research. However, in a retrospective study of the nature of prostitution during the colonial period, a time when urban areas in Kenya were highly male dominated due to colonial migration policies, White (1990) highlights the overlap between the provision of sex and other material needs by prostitutes, suggesting that there is a historical precedent for this form of sexual and material relationship (White 1990). The need for accommodation and the sharing of transports costs with another seller of the opposite sex may also lead to sexual interactions during selling trips, though this is also influenced by sex in repayment for these costs. This lengthy quote illustrates this process:

- “These days there a lot of women doing business Thus you can get there at the shore, meet her and greet her. Perhaps she can ask you; “where are you taking your products” “I do send them to somewhere, what about you? I do take them to certain place”, aa how is the business there? It is just good” Do you see! By so doing, she is

looking for the ways to make you be close to her, do you see, she can tell you that; “want you to tell me about the place you are going to buy? Or “you have to pay a fare for me; I will pay you back when we get there”. If you are taking the sardines to a distant place, in the past I tried to send the sardines at far place, as you said, by the car, the place as such as Mahaha. It is far thus you cannot go by a bicycle, “I want you to pay a fare for me, I am bankrupt thus I want you to”....now if you find that she is a fellow businessperson, you can pay for her, but when you get there, she can persist that you have to sleep in a single room. She tells you that I do not have the money to rent a room, thus you should just take a single room so that we can sleep together. Now, how can we sleep, you are a woman and I am a man, Or if you can’t, [sleep with me in a single room] hire me another room, You can hire her a room, and after going there and finish selling the luggage, She can tell you that; I do not have the money to, what do you think I am woman just like other women, thus, if you entertain those things....you will make love with her, so that you can compensate your money” (DSM5)

This detailed account again highlights an interaction between the need to find accommodation, but also gender relations which may involve some form of exchange, which will be fully discussed in the next chapter.

Of course, not all dagaa sellers have sex, with reasons for not doing so related to knowledge about and experience of HIV related deaths, and religion:

- “Because I have witnessed the problems from my relatives how they have been affected by HIV AIDS, I even buried some of my brothers, As well as my sisters at home, this is because of the same thing of infections, just in last year I have buried... sisters of my own family, this is all because of HIV AIDS infections, thus I have witnessed all these, I committed myself that I won’t involve myself in matters that will take into troubles, only those that God decides for me” (DSM1)
- “After testing I promised that, I will never make love away from my home” (DSM1)
- “Yet I stopped doing those things after I believed [in god]” (DSM4)

Lastly, as the quote below shows, whether female dagaa sellers engage in sexual relationships will also depend on how their business is conducted. Some dagaa sellers will purchase directly from middlemen, but others may engage in the dagaa business with their spouse or partner, and so responsibility for purchasing does not always rest with them. This is an important mediating factor when considering the dagaa process and risk.

- (*Interviewer: ‘Are you telling me that having a husband prevents you to have another man?’*) “Yes [laughter]... Because at that time I was not married, but now I am married, my husband goes while I am at home” (DSF4)

Having discussed how the dagaa process of mobility influences risk, it is also important to provide a word of caution over how we interpret this data. In some cases, mobile dagaa sellers tell their spouses back home that they have to stay away, for reasons such as the dagaa have

not finished drying. However, this can be an excuse for them to stay away, perhaps unnecessarily, and to have sex.

- “You not to know if have slept because of the anchovy, you just think that has slept there because of the anchovy, while there are temptations that s/he encounters there. the anchovy are not the reasons, because her/his friends may return but him/her sleeps there” (FG-DAGAAF)

In this case, the desire to have sex explains the reason to stay away. This is distinct from the standard interpretation of scenarios above that link staying away due to the demands of the economic activity with the sexual activity follows, and introduces a nuance which is difficult to account for. Two examples of a dagaa seller staying away and having sex may represent two very different narratives. This illustrates the value of qualitative work in unpicking the different motivations and influences on sexual behaviour, and also reminds us to think carefully about the issue and direction of causality, a challenge which is pertinent when thinking about the assumptions of causality that underpin the statistical models reviewed in chapter three. This is an issue that is returned to in chapters eight and nine, as this was not the only situations in which this was observed.

This section illustrates in a coherent manner how broader social processes, and the specific form that they take, can directly influence sexual behaviour and HIV risk. The broader conditions described in chapter six provide the stimuli for mobility, and contribute to shaping the experience of moving, which consequently provides the basis for social context within which potentially risky sexual activity is engaged in. These narratives are not to be interpreted as deterministic, but rather show how a range of structural and social processes combine in a specific context (Bujra 2006). Of course, other elements are missing from this narrative which may enhance our understanding of risk, such as a deeper understanding of why the farmer does not remain faithful to his wife, but this should be seen as something that should complement the social analysis outlined here, rather than the primary goal of most theoretical and economic approaches, which is to reduce risk to an individual’s choice to have or not have sex.

7.4 Farmers and maize traders: A comparative analysis

The previous section discussed the different ways in which each form of mobility influences both risk contexts and individual risk behaviour. This section will compare two of the processes, farmers and maize traders, in order to formally present a range of categories of analysis that are important to account for when attempting to understand the relationship

between mobility and HIV risk, which are summarised in Table 7.1. These reflect the typical responses that were given by farmers and maize traders, and have been derived from both the general discussions about each process in stage two of the project, as well as the individuals' experiences of these processes which were documented in stage three. Nevertheless, these should not be interpreted as quantitative categories, rather an attempt to summarise the research findings in an accessible way.

Typical Reported Themes	Farmers	Maize Traders
Length of time spent away each trip	1 month	3 days to 2 weeks
No of destinations	1	Multiple
No of times destination area visited	3 times per year, across a number of years	Single or less frequent
Reasons for going to a specific place	Kinship/community networks (through which land is accessed)	Price and availability of maize
Where they stay	Home/Family/Friends in the village	Guesti in Urban Centre
Who they travel with	Mostly on their own, or alternate with partners, but sometimes travel with spouse	Men – on their own Women – sometimes travel in a small group
Number of sexual partners while away	1	Multiple
Nature of extra marital relationship	Regular casual partner	One-off temporary partner
Degree of Concurrency	High	Low
Access to local sexual networks	Through living in the local community, introduction via friends	Through meeting potential partners at bars/hotels
Where they have sex	Field/Bushes/Home	Guesti
Who they have sex with	Other farmers	Unselective, but will include a range of the local population
Reported Condom Use	Not always with longer term partners	Yes, with one-off partners

Table 7.1 – Typical reported factors influencing risk: a comparison of farmers and maize traders

These categories help emphasise the links between the structural influences and the requirements of each economic activity, and how these shape the relationship that mobile individuals have with their destination areas, and the implications this has for the conditions and experience of engaging each process. Further, it also emphasises how these processes

influence risk behaviours, understood in terms of extra marital sexual partners and condom use. It is accepted there will be exceptions to these relationships, as they are mediated by a range of other factors which have not been explored in this study, and, in line with the theoretical approach to structure and agency, these are not to be interpreted as overly deterministic. However, this comparison helps us to build up a picture of what is important to consider, and how differences in the elements of each process translate into differences in risk.

The categories derived and presented above reflect the materialist approach to this project, linking the systemic influences on each form of mobility with the way that each economic activity influences risk. For example, the patterns of movement that are related to farming and maize trading are shaped by the process of production associated with each economic activity. For farmers, this involves several long trips to the same place over an extended period of time due to the need to carry out certain tasks at different points in the agricultural production cycle, a cycle which is often repeated, if successful, year after year. By contrast, the process of maize trading, which itself has a unique set of tasks that need to be carried out, involves a greater number of shorter buying trips, to multiple destinations, though this does not preclude them from visiting the same destination more than once. In general, these very different patterns of movement influence both the number of extra marital partnerships and the qualitative nature of the partnerships, with farmers more likely to engage in longer-term relationships, and maize traders more likely to have a higher number of one-off extra marital partners. The divergent nature of these relationships has direct implications for how this might be linked to risk, which includes the degree of concurrency involved or variations in the likelihood of condom use with regular or one-off partners.

A second, and linked, important systemic influence which has a strong bearing on risk is the forces that shape how farmers and maize traders decide where to go. For farmers, this is strongly shaped by kinship networks, for maize traders the physical and social spatial inequalities of demand and supply of maize. These forces have an impact on the context into which each group moves, and also the relationship they have with each destination area, and consequently their experience of living and conducting economic activities in each area. There are key differences in the social context in which each group live, who they live with, where they sleep at night, and in turn how they access local sexual networks. This has implications for HIV risk, such as influencing who farmers and maize traders have sex with, where they have sex, differences in social constraints over sexual behaviour and how avoiding these constraints may contribute to lack of condom use and the availability of condoms.

To provide a concrete example of this comparative analysis, one farmer discussed above goes to the destination area to farm because he accesses land through his parents-in-law. Whilst away, he lives with them, but as he does not want them to know he is being unfaithful to his wife (their daughter), he has sex with a local woman that he met in the village in secret to avoid detection, which makes condom use difficult due to availability and concerns about buying them in a community in which he (and his absent wife) are known. In comparison, a maize trader goes where maize is available at a price that he can make a profit from, often a place where he is often a stranger. Therefore, he stays in a *guesti* in an urban centre, and mixes with the local community in the bars and hotels in the evening, where he may meet potential partners. Condoms are available in these establishments, and so easy for him to purchase, and he can go back to his room at the *guesti* to have sex, rather than find a secret place in the bushes, as detection is less of an issue.

One important implication of this analysis is that it illustrates that the qualitative nature of sexual relationships engaged in while away has a strong influence on risk. When comparing the two cases, it is clear that having a greater number of sexual partners may not necessarily translate into enhanced HIV risk. A mobile farmer who has one permanent sexual partner with whom he does not use a condom may be at greater risk of infection than a mobile maize trader who has multiple one-off sexual relationships but with whom he uses condoms.. This informs the epidemiological debate on how best to define risk behaviours, and offers evidence as to why, in line with other studies, there might not always be a consistent association between increasing numbers of partners and enhanced risk (Slaymaker 2004). It also emphasises the importance of differentiating between casual and one-off partners in terms of risk, something which was accounted for in the statistical analyses by Kishamawe et al (2006) . The qualitatively different types of relationships that these groups engage in is one factor that influences the results of any statistical analysis, and may help explain the lack of significance found in many of the analyses reviewed in chapter three, which often, but not always, only test for an association between the number of sexual partners and mobility status.

A second implication of the analysis relates to condom use. Whilst the consistent condom use rates reported by maize traders can be questioned, differences in condom use across both groups are likely to represent underlying trends, as the self-reported sexual behaviour by both groups is subject to similar biases. Assuming that condom use is lower than reported in the study, it is also possible to introduce the influence of other factors, such as who farmers and maize traders have sex with. Farmers may be at a lower risk of infection if they have sex without a condom with a regular partner from a rural area where background prevalence rates are low, compared to a scenario in which a maize traders has sex without a condom with a

one-off partner from an urban trading centre where prevalence rates are higher. This illustrates that for any mobile group, there are many competing forces and influences over the risk of infection, some of which are protective and some risk-enhancing, which are not necessarily easy to disentangle. The precise impact of each factor will differ by individual experience and/or process, as well as mediated by gender. An additional consideration is that the analysis shows that even if mobility is related to having sexual partners away for both mobile groups, the conditions that shape these relationships are different. This suggests that simplistic narratives that are applied across all mobile groups should be avoided. These observations have been made possible through the methodological and conceptual approach taken by this project, and the way in which mobility has been conceptualised.

As mentioned above, there are always exceptions to the forms of general relationships outlined above. However, the additional lens that the exception has to offer can often strengthen, rather than undermine, the analysis (McPherson et al. 2006). An example of an exception to the typical themes outlined in table 7.1 is one maize trader who reported having a regular partner in one of, but not all of, the destinations he visited. His regular partner works in a hotel that he stays in every time he goes to that destination, and so he has established a relationship with her over a period of time:

- “The woman was a hotel worker, she had a hotel, thus as long as I was using her services we finally started relationship. Do you see, and at every time I was going there, she was the one to receive [host] me. There were only two hotels as it was in the village ... one of which was just as a café for the morning tea, they don’t cook food, right? But the second one was the one cooked food, we mostly go there to give then an order to cook us lunch and dinner, do you see! Thus that is how we started our relationship.” (MT3)

This is a different form of relationship than the typical one reported by other maize traders, and enables a reflection of the important categories of analysis. It emphasises that the relationship between mobility and sexual behaviour is dynamic, and changes over time. Rather than a narrative that is essentially uni-directional in which mobility influences risk through a range of factors, in this case the relationship with the hotel worker is a factor that draws him to return to that particular buying destination rather than the relationship purely being an *ex-post* outcome of the mobility process. Therefore, what is important is the on-going and changing relationship with place that this maize trader has, which is partly, but not entirely related to his practice of maize trading when understood in this sense. This insight ensures that the categories above are not viewed as deterministic, nor is it appropriate to represent them in a framework that associates linear causality between different categories. The

relationship with place and the conditions of moving are thus conceptualised as both dynamic and interacting, suggesting that risk is related to a context that develops over time.

7.5 Concluding remarks

Returning to the research question, this chapter has provided general outlines of each mobility process, and subsequently the mechanisms through which mobility influences HIV risk. It links structural elements, the requirements of each economic activity, how these shape the conditions of moving and the relationship that mobile individuals have with destinations, and in turn how this influences sexual behaviour and importantly risk. Care has been taken to ensure that it is not assumed that the level of risk relates only to the number of sexual partners that individuals have, as this is not necessarily risky in itself, with attention paid as to what it is about the mobility process that drives lack of condom use, and how condom use is linked to the qualitatively different types of relationships engaged in by different mobile groups.

One key finding is that the patterns of movement related to each economic activity are important in shaping the types of relationships that mobile groups engage in, which has implications for condom use. We also find that the structural factors that determine where people go have an impact on where they live and stay, their relationship with the local community, how and where they meet potential partners, and ultimately who they have sex with. The relationship with place also influences the degree of social constraints over sexual behaviour, and in some cases the practicalities of condom use.

When applied to different processes of mobility, the summary presented in table 7.1 captures a range of different factors that will combine in a multitude of configurations that allow complexity and diversity to thrive, whilst at the same time providing a guide as to how and why those engaging in the process may experience risk. It necessitates that each specific form of mobility is linked to broader structural processes and practices. The categories presented here are not to be interpreted as deterministic or with uni-directional lines of causality or effect, as these relationships will not hold for all mobile individuals, and will vary by gender. It is also anticipated that different factors will overlap and interact with each other, particularly in a dynamic sense. This nuance and complexity would be lost if directions of causality were established, as is often the case with structural frameworks, and also because as most of these factors overlap and are interrelated, the result would be a confusing set of multi-directional relationships. The usefulness of this simplification is that it provides an underlying framework that can provide the basis on which future research that uses a similar methodology can be

formulated, and which enables complexity to flourish. It directs attention not only to the categories themselves, but also to the ways in which they are interrelated, which will differ across contexts. Further, returning to the research question, the table concisely summarises the primary points of differentiation between two mobile processes addressed in this study that may enhance or reduce risk

Chapter 8 – Research Question 3: Are there other factors involved in understanding the risk that mobile populations experience that are not related to their mobility?

8.1 Introduction

This chapter addresses a number of themes identified in the research project that are related to sexual behaviour and risk, but that are not directly linked to mobility. Factors touched upon in chapter seven that influence risk and are addressed here include participation in local value chains, and norms around sex for exchange. Whilst labelling these factors as not directly related to mobility is artificial to some extent, as mobility has some role to play in linking different parts of value chains or exacerbating income inequalities when traders move to more remote areas, the logic behind addressing these issues separately is that they apply to both those who are mobile and those who are not. Additionally, when mobility is involved, the articulation of these themes focuses less on the mobility of the individuals and more on the structure of the value chains and how engaging in these chains influences risk. The chapter commences with a brief definition of what is meant by ‘value chains’, before introducing the value chains documented in this study, including a brief historical overview, and the specific positions occupied in each chain by our study participants. Following is a discussion on how engaging in these value chains influences sexual behaviour. This sets the scene for a broader discussion of the role of sex for exchange rooted in local sexual norms, and the general social relations that shape these sexual interactions. The concluding remarks include a reconsideration of the role of mobility discussed in chapter seven. The analysis in this chapter draws on the focus groups conducted in phase two, the phase three in-depth interviews, and the focus groups that discussed sexual norms in phase four of the project, and, where possible, findings are triangulated with other secondary sources.

8.2 Local value chains: Dagaa, maize and tomatoes

The role of value chains in shaping risk contexts and behaviours was not initially the primary subject of inquiry of this research project. However, as the research progressed and themes emerged, it became clear that it was necessary to engage with the structure of local value chains. This was done through the lens of mobility, and the study of the economic activities that mobile populations engaged in, so that the chains mapped below focus on the positionality of the participants of this project, rather than a full mapping of the entire chain.

The three main chains studied were the dagaa and maize chains, due to the fact that these reflected the economic activities of two of the three mobile groups selected in phase one of the project, along with the tomato chain. The tomato chain was a value chain that was discussed in phase one of the project when participants were asked to expand on what they meant by business, though it became clear that this group were not mobile, and they were primarily mentioned in the first phase as these focus groups were conducted during the harvest period for tomatoes. However, as the project progressed and it became clear that value chains had a central role in the analysis, this value chain was engaged with in phase three to enable a comparison with value chains that involved a greater degree of mobility, and to validate key themes that had begun to emerge.

Value chains can be loosely defined as 'describing the full range of activities which are required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposal after use' (Kaplinsky et al 2000, p4). This highlights the need to document the different stages which each commodity passes through, and also the linkages between them, and enables an analysis of how value is distributed across each stage of the chain. However, the usefulness of the value chain approach is not uncontested, as it has been criticised as being conceived in a narrow way, ignoring the broader social and economic context within which these value chains operate, and also because the analysis fails to incorporate the role of labourers and workers, with the chain commencing at the level of the producer (Henderson et al. 2002; Bernstein et al. 2006). With this in mind, and on the understanding that a full theoretical discussion and reconciliation is beyond scope here, the approach used here attempts to locate value chains within the broader historical economic structures which were discussed in chapter six, and the local socio-economic context (for an example of this approach see Gibbon 1997), with the notion of value chains used in this analysis focusing on the gendered power relations within value chains, and the role that this plays in shaping sexual behaviour.

8.2.1 The dagaa value chain

The dagaa fishing sector became established in the 1960's, and, unlike many native species, in Lake Victoria it has survived and even thrived with the introduction of the Nile Perch (Wanink 1999). Since then, dagaa has grown in importance and in terms of tonnes caught, it is second only to the Nile Perch (Msekela 2008). Total production in 2007 in Mwanza region was estimated to be in the region of 40,000 tonnes (Msekela 2008).

The dagaa value chain (see diagram 8.1) captures the range of different actors in the dagaa chain, and the flow of the commodity from fishermen to end markets and the consumer. Although this value chain diagram captures most important elements, it is acknowledged that this is an oversimplification of the chain, as the dagaa chain is complex, incorporating many different formal and informal actors who often engage in overlapping roles, a wide range of different markets, and any number of intermediate steps in the process (Legros et al. 2011).

Figure 1 – Distribution Diagram

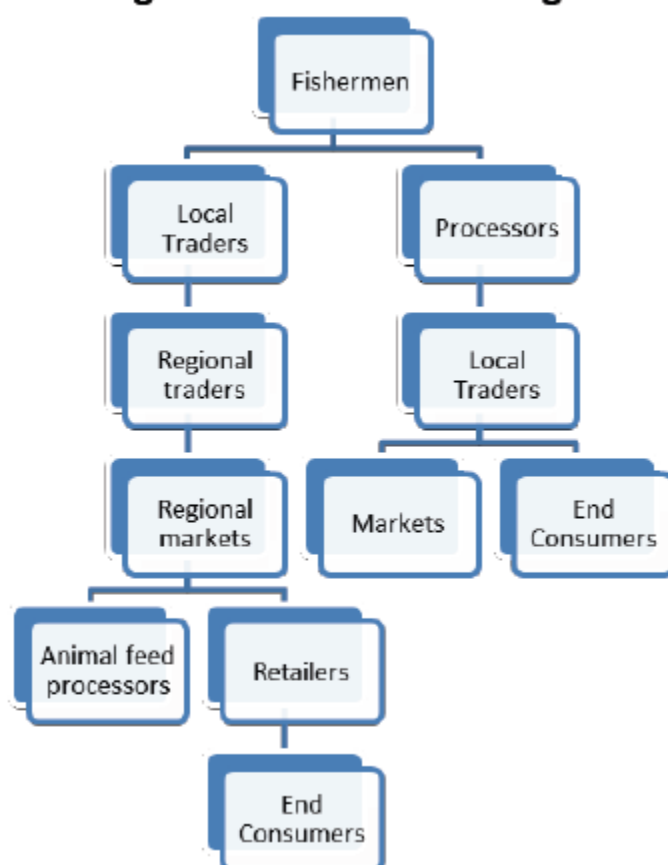


Diagram 8.1 – Dagaa value chain. Source: Legros et al 2011

The chain begins with the fishermen, though it is acknowledged that this ignores the roles of different types of boat workers as documented in the fishing chain in Malawi (MacPherson et al. 2012). Fishing takes place at night, in a variety of sized boats, with ownership of boats widely dispersed, with 94% of boats owned by those who had only 1 or 2 boats. Additionally, in 1997, four different methods of fishing, each with their own specificities were identified (Gibbon 1997). This structure of production remains fragmented, with more than 8,000 vessels engaged in fishing for dagaa in Lake Victoria, though this includes vessels from all the countries

bordering the lake (Legros et al. 2011). However, this fragmented market creates space for many different actors to coexist. Once landed, dagaa need drying before they are sold, which is usually done on rocks in the sun or on drying mats, and so the next step in the chain is the processing of dagaa. This is a task that is primarily conducted by women, as this is seen as women's work (Legros et al. 2011), as in many countries across sub-Saharan Africa (Merten et al. 2007; Bene et al. 2008; MacPherson et al. 2012), though it is noted that boat crew, children and some casual male labourers are also involved in this step (Gibbon 1997; Legros et al. 2011). Therefore, the next step in the chain involves either fishermen selling directly to processors/traders, or supervising this part of the process and selling to larger scale traders who transport the dagaa to the main markets, with much of the local catch of dagaa Mwanza passing through Kirumba market in Mwanza city (Gibbon 1997). The traders involved at this point include those that can be classified as 'down country' traders who purchase and transport varying bulk volumes of dagaa to other regions, and also for export to nearby countries. Other large scale traders resident in Mwanza collect from boats they own themselves or from other fisherman and also trade through the Kirumba market (Gibbon 1997). These resident traders in Mwanza are also involved in brokerage of deals between fisherman and other traders, with distinctions between different types of traders not always clear. A larger number of small collectors also exist alongside these larger traders, with lack of capital one of the main factors that contributed to different classifications of traders. Lastly, some vessel owners market their produce directly in the markets of Mwanza city (Gibbon 1997). In general, the two different chains in diagram 7.1 represent the fulfilment of local markets and the wholesale market which operates in Mwanza.

The local value chain is more informal, though to some extent this overlaps with the formal marketing chains, as at times when dagaa are in short supply, these traders also purchase from the central dagaa markets in Mwanza City to fulfil demand in the various regional weekly and daily markets. The informal chain involves small scale traders in the surrounding areas outside Mwanza city who buy directly from traders or fisherman at the shore, and distribute dagaa to consumer markets across the region, either acting as middlemen themselves, or selling directly in the retail market (or both). It is these informal value chains that the residents of Kisesa participate in. Diagram 8.2 outlines this part of the larger value chain, and also highlights (in bold) the roles fulfilled by the participants in this study. The value of incorporating the gender of different actors is clearly illustrated here, and enables the mapping of a more complex value chain, with many different routes through which the dagaa can flow from source to final consumers.

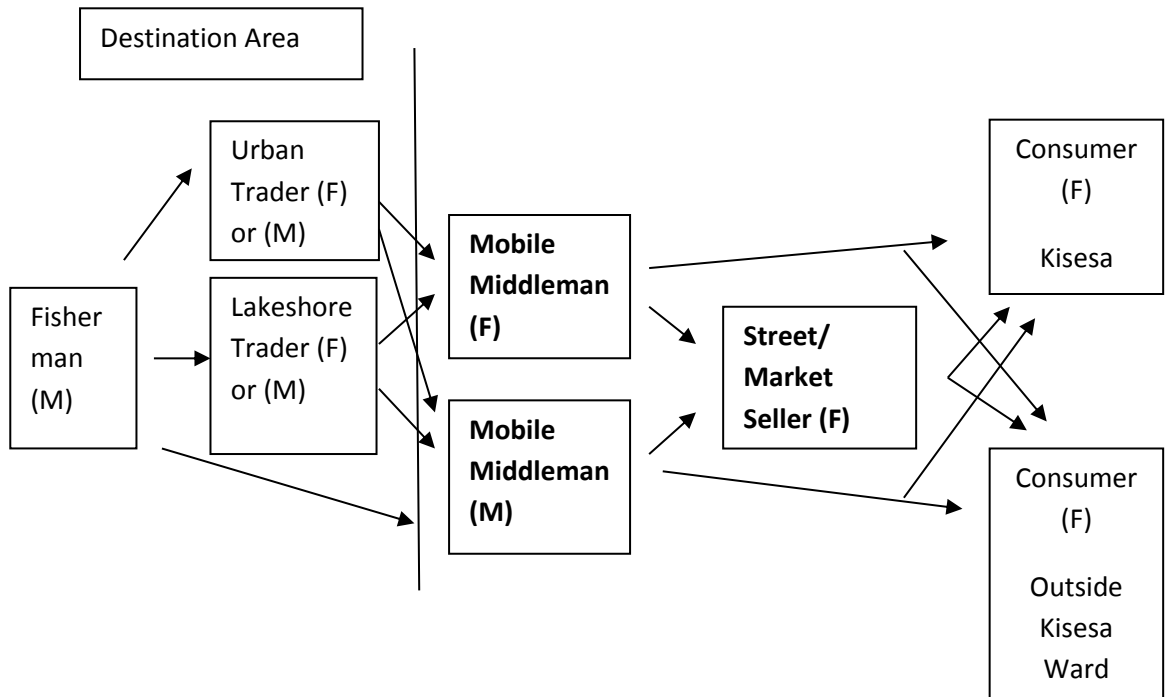


Diagram 8.2 – Local dagaa value chain (F and M denote gender)

This value chain map illustrates the complexity of the value chain and the difficulty in mapping even a relatively concentrated element of the chain that operates over relatively short distances. This is due to the overlapping nature of many roles, such as middlemen who sell to both retail sellers and directly to consumers at weekly markets, and the different locations that traders buy from and sell to. Additionally, different actors do not always fulfil the same roles over time, or will dip in and out of the market as means and needs vary, making this a fluid and dynamic chain. For our purposes, it emphasises that most, though not all, roles are carried out by both men and women, particularly in the trading and movement of dagaa, though the majority of initial producers (including boat crew) are male. Conversely, most consumers (i.e. those that purchase the dagaa for home consumption) are female, as dagaa are locally referred to as vegetables (*mboga*), which demarcates them as products that are to be purchased by women for daily household consumption, a social rather than biological categorisation. However, whilst each role is carried out by both men and women, most roles in this section of the dagaa chain are dominated by one gender, and so for the purposes of the analysis here, we can represent the typical value chain as characterised by a number of gendered interfaces where men sell to women and vice versa (see diagram 7.3). This typical value chain is the starting point for the analysis in the next section.

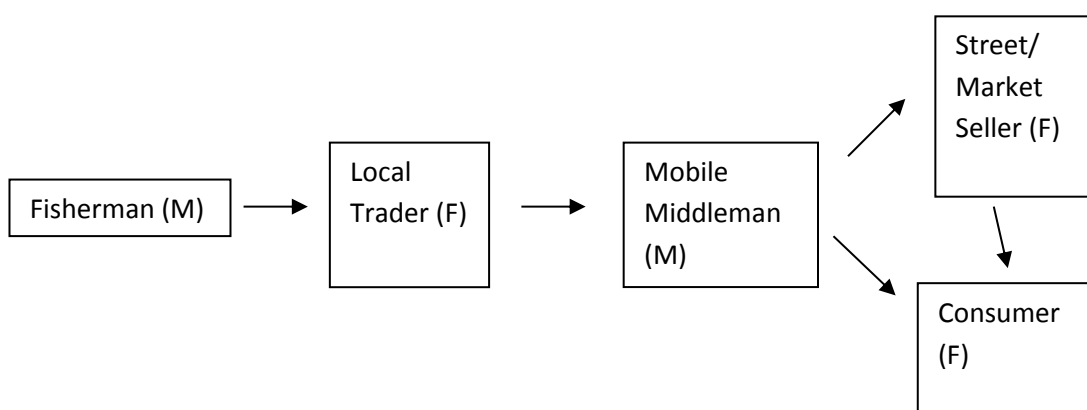


Diagram 8.3 – Gendered interfaces along the local dagaa value chain

8.2.2 The maize value chain

The maize value chain is also complex, with many interlinked actors operating at different nodes of the chain. As noted in chapter six, this is a trade that was formalised through the process of economic liberalisation and the dismantling of the Parastatal marketing boards. However, this form of trade predates the liberalisation era, as Mwanza region has long been a maize deficit region, but has historically not been well served by Parastatal boards of the post-independence era, with demand for maize fulfilled by parallel markets. The sector is dominated by smallholder production. Diagram 8.4 documents the maize value chain in Tanzania.

This value chain map highlights that the vast majority of maize produced on large or medium scale farms is destined for export, supermarkets or the disaster fund, and bearing in mind this makes up just 15% of total production, it can be seen that maize produced by smallholders is vital in supplying urban and rural consumers. The maize traders who participated in this research project, perhaps unsurprisingly due to the complexity of this chain, do not fit neatly into any one category. They all reported purchasing from village collectors and in some cases directly from farmers, and selling to bench retailers, directly to wholesalers in urban markets, and directly to consumers, so to some extent fit into the category of large/medium scale traders, though with more linkages to different sources and onward markets.

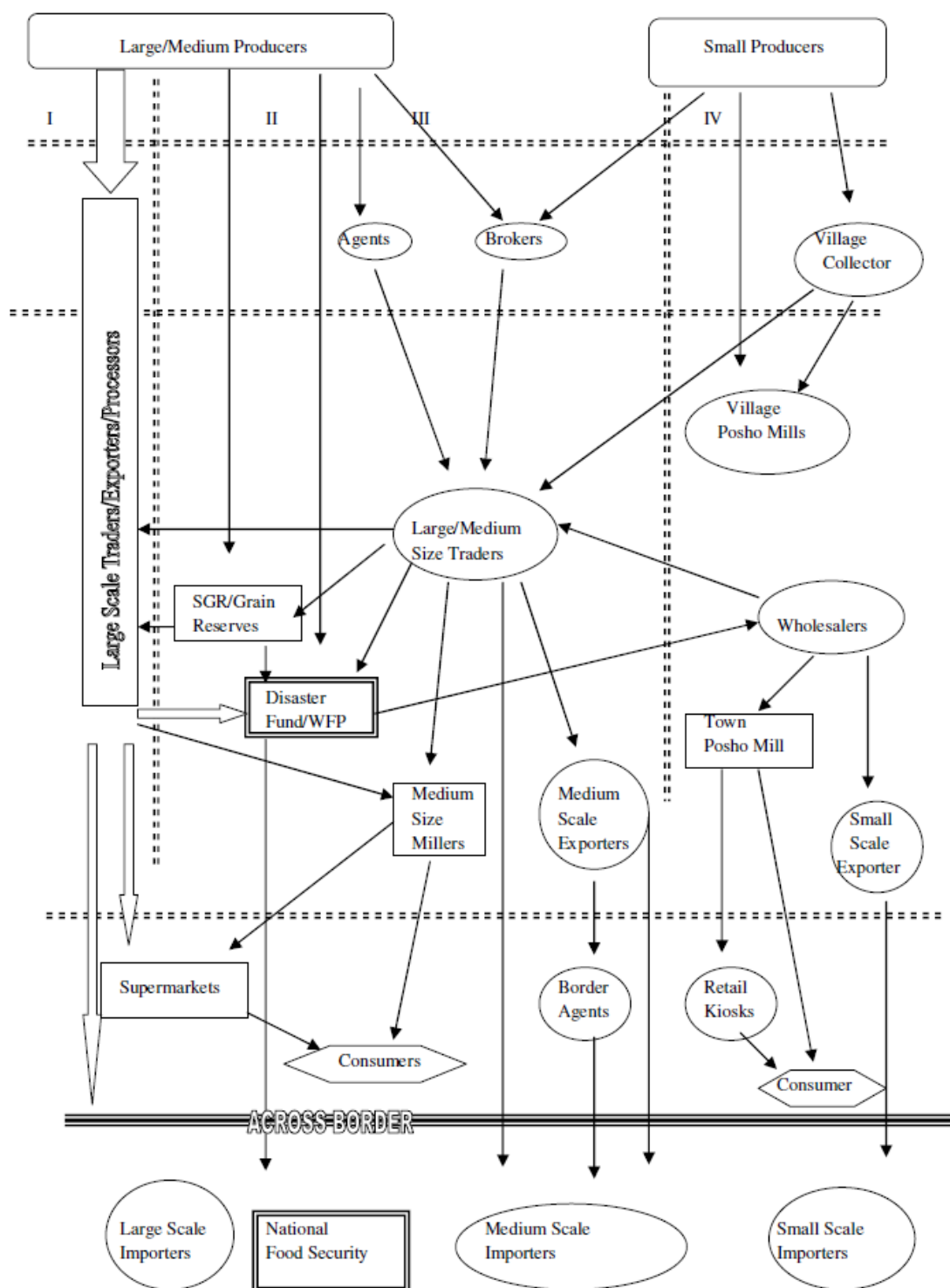


Diagram 8.4 – Maize value chain – Source: Helms and Strauss (2009), Tanzania Value Chain Analysis in (Chemonics International Inc. 2010)

Diagram 8.5 illustrates the position in the value chain of one of the participants in the study (MTM2), which is a representative of the typical role of most male maize traders in Kisesa.

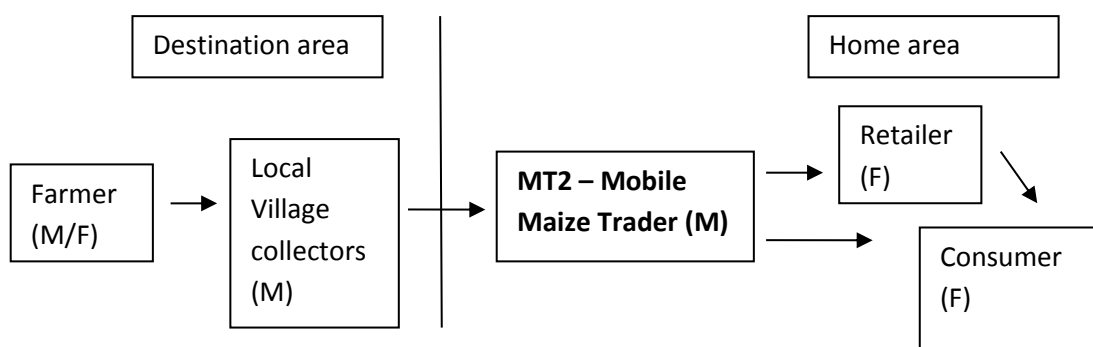


Diagram 8.5 – Local maize value chain for MT2 (male maize trader)

As with the dagaa chain discussed above, these value chains are also highly gendered, with most mobile maize traders male, and most retailers and end customers female. Again, there are exceptions to this, with a number of female mobile maize traders incorporated into this study. Nevertheless, in general this chain is also characterised by highly gendered roles, with one primary gendered interface existing at the node between mobile male traders and female retailers/consumers. This interface is important for the analysis below.

8.2.3 The tomato value chain

The final value chain discussed in this section is the tomato value chain, though this group were not studied until the final phase of the project. The tomato value chain, following liberalisation, is an increasingly important value chain, as the cropping cycle is relatively short leading to the potential for more harvests, and hence a reliable source of money for the household all year round (Ponte 2002). As a perishable good, and in light of the increasing monetisation of the economy, households cannot store this good, and so do not end up losing large proportions of marketable surpluses through kinship and community networks, as can happen with commodities such as maize or rice (Ponte 2002). Diagram 8.6 is a representation of the typical value chain for two key vegetables, tomatoes and onions, based on a study which documented these value chains in Tanzania and Kenya.

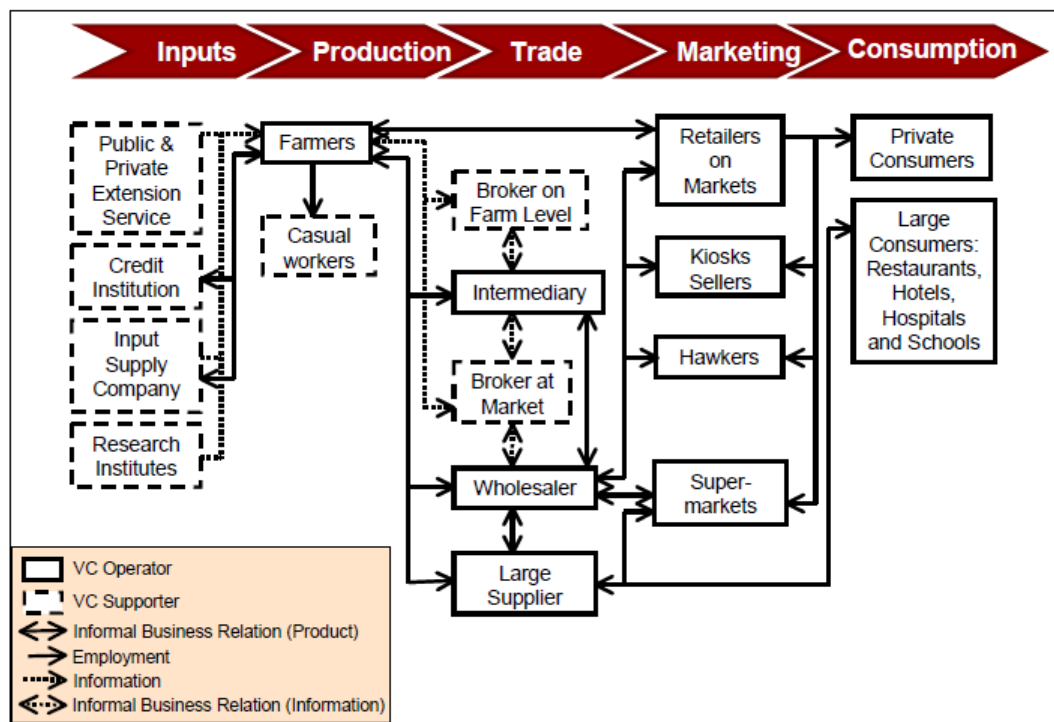


Diagram 8.6 - Vegetable value chain in Kenya and Tanzania: Source – Koenig et al 2008

The section of the value chain that residents of Kisesa are involved in is the trade and marketing of tomatoes. Male residents of Kisesa are engaged as middlemen who buy tomatoes directly from the farmers, and then transport them to Kisesa urban centre, where suppliers and buyers congregate early each morning. However, some farmers also transport their own tomatoes to this market, which is represented by the step from farmer to retailer in the value chain map above. The middlemen and farmers sell baskets of tomatoes to female retail sellers, who then either stay in Kisesa or travel to the edges of Mwanza city or other local markets to sell them to household consumers. Diagram 8.7 documents the local tomato value chain engaged in by residents of Kisesa.

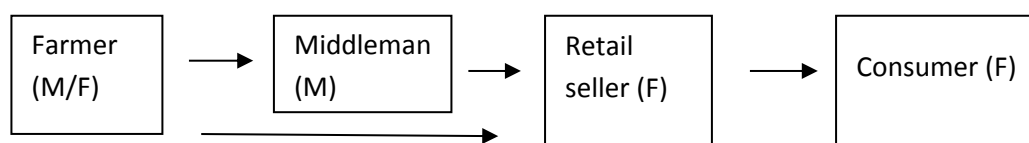


Diagram 8.7 – Local tomato value chain in Kisesa

Again, as with the dagaa and maize value chains, the roles across this value chain are highly gendered. Almost all farmers who take the produce to market and middlemen are male (as observed by the author each morning), whilst the majority of retail sellers and consumers are female. Therefore, there is a highly gendered interface between farmers/middlemen and retail

sellers. The main difference with the other value chains is that this chain can link producers and consumers who are spatially close, with most middlemen and sellers travelling relatively short distances, and at furthest to the adjoining wards. Therefore, mobility and overnight stays do not form part of this process.

8.3 Value chains and risk

The previous section outlined three complex local value chains. One shared commonality between these three very different processes was that, in general, with some exceptions, specific roles along each chain are highly gendered. These are conceptualised here as gendered interfaces, in which one gender buys or sells predominantly to or from another. This introduces a 'space' in which unequal power relations that reflect economic relations between buyer and seller, and gendered relations between men and women, are expressed. These gender relations are conceptualised as rooted in relations between men and women as social groups, rather than a reductionism of gender relations to being between an individual man and woman, as the nature of these relations are socially and historically derived. The unequal economic and social relations at these gendered interfaces create the conditions in which sexual activity takes place under varying degrees of social and economic coercion. For example, male dagaa sellers reported that their female customers ask for the dagaa upfront on the agreement that they will pay them back later once the dagaa are sold, but then creating a situation in which they may attempt to avoid paying for them through offering sex, or a situation when this possibility is at least introduced:

- “turning to the market, there are temptations because a large percent of the business involves women, they are the ones we are selling the products [to], now you can find someone have no money, thus wants to borrow. You can lend her the products, you may think that she is your customer while has some reasons behind. Now at the time for her to pay you the money, she will start giving some factors, there one should be wise enough [to escape her]to know her intentions, and...it is up to you to be wise in giving her answers” (DSM2)
- “I think men are very few, most of the women buys a lot, you hear them saying; “give me three tins, give me two tins, or sell me four or three tins, I will pay the remaining money next week, do you see! She does the same when she comes in the following week; “I have already paid for the tins I was in debt of, thus sell me another tins of dagaa, I will pay for some of the tins and I won't to some”. Therefore when will you pay the other money, “I will bring you the money next week” [she replies] now if you don't consider it a big deal, you can make a follow up on her” (DSM1)

These quotes by male middlemen illustrate how extending credit, which can be either to consumers or retail sellers, can bring sex into the equation, though of course it must be noted

that this situation will not always lead to sexual interactions. The implication expressed by the male dagaa sellers is that this is to some extent instigated by their female customers, who lure them into accepting a financial loss by persuading them to have sex. This issue was also raised in the first phase of focus groups:

- “Once you leave woman money to buy dagaa she will go to the market and will buy fish, if you ask her, where did you get money to buy fish? she will tell you that fish are very cheap nowadays, if you try to trace back you may find she is in relationship with the fish seller” (FG3-MR)

However, from the point of view of female sellers, this extension of credit can be a situation in which male traders can exploit these unequal relations to their own ends by coercing sex from customers by giving them a good deal and following up on it later:

- “A man has...has...you borrow something from a man, that is, can you borrow me anchovy, [in that case] you are entering into temptations when he lends you. He tells you to keep the money when you pay him another time. You have to meet again later on. Yes, [he tells you that]; “there is no need to pay me back the money we should just make love”” (DSF5)

Therefore, these gendered interfaces, and the resulting sexual interactions, can be due to a range of different reasons, and can be experienced and understood in different ways by those involved. This last quote in particular shows how male economic power resulting from the structure of the value chain can be used in a coercive manner, in contrast to the quotes above by male middlemen that cast the female customer or retail seller as the one initiating the possibility that sex will be used to repay a debt. Whilst these different accounts may have been presented by participants in such a way as to downplay the role of either themselves or their own gender in these sexual interactions, they illustrate the complexities of trying to unpick precisely how gendered power and agency manifest themselves. Indeed, it is possible that the two different accounts could be two sides of the same narrative.

Closely related, one female dagaa seller had a relationship with someone who said he was a businessman, but it turned out that he wasn't, illustrating that sex can underpin gaining access to dagaa, as has been noted in other studies (MacPherson et al. 2012):

- “One thing brought him there, he came to visit me there at my working place, and he told me that he would like to work with me, by sending me products from somewhere. That he can be sending me fish, have...and...he tried to give me the real picture of how people does work and the way he thinks that I can manage the business, that he finds me serious with work. Those praises he were giving, made me fell under new perceptions ...[words unclear] ... thus that situation maintained communication between us, but my intention was to get someone to listen to me in my business, I did

that for business purposes. However, this man was not a businessperson rather, had other intentions” (Interviewer: ‘Therefore, business...did he send you anchovy?’) “He neither does the business he is in other business” (DSF1)

Lastly, having sex with someone for exchange can be a way in which female dagaa sellers can increase their capital:

- “however they come to you in another technique, asks you as...goes to strengthen his/her business so that can get profit while loves you” (FG-DAGAAM)
- “Perhaps, you opt to do something [sex] if you think that your capital is not enough, you can’t ask for a loan to somebody if you have big capital” (DSF5)

The examples quoted here from the dagaa value chain range from female street sellers and/or consumers actively exploiting these gendered interfaces to pay back debt due accrued through the extension of informal credit, increase their profits or make up for their losses by replenishing their capital, or cement a business relationship, to situations in which male power is expressed through coercive practices on the part of male traders. These findings and analysis support and corroborate other work on the role of unequal and gendered power relations in fishing value chains in driving ‘transactional’ sexual interactions (Pickering et al. 1997; Bene et al. 2008; MacPherson et al. 2012).

However, these themes are also, in some situations, applicable to the other value chains. In the maize value chain, there is only one highly gendered interface, which is in the sending, rather than the destination, area. This interface exists between male mobile maize traders who sell to either female retail sellers or female consumers. Gendered interfaces do not in general exist in the destination area, as their purchasing activities while away involve interactions with local male collectors or in some cases the farmers themselves, who with some exceptions are male. Whilst male maize traders denied that they ever had sex for the direct exchange of maize, as they claimed that women preferred money nowadays, one unique economic relationship, *mali kauli*, was linked with sexual activity.

*Mali kauli*²¹ is an economic agreement that is practiced within the Sukuma tribe, and in all likelihood elsewhere in Tanzania (FG-SNM). The definition given by both groups was broadly in line with the understanding of the term articulated in Ogawa (2006), though the findings of this project extends the definition beyond being purely a transaction that is used in the clothes business to one that represents credit in a broader sense. *Mali kauli* can be loosely defined as a verbal agreement to extend informal credit, a commercial transaction without the handing over of money at the point of sale, with payment agreed at a later date (FG-SNF, FG-SNM). This term can be applied to the buying of goods for consumption from a shop or trader

²¹ See Ogawa, S. (2006).

accompanied by an agreement that the consumer will pay in a few days time (FG-SNM), or other commercial transactions in which repayment is agreed for a later date (FG-SNM). The two following quotes are clear illustrations of this practice:

For consumption

- “For example even if I do not have money , even if I do not have vegetables there at home, and if I go to somebody selling dagaa there at the center, I am just going to take dagaa and then I will come to pay later on”(Interviewer: ‘Later on, after what period of time now?’) “two or three days” (FG-SNF)

Other commercial transactions

- “It’s an agreement between two people without using money, they can sell each other things, maybe like a cow, you see? A cow. Maybe I could go to Mr X, or Mr Y, and tell him, I want him to sell me a cow. Now money is on a different page, but you can still plan, to plan a date of repayment, like when the cow gives birth, you can repay him, and he can go on with his business. Now the date has come that you planned to repay him, and you can send him something now, the money. This is mali kauli, yes.” (FG-SNM)

However, generally speaking, the term *mali kauli* refers to a business transaction (FG-SNM), in which the borrower is given some goods on credit, with the intention of selling them on. The proceeds from the sale are then used to repay the original owner, with the borrower keeping the profit. This can occur in a range of business, from the clothes trade to the trading of other commodities such as maize, dagaa and tomatoes, and in particular in value chains where the trader does not always have the capital to purchase the goods upfront. These three lengthy quotes are worth reproducing in full as they illustrate the complexity and nuances of the process of *mali kauli*. These relate in turn to the dagaa value chain, the maize value chain, and lastly the tomato value chain.

- “And there you have one hundred sacks, it means that [she] will come to tell you that, “in my handbag there, although my capital is small however it pays me because the market is favourable”, now should I add you ten sacks?. She agrees. Ok, I have no cash, she responds; ok “you will send me the money, how much will you give me”? She makes her calculations and is satisfied; you give her ten sacks before she leaves. When doing the business there... she will even call you, “the market has become bad therefore could you please decrease the amount of money so that I can give you a certain amount?” thus such statement will, firstly you won’t agree with that, “aa no that were not our agreements” ... it means that there have something already introduced do you see, thus the woman could easy herself to you so that you can solve the problem in that way. She gives you a certain amount and the remaining amount will be accomplished in that way.” (FG-DM)
- “That [sex in exchange for maize] happens a lot, even here in Kisesa, but it has never happened to me.” (Interviewer: ‘Ok, perhaps when you said that it does happen,

perhaps what are the reasons making people do that?') "Aa, as you know ... if they [women] know the business you are doing, they usually have many things they can do to you, thus you must not have that [sex] in your head... Thus that can happen during the time your mind is tuned in making love, hence it leads you to fell in temptations, because somebody may come to buy maize from you even three or four times, but in the fifth time, she wants you to borrow her the luggage (mzigo), telling you a number of things, hence you will realize her intention why she came, it means that, if you are also thinking of that [sex], you will thus finish everything there, That will be the starting point...It becomes a problem...Ee, firstly, you will have realized what she came for..."(MT2)

- "You can consider a three month experience with the customer, 'I am just telling you to bring me some tomato', right. You put tomato at her bench, ok. She tells you that; "you just go,I will find money for you" she tells you so, you send tomato to other customers. When coming back to owe your money, she tells you that; "you come back tomorrow ok" you find her have no money when you come back in the following day. That is why there is a relationship between a woman and somebody selling tomato, because, there is a long time familiarity." (Interviewer: *'That is, she may tell you that; send me a luggage'*) "Send me a luggage, but you find that she has no money" (Interviewer: *'She does not have. She tells you to come take the money, isn't it?'*) "Come take the money tomorrow, and when you go tomorrow you find that she also doesn't have the money" (Interviewer: *'She doesn't have the money, therefore that is....'*) "Yes, that is when the relationship begins" (Interviewer *'It begins [the relationship] ...You have been doing this business; have this ever happen to you?'*) "Mmto tell somebody that, I shall come for money tomorrow, this ever happen to me as well. Ok, now at the time she told me so, I had already engaged a certain woman, right? I decided to take her bench as she was dodging/avoiding me every day, yes, I went to her home and took the bench/table" (TSM1)

The consumer form of *mali kauli* is illustrated by the case of the maize trader. This is described as a process that happens over a period of time, as the female consumer first establishes a relationship with the maize trader by purchasing maize from him on credit, and each time making the repayment on the correct date. After repeating this cycle, the consumer is eventually unable to repay, and instead offers sex to clear the debt. Whilst the maize trader framed this as a deliberate ploy to avoid payment, it is also possible that the lack of ability to pay may occur for less suspicious reasons, such as general household income shortages. However, this process only opens up the possibility of sex being exchanged in lieu of payment, something which the maize trader is clearly aware of as he notes that whether it does or not depends on one's frame of mind. Again, we are reminded that we are only attempting to explain the mechanisms through which these value chains can influence risk on the understanding that whether sex occurs or not will be mediated by other factors, including individual ones.

The *mali kauli* transaction was also described in relation to the dagaa value chain, in which a female seller asks a male dagaa trader for some dagaa in advance so that she can sell it. At this point, they made an agreement on how much she will repay based on the quantity that she took. However, the market conditions change or do not meet her expectations, with the result that the goods sell for less or are not sold at all. The female seller therefore wants to renegotiate the original payment terms. This issue again creates the situation in which sex may be used as a way of repaying some of the debt. Finally, one tomato middleman described a situation in which a female tomato seller that he regularly supplied to on credit was eventually unable to pay him back. In this case he visited her at home and decided to take her table as payment, rather than have sex with her. However, this again highlights a context in which sex may have been considered, and how this is linked to the process of extending credit through the local value chain.

However, one female participant in the study gave a very different version of *mali kauli*:

- “Now when s/he longs for him/her, S/he must stick on his/her point saying that, I have to borrow something from somebody. I have got money today but I won’t pay him because what I want is....” (Interviewer: ‘Love’) “Love. When he comes to demanding for his money I will just tell him I do not have while I have What is targeted is love ... But if we have attracted each other, he must ask me, that, I need[love] you let’s forget about issues of money. There is when love begins, we put aside things about borrowing each other” (FG-SNF)

This suggests that, from this female’s perspective, the failure to repay the debt is not always due to lack of income or failed commercial activities, but because this in itself is a social and economic process through which women can instigate a relationship, something which in general is difficult for them to do. This alternative explanation of *mali kauli*, in which women make use of existing socio-economic relations for non-economic ends, illustrates that sexual interactions are engaged in for multiple reasons, which prevent the simplistic reduction of transactions such as *mali kauli* to their economic element. This issue of causality was noted in relation to a number of other situations in chapters six and seven, and highlights the difficulty in assigning a ‘reason’ to an action, particularly when sex is involved, as the motivations for any sexual interaction are likely to be recounted in different ways by different actors. It also highlights how individuals make use of social norms for their own ends in a creative manner.

Mali kauli, as outlined in these three quotes, is therefore a complex form of economic transaction that typically involves the extension of credit, but applied across a range of different situations. At a simplistic level, it is the extension of informal credit, to be paid back at an agreed time at a later. This informal credit can be extended at different interfaces in the

commodity chain, whether that is between middleman and retailer or retailer and customer. These transactions play an important role in the functioning of value chains in circumstances where money circulation is low by enabling both traders and retail sellers to maximise their chances of making a profit by either extending goods in advance, or a situation in which a consumer asks for some produce in advance, with a promise to repay the debt at a later date. As Ogawa (2006) notes, and which is reflected in the narrative above, the terms of *mali kauli* transactions are often open to renegotiation, which may include, for some, the introduction of sex into the equation. However, this is also a protracted process, with the physical exchange of goods often occurring at a different point in time to the sexual exchange element. This economic transaction involves both economic and gendered power relations between creditor and borrower, though care has been taken to ensure that this is not conceptualised as not being an overly-deterministic influence over sexual behaviour, with *mali kauli* creating the conditions under which sexual interactions may be engaged in, particularly if the (female) borrower, for a number of reasons, is unable to repay the agreed debt to the (male) creditor, but in which other factors will determine how these situations are resolved. The example of the tomato seller in which he took a table in lieu of payment emphasises that whether sex or something else is exchanged will be mediated via individual factors, so that sex is not always the outcome.

However, due to the fact that this theme emerged towards the end of the project, this is only a brief overview of the issue, as there was not enough time in the study to follow this up to enable a fuller exploration. It is possible that the phrasing of questions around whether maize traders and dagaa sellers ever have sex for exchange would not necessarily be understood by participants to include *mali kauli* as this is not always a direct and immediate exchange, and is a more organic and social process. Whilst the aim of this project was to explore how mobility (or not) influenced HIV risk, rather than a quantification of these relationships, more research is needed to understand the extent to which agreements break down and lead to sex to fully assess the contribution that *mali kauli* may have to the spread of HIV. From previous research in nearby Mwanza City, it is clear that this is a common business transaction (Ogawa 2006), and so is an issue that should not be dismissed.

This section has illustrated the role of the gendered structure of local value chains, in combination with local informal credit systems, in creating contexts in which unequal social and economic relations influence sexual activity, and in particular a form of sexual activity which is generally agreed to be particularly risky (Poulin 2007; Wamoyi et al. 2011). Whilst the issue of gender and the structure of value chains has been addressed in work on fish value chains, leading to the coining of the term 'fish-for-sex' (Pickering et al. 1997; Bene et al. 2008;

Nagoli et al. 2010; MacPherson et al. 2012), the discussion presented here extends this analysis to other commodity chains, including maize and tomatoes, though anecdotally there were suggestions that this occurs in other value chains such as the trading of second hand clothes (informal discussion with a key informant). The implication is that the fish-for-sex phenomena needs to be understood as a specific example of a more generalised form of the way in which gender and economic power are expressed through the structure of local value chains to influence sexual activity.

Reflecting on the sociological debate around the roles of structure and agency discussed in chapter two, it is clear that any comprehensive understanding of risk in this specific situation must incorporate the structures of the value chains and how this influences the social and economic context in which individual agents engage in sexual behaviour. However, recourse to the notion of structure alone does not enable us to explain why some individuals have sex and some don't, and particularly individuals who are faced with similar circumstances. Women who occupy similar positions in the value chain will not always behave in the same way, nor will they engage in sexual behaviour for the same reasons. Individual agency will, in part, shape whether sex happens at all, as some women are simply not prepared to engage in sexual relations outside of their marriage or partnership for the purposes of gaining access to material goods, nor will male traders have sex with every woman who is indebted to them. Further, we have illustrated the wide range of ways in which these relations are utilised by both sexes highlights, often for competing ends, so that the role of individual agents is also important to account for. These complexities would remain hidden if an overly deterministic view of the role that structures play in shaping sexual behaviour is taken. Consequently, if individual agency is ignored, there is risk that the many different ways in which the specific contexts created by unequal gender and economic relations is utilised by both genders is reduced to one common element, the element of exchange (Hunter 2010).

Conversely, any attempt to ignore the influence of the structure of relations across the value chain on sexual behaviour by formulating behavioural models that are conceptualised purely at the level of the individual will also be unable to account for either the dynamics of these relations and the many different ways in which they are applied. As with the structural narrative, individual behaviour would be reduced to the exchange aspect, but in an abstract, asocial and ahistorical manner, such as in the economic approaches of Luke (2006) and Oster (2012). Female dagaa sellers may well 'choose' to have sex with a male dagaa trader if they have lost some of their capital due to a bad days trading, but they make this 'choice' within a highly constrained social, economic and gendered context.

The framing of sexual behaviour for exchange in the language of choice, in the absence of any incorporation of the structural factors that shape the nature and degree of choice, can only provide a limited and highly stylised account. Therefore, whilst the general thrust of this project was to uncover the structural influences on behaviour, the theoretical approach taken also enables an engagement with how behavioural outcomes are also mediated through individual agency. Although this project has not fully explored the individual motivations around sexual behaviour, the leanings towards structure do not represent a collapse into a purely structural account, but reflect an attempt in this project to address an area that has largely been underrepresented in the literature on HIV, as discussed in chapter two, and therefore it is not suggested here that the analysis above can provide a complete picture, and explain every sexual interaction.

8.4 Sex, exchange and social relations

The preceding section addressed patterns of sexual interactions that occur within the context of gendered local value chains. However, whilst the gendered structure of the value chains, and in particular the dagaa value chain, was mentioned by participants in relation to sexual behaviour in every phase of the project, there was also some disagreement amongst participants:

- *(Interviewer: ‘perhaps this matter on having sex, is it maybe done by exchanging with things like dagaa, [that is] one decides to have sex in exchange of...I mean, there is no money... offered rather somebody offers dagaa in turn of...how is that does it happen?’) “ ‘Aa, it is imposible, what is used in exchange is money!’ (FG-DAGAAM)*

This quote is illustrative of the views of a number of participants who argued that sex was not engaged in for the exchange of dagaa or other commodities, but motivated purely by the exchange of money. This was expressed independently of any direct linkages with value chains, and reflects local sexual norms around ‘sex and exchange’. Although referred to as transactional sex rather than sex for exchange, this norm has been documented in detail by Wamoyi et al in relation to the same study population (2010, 2011), reviewed in chapter three. The findings of this project support this previous work, and build on some of these themes below, particularly in relation to the giving of money and changes in this practice over time that have been highlighted in this earlier work (Wamoyi et al. 2011).

Broadly speaking, the social norm of sex and exchange is the expectation that if a man has sex with a woman who is not his wife, he is expected to give her something, be it money, clothes or food, though in general in this project money was identified as the most important source

of exchange in these situations. This norm applies to situations when a man has an extra marital partner, as in the case of this study, or when younger, unmarried couples have sex (Wamoyi et al. 2010), and is understood as being distinct from prostitution (Wamoyi et al. 2011). Participants in both focus groups confirmed the existence of this norm, and that some form of exchange was the local expectation:

- “he accepts everything you tell him while he thinks in his heart that; “ee if I say that I do not have any money, I won’t win this woman”” (FG-SNF)
- ““Here,... the woman, if she expects to have sex with the man, the basic thing is that she must get some money” (*Interviewer: ‘the basic thing?’*) “Yep, the basic thing. Even if she will be paid with something else, the basic thing is money” (FG-SNM)

This exchange is typically from the man to the woman, although in some cases a wealthier woman may give some money to a younger man, though this is rare (FG-SNM). Women and men reported similar reasons for this expectation of something being given in exchange for sex. Women primarily highlighted the material needs of women who were not married but still had to provide for a family at home or poverty (life hardship) more generally (FG-SNF), whilst men saw giving money as a means of getting closer to a woman or as a sign that they liked them (FG-SNM), a motivation reflected by women who also saw the giving of something as a sign of love (FG-SNF). Men also associated this practice with changes over time in the degree to which women needed access to money rather than material goods such as food or clothes:

- “OK, so in the past, women lived, but they didn’t have to deal with matters of money. So, if a man came, he would just seduce her. And he was the one that dealt with business and money. But now, she can’t go with him without money, in case she goes with him without money, he has to tell her his plan” (FG-SNM)

Women also framed this norm against an enhanced demand for money, but in relation to the need for access to luxury products, suggesting that in Kisumu, sex and exchange (or in this case seducing through gifts) is something that occurs for reasons that include, but also go beyond, subsistence needs:

- “Because somebody has understood, s/he has been understanding, and things relating to seduction have been as luxury that is, how can you live in these day’s life without being seduced with gifts. In the past they were just living , today, somebody can leave here going to do what s/he feel somewhere else, that is, can live depending on men while she doesn’t make love with them, without seducing her with gifts, how will she live, how will she eat, how will she dress if she is not given gifts for seduction, luxury is what causing people to be seduced by being given gifts, as you know these things has been brought by white people” (FG-SNF)

Therefore, when discussing sexual norms in general, participants in this study reported a wide range of situations in which this sexual norm applies, though what, how much, and how often

something is given will vary by the nature of the sexual interaction engaged in, particularly in longer term pre or extra marital relationships. The implication is that whilst the norm of sex for exchange is often associated purely with poverty, there are situations when women, possibly due to the lack of other economics means, engage in sex to access goods that are thought of as non-basic consumption goods, particularly as local norms of consumption change over time , as has been noted in other work (Hunter 2002; Leclerc-Madlala 2003).

In relation to the mobile groups studied in this project, this theme of sex and exchange was reported by male participants in all three mobile groups. For example, a number of maize traders linked sexual activity with exchange:

- “Therefore, when you have...little amount of money...you can look for a friend for...but if you have run out completely...It is impossible ... in today’s situation, I mean...it have been a business to women, It is impossible, I mean, even if you try to convince her, it is...they do it for money, I mean it have already been a business. You can try your best to convince her, but at the end of the day (she) will demand money.” (MT7)
- *(Interviewer: ‘Ok ...perhaps have you ever made love with a woman in exchange with maize or cassava, have this ever happen to you?’)* “There is no such a thing, don’t underestimate us; we do respect our business because if she needs money for expenditure, you will give her”. (MT4)
- “She tells you before leaving there that;”I need five thousand shillings”. It is five thousand shillings, all right, after finishing doing that, in the next day, You give her another five thousand shillings in the following day. Thus you will think of the money that, ee [laughter] if I go with her five times...Now women of that kind are much after business, They are surely after business, even if you want a girl of two thousand shillings, you can get her. It is better I find a woman from the village who I can give five thousand shillings and be with her for even month.” (MT1)

The first quote expresses the opinion that it was not even possible to have sex with someone while away without having anything to give her, whilst the other quotes discuss giving money for expenditure or as some form of payment. Whilst these could be interpreted as payment for sex which is more akin to prostitution, the local sexual norms discussed above that frame the context within which sex and exchange take place suggest that it is something more complex, in which sex is not necessarily ‘purchased’. This general theme of sex for exchange was also noted by male dagaa sellers, and can be thought of as complementary to but often separate from sexual transactions involving exchange that occur specifically within the dagaa value chain:

- “I had those friends to help each other in common problems, however it is just me to give her, or maybe she is in need of...of... a certain amount of money, that I have this problem, thus we help each other” (DSM2)

- “The main influencer was money, that is, she had a problem of money in her heart. The main influencer is money.” (*Interviewer: ‘Therefore, let’s say, what if somebody has no money?’*) “There is no [love] relationship [making]” (DSM4)

These views forwarded by the dagaa sellers are consistent with the views of maize traders in that sex for exchange is viewed as motivated by the material needs of women, and that one of the main reasons that women engage in sex is for money, rather than dagaa or maize. In the case of the dagaa sellers, it is particularly striking that this form of exchange was reported as something that was unrelated to the dagaa business of buying and selling in the context of discussions about the value chain. Both groups also emphasise that sex won’t happen without money, suggesting that this sexual norm is important when considering how norms structure sexual interactions.

An additional example of this norm in action is that of one mobile farmer who reported having sex with a farm labourer, who he thought did so to try and gain an increase in wages.

- “There at our agricultural activates, especially to those we are employing, those casual labourers, because you can’t employ men only there must be women. Now if you employ women there must be temptations, the women will seduce you, so that can pay them more, you have agreed ee, she wants you to make love with her so that you can pay her more through making sex with her” (FM2)

This situation is also underpinned by the norm of sex and exchange, and highlights a different situation in which it is creatively applied. In this example, the male farmer feels targeted due to the fact that if his female employee convinces him to have sex with her, he will be bound to give her something, such as a wage increase or one off payment. This quote also expresses succinctly the feeling by many men that they are targeted by women who want their money, something that was expressed by maize traders, and touched upon in chapter seven:

- “Because every woman sees you think that, it is her opportunity to get money.” (MT1)

Whilst it is entirely possible that men are using this as an excuse for their extra martial affairs, it is also possible that this norm offers women the opportunity to manipulate sexual interactions for their benefit, albeit in a context in which their sexual behaviour and general degree of agency is highly constrained. Conversely, this sexual norm is also viewed as being used in a coercive manner by men, with men giving gifts in advance which are later exploited for sexual purposes:

- “Someone can buy you a soda, just a while he buys you some mango to eat, when it gets evening the one bought you those things, seduces you because of what he gave you.” (DAGAAF)

As with the gendered interfaces along the value chain, this last quote emphasises that sex will be engaged in for multiple reasons, and will be experienced in different ways by the actors involved. The norm of sex for exchange was therefore utilised in a range of different ways by the participants of this study. Women may try and use this situation to their advantage to gain access to money for a variety of reasons, whether for subsistence or access to consumption goods, with men feeling that they were targeted with this purpose in mind. On the other hand, having capital to hand enables men to enter into sexual relations, and, depending on the circumstances, this can be used with varying degrees of coercion. However, this does not preclude the fact that in some cases, the exchange may have taken place to fulfil the social custom, as opposed to representing a purely economic transaction, or reflect other motivations such as love and intimacy (Hunter 2010; Wamoyi et al. 2011). Although it is not possible at this point to derive the precise motivations for each sexual interaction, it is clear that the accounts above are all closely related to the norm of sex and exchange, and express the different social forms that it takes. One implication of this analysis is that the element of exchange directly linked to value chains can be conceptualised as a special case of a broader social norm which structures sexual interactions. It emphasises the dynamic manner in which this norm is applied and reapplied by different actors across a range of situations, and is a good example of how structures and agency are intimately linked, as discussed in chapter two, and in particular how it is human agency that utilises and changes structures.

One of the criticisms of the general value chain approach, noted earlier in the chapter, reflects the fact that, the broader context in which value chains are located is often unaccounted for. This crucial insight enables some suggestions to be made as to why there may be less (or a changing) emphasis in the study site on how unequal power relations expressed specifically through value chains influence sexual interactions, and more of an emphasis on the norm of sex and exchange. This can be explained by situating the local value chains within the socio-economic context of the study site in comparison to other study sites. The power expressed through these value chains will exert a strong pressure in communities in which specific value chains are of central importance to the economics and survival of the local population, for example in fishing communities. However, the study site is not a fishing community, with dagaa and indeed trading in local commodities one of a range of different economic activities. Therefore, the economic and gendered power exerted by the structure of local commodity chains may not be felt so strongly by those engaging in them in the study site.

A second factor that may help explain this changing emphasis is related to the process of economic liberalisation and the increasing commodification of production, and the enhanced degree to which the local population participate in the market (Sokoni 2008), and as such the

growing importance of money. Therefore, if women can gain access to money through having sex with someone on the basis of expectations created by this sexual norm, then this would reduce the motivation to access material goods which could then be either sold on or used for household consumption. Additionally, it is perhaps understandable that women would rather be given money directly in exchange for sex, rather than commodities which they then need to sell on to realise the value, something which can entail sitting in the market all day with no guarantee that they will be sold.

However, the application of this sexual norm, which we have argued underpins a wide range of different sexual interactions that involve some form of exchange, is itself influenced by broader social relations. For example, reconsidering the cases above, we can distil a range of different social relations that underpin the sexual interactions engaged in by the male participants of each mobile group. In the case of the farmer mentioned above, we can think of this relation as expressing the power relations between employer and employee. Similarly, when maize traders engage in sexual relationships whilst they are away, they do so both as a mobile trader, but also as a businessman who has a certain amount of capital vis a vis local women. An additional relation referred to above in which the mobile maize trader has sex with a local woman who works in the hotel he stays at also reflects another social relation between male customer and female bar/hotel worker, a social relation that is often linked to sexual behaviour (Kapiga et al. 2002; Akarro 2009), and which was also observed by the author first hand.

This recasting of sexual relationships in terms of social relations can also be broadened out beyond those in which sex for exchange is the primary driver. For example, one married male farmer had a relationship with a divorced female farmer while he was away. Divorced women, sometimes referred to as *msimbe*, a term that can have negative social connotations, attract a certain degree of stigma and are often viewed as promiscuous, and therefore fulfil a certain social role (Plummer et al. 2010). They may make attractive partners for married men as there is no husband involved, and these women are often in difficult social position. Other social relations that shape sexual relationships include those based in the rural/urban and rural/remote categories discussed above, which will reflect differences in social standing, and also the dynamics of class formation and differentiation which will produce and reproduce social and economic inequalities upon which many sexual relationships are based. However, it is important to note that the inequalities are both social and economic, and that these cannot be reduced to the economic element alone. These insights are possible because of the approach taken in this project that entailed asking not just about whether participants had sex, but who they had sex with. As a result, it has enabled a unique perspective to be gained on the

underlying social and economic relations that play an important role in shaping sexual interactions. These include the gendered structure of local value chains, local sexual norms around exchange, rooted in broader social relations.

8.5 Concluding remarks: Towards a reconsideration of the role of mobility?

Reflecting on the third research question that this project has attempted to answer, this chapter has illustrated that there are a number of other factors that play a prominent role in shaping sexual relationships that can be considered as risky, such as the structure of local value chains and the gendered interfaces that exist at certain points of each chain, and local sexual norms around sex and exchange which are themselves rooted in broader social relations. These findings suggest that in terms of the mobile groups who participated in this study, mobility is not necessarily the only factor that contributes to the risks that they face. As noted above, for those engaging in the dagaa mobility process, risky sexual contexts and sexual behaviour were predominantly related by participants to the structure of the dagaa value chain rather than the mobility of dagaa traders and sellers. This points towards a reconsideration of the role of mobility, and illustrates that the risk mobile populations encounter may be due to other socio-economic factors.

As most of these mobile groups were moving into similar socio-economic and cultural contexts, it is clear that sexual norms and social relations exist independently of mobility status, and therefore influence sexual relationships and risk for groups with varying degree of mobility. Further, the extension of informal credit through *mali kauli*, be this for consumption or as part of a commodity chain, is also something that both mobile and non-mobile populations will engage in. Reflecting on the lack of statistical significance of many quantitative analyses, the evidence presented in this chapter supports the notion that this may be because the sexual behaviour of mobile and non-mobile populations is in many ways influenced and structured by the same factors, and so both groups experience some elements of risk in similar ways. This is an important and plausible finding.

However, it is also acknowledged that mobility still has some role to play. For example, urban/rural and class relations will sometimes, but not always, reflect spatial differences, so that the introduction of social relations into the analysis in part necessitates a reassessment of the role of mobility. Mobility may play a role in exacerbating these inequalities, taking mobile groups from places where they are in a relatively more powerful economic and social position, as mobility is often the expression of unequal urban-rural relations. Mobility also plays an

important role in linking certain nodes of each value chain, and so to a large extent, these issues overlap and are difficult to disentangle. For example, when considering a sexual interaction engaged in by a male maize trader while away in which something is given to the female partner, do we ascribe this to that fact that he is mobile and influenced by the factors discussed in chapter seven, or is this viewed as a being shaped by local sexual norms of sex and exchange and the gender and economic relations expressed through his position as a businessman? Did his mobility exacerbate these inequalities in social relations? Whilst it is not possible to answer these questions here, they highlight the overlapping nature of the mobility narrative with other social and structural elements, and also the fact that understanding and explaining sexual interactions is not always a straightforward task. It also illustrates the difficulties around linking structures to individual behaviours, though it is hoped that throughout both chapters seven and eight, the emphasis that these narrative are not to be interpreted as overly deterministic has been clearly articulated, leaving space for sexual interactions to also be shaped by individual factors.

Chapter 9 – Discussion and conclusion

9.1 Summary of the project and reflections on the main findings

The starting point for this thesis was a critical review of theory that has been applied or developed to address the dynamics of HIV transmission. The review concluded that, when not based on intuition or religious/moral grounds, most interventions or models were almost exclusively rooted in individualistic conceptualisations of sexual behaviour. These take the form of common sense assumptions about sexual behaviour which are reflected in most standard prevention programmes, psychosocial theories of behaviour change, the primary theoretical framework applied to HIV and sexual behaviour, or more technical expositions of the ‘rational’ individual that underpin neoclassical economic models of transmission. These varying forms of methodological individualism make a number of assumptions that prevent the incorporation of extra-individual influences on behaviour, such as power, gender and a range of factors that are variously considered social, structural or contextual. Paradoxically, in the models themselves these social factors force their way (back) in, though they can only be (re)incorporated in a limited manner (Fine et al. 2009), highlighting a tension within these models which find that despite their formulation at the level of the individual, there remains the need to engage with structural factors. This review in particular emphasised the limited contribution from neoclassical economists, and the need for an alternative economic approach that can engage with the social world. Following, the growing and influential body of work that addresses structural drivers of HIV was reviewed. It was argued that whilst these approaches are grounded in insights from both a range of social theories and research practices, the theoretical frameworks used are not always apparent or acknowledged, with the result that, ‘structures’ are not necessarily well conceptualised. In particular, not enough attention is paid to the nature of the structural factors themselves, and how they are related to the workings of the social system, with the result that systems, structures and processes are often confused and conflated. ‘Better mining of the social sciences’ (Auerbach et al. 2010) has been identified as a way forward to add more conceptual rigour to an essential strand of HIV related research, and a body of work that this author, despite some critical remarks, aims to contribute to. Drawing together these insights, it was argued that it was necessary to take a political economy approach that is both capable of addressing both structures and agents from an economic perspective, whilst at the same time giving a more concrete sense of how context or ‘the social’ need to be conceptualised. This approach gives primacy to processes of accumulation, differentiation, and the expansion and development of capitalist relations of

production, through a materialist conception that distinguishes it from many of the psychosocial approaches discussed, rooted in an understanding of how individuals experience risk through engaging in the process of economic reproduction.

This conceptual framework was applied to one important structural driver of HIV, migration and mobility. Although in many cases migration and mobility are seen as operating at the level of the individual, we argued that it is necessary to reconceptualise this as a structural driver. Structural drivers have been defined as: 'core social processes and arrangements - reflective of social and cultural norms, values, networks, structures and institutions - that operate around and in concert with individuals' behaviours and practices to influence HIV epidemics in particular settings' (Auerbach et al. 2011). Therefore, applying this definition to the topic at hand, migration/mobility can be more rigorously thought of as a core social process, itself shaped by social/structural and systemic forces.

Current thinking within the health literature on the role of migration and mobility sees migrants as populations that are vulnerable to infection, engaging in riskier sexual behaviour than those who remain at home, with the implication that this has the potential to intensify transmission, leading to prevalence rates across the general population stabilising at a higher level in comparison to scenario's in which migrants do not engage in greater levels of risky sexual behaviour. Two case studies, truck drivers and mineworkers, dominate the literature. Although it remains unclear to what extent the lessons from these specific case studies can be extrapolated across all mobile population, they are, with some exceptions (for example see Thomas et al. 2010), generally accepted. One outcome of this is that further study of the relationship between migration/mobility and HIV risk is often reduced to the quantification of statistical differences in either HIV prevalence or sexual behaviour between 'non-mobile' and 'mobile' groups. An important consequence of this approach, in part determined by the standard statistical framework utilised, is that migration/mobility is reduced to an abstract individual variable. Following a thorough review of studies that took this approach, it was found that the results are inconclusive and inconsistent, with no universal correlation between mobility and HIV risk for men or women. Thus little is revealed about the complexity of the role that population mobility may play in influencing behaviour and the dynamics of the epidemic. This is in part due to the fact that the statistical framework is more suited to measuring an association between mobility and HIV, rather than investigating how or why a certain relationship may hold, and is also ill-equipped to treat migration/mobility as a complex, dynamic social process that occurs across space and time. Therefore, it was concluded that the relationship between migration/mobility and risk behaviours is not well understood, and

especially in Tanzania, where what is known about the role of mobility is heavily dependent on statistical analyses.

Insights from both chapter two and chapter three were then incorporated into the development of the research questions and fieldwork objectives. It was decided to use an exclusively qualitative approach to complement the statistical work that had been previously conducted in the study site, and to enable different types of questions to be asked. The first research question intended to understand the systemic factors that shape population mobility flows in the study site. This element of the research is precisely where the notion of structure is fully incorporated into the analyses. The second research question was aimed at understanding how migration/mobility processes are related to the dynamics of transmissions at a systemic level, and also how these processes may influence the behaviour and HIV risk of those individuals engaging in them. Therefore, two key fieldwork objectives entailed mapping out some key mobility processes, and to ensure that these processes were not conceived as overly deterministic, and to capture the role of agents, to also document individual experiences of them. Such an approach enabled many factors to be incorporated in the analyses that are missing from, and for a number of reasons cannot easily be addressed within, the statistical framework. These included considerations such as: who moves, why, how they decide where to go, patterns of movement, the characteristics of sending and receiving areas, and who they have sex with whilst away. This enabled an understanding of how social structures and systemic forces are reflected in the behavioural decisions mobile individuals make, as well as how their experiences of engaging in specific forms of mobility influences sexual behaviour and HIV risk (or not). The three mobile groups studied within this project, and which were carefully selected through the use of a participatory ranking technique in a number of exploratory focus groups, were mobile farmers, maize traders, and dagaa sellers.

In relation to the structures within which mobility processes are located, a number of structural relations and systemic processes were identified that are linked to on-going developmental change, the development of class relations and differentiation, and the dynamics of economic liberalisation. For farmers, changes in property ownership relations and the impact that this has had on the land market and land prices, unequal land distribution, urbanisation and in-migration to Kisesa, and declining land productivity combine to provide a strong stimulus to look for cheaper, more fertile land elsewhere. The land productivity issue is also linked to the physical and social structures of production of maize, which are characterised by spatial inequalities in demand and supply reflected in spatial price differentials, and which shape the mobility of maize traders. The mobility of dagaa sellers can also be conceptualised through spatial differences in production, and consequently supply and

demand, of daga, with the proximity of Kisesa to the lake meaning that these inequalities are not as socially produced in comparison to maize. These findings set the platform for the exploration of how these processes influence risk.

In relation to mobility, it was found that the requirements of engaging in each different economic activity exert a strong influence over the patterns of movement of individuals engaging in them. Further, the systemic factors which determined where it was that mobile individuals actually went, which were related to kinships and community networks and the spatial distribution of markets, were found to be important factors when considering the conditions of moving, and in particular where mobile individuals lived and slept while they were away, who they stayed with, and overall the relationship that they had with the destination area.

These insights have a number of implications for the sexual behaviour and HIV risk of the study participants. Firstly, the patterns of movement related to each economic activity are important in shaping the types of relationships that these mobile populations engage in. Those who go to one place repeatedly and stay for a month or so at a time typically have one more permanent partner while away, whereas those going to a number of different places but stay for shorter periods of time typically have more one-off sexual interactions. Secondly, where mobile individuals live and stay and their relationship with the local community has an impact on how and where they meet potential sexual partners, and ultimately who they have sex with. Their relationship with the destination area also influences the degree of social constraints over their sexual behaviour, and in some cases the practicalities of condom use. A further implication for HIV risk is that, in line with the findings from the general literature, condom use was not always practiced within longer term relationships, suggesting that some mobile individuals who had less extra martial partners than others may experience a higher risk in terms of becoming infected with HIV.

The analysis also identified a number of other factors that play a prominent role in shaping sexual relationships that can be considered as risky, such as the structure of local value chains and the gendered interfaces that exist at certain points within each chain, the negotiation and renegotiation of informal credit arrangements, and local sexual norms around sex and exchange which are themselves rooted in broader social relations. These findings suggest that in terms of the mobile groups who participated in this study, mobility is not necessarily the only factor that contributes to the risks that they face, as these issues apply to both mobile and non-mobile groups. This points towards a reconsideration of the role of mobility, and illustrates that the risk mobile populations encounter may be due to other socio-economic

factors. This insight may also help explain why the results of the statistical analyses are often inconclusive and insignificant, as mobile and non-mobile populations may in fact be experiencing HIV risk in the same way. However, it is also recognised that mobility will, in some cases, play a role in exacerbating spatial and gendered inequalities, so that the relative roles of mobility and local sexual norms and gendered value chains overlap and are difficult to disentangle. This suggests that risk cannot always be easily reduced to one reason alone, with multiple factors associated with the dynamics of transmission.

This project has, therefore, contributed to the literature in the following ways. Firstly, and primarily, it contributes to the literature on mobility and HIV, complementing previous case study work on mineworkers and truck drivers, to which our more generalised insights are also applicable. In particular, light has been shed on how different processes influence risk in different ways. It has highlighted the benefits of a qualitative approach, and the importance of ensuring that mobility is conceptualised as a process, and that by mapping out these processes we have shed light on some complex dynamics. It also helps to explain how population flows that are in part stimulated or maintained by urbanisation, and that to some extent run counter to rural-urban flows, may be a contributing factor to the increasing spread of the virus to rural areas.

Secondly, this project is an example of using a materialist approach that seeks to understand how engaging in specific livelihoods that involve mobility, and the associated lifestyles this brings, influences sexual behaviour and HIV risk. This is an economic approach that is not framed in the language of optimal decision making by rational individuals, but one that is no less economic, rooted in the everyday lived experiences of mobile individuals as they try to provide the material goods or income that they need for survival and the expansion in living standards. Additionally, it was also illustrated at certain points that some sexual interactions have been described by men and women in very different ways. Whilst men often talked about sex for exchange in terms of the economic element, this was not always the case for women. This raises a note of caution against reducing every situation in which something is exchanged for sex to its economic element, with these norms both economically and socially embedded. Whilst the review in chapter two was critical of some psychosocial approaches to a certain extent, these findings may also enable a reflection upon how mobile individuals' material experiences may influence their perceptions and motivations, something that has been done with distinction by Campbell (2003), but which this project has not addressed.

The findings also contribute to the literature on value chains and HIV. The value-chain approach was particularly useful in the mapping out of a number of local value chains, and also

locating the roles that the study participants occupied in these chains. Reflecting on the literature on fish-for-sex and studies that investigate the role of gender and power within fishing communities, it has been argued that this phenomenon is a special case of a more generalised narrative, as similar issues in other value chains such as maize and tomatoes were reported. This emphasises the importance of understanding the structure of value chains, and specifically the existence of highly gendered interfaces at certain nodes along each chain which creates spaces in which economic and gendered power can be expressed, including the introduction of sexual relations. Other anecdotal evidence suggests that this may also occur along other value chains, such as clothes trading. One implication is that this may help reduce the stigma associated with fishing communities and fishing value chains if it is recognised that this is a structural issue to do with the value chain itself, and reflective of broader social norms around sex and exchange, rather than because of the personal characteristics or traits of those involved in the fishing industry (Westaway et al. 2007).

This project also reflects on the debate as to whether poverty or wealth is driving transmission (Gillespie et al. 2007). In line with other work on mobility, it was found that those who are mobile are not necessarily the poorest (De Haas 2005). This suggests that if mobility is associated with enhanced risk, this is more in relation to wealthier sections of the population who have both the capital, resources and the kinship networks to enable them to move. However, on the other hand, the partners that these mobile groups have while away, particularly in circumstances when sexual relations are shaped by norms of sex and exchange, may well be poor(er), suggesting that in some sexual interactions, relative wealth and poverty will both be involved. This again emphasises the difficulty in attempting to explain sex in terms of one isolated variable only, and that relative inequality in terms of wealth, which is often highly gendered, is a key factor.

Finally, reflecting on the discussion in chapter two, this project contributes to the growing body of work on structural drivers, and is an example of mining the social sciences, and of attempting to better conceptualise structural drivers. It has been shown that structures operate at many different levels, and can be understood in multiple ways. For example, this research has identified broader structures that shape mobility and where people go, alongside sexual norms around exchange that are both operationalised at a systemic level, whereas the structure of local value chains have also been viewed as equally important. Reflecting on the literature on structure and agency, this project has also attempted to ensure that both agents and structures are addressed, and that the role of structures is not presented as overly deterministic. It has been consistently emphasised across the analysis that individual factors are also important to consider. However, it was firmly believed that there was a need to focus

on the role of structures, so it has not been possible to engage with every behavioural aspect. This unique methodological and epistemological approach has also enabled an understanding and identification of HIV risk for both mobile and non-mobile groups. This was possible by incorporating a more nuanced and non-deterministic conceptualisation of the term structural, with attention paid as to how general structures combined and manifested themselves in a specific local socio-economic context. The lens used in this project has not only enabled us to identify the risks that mobile populations face, but also how structural factors enhance the risk of non-mobile groups.

9.2 Implications for HIV prevention

The findings from this project enable several comments to be made about the prospects and directions for future HIV prevention efforts. One important insight is developed from the general process of maize trading. In chapter seven, one element of the process identified in relation to sexual behaviour was when maize traders are waiting for transport back to Kisesa. In particular, this happens when their transport home is delayed, as it often is, and as a result they have to wait around for a number of days for it to arrive. During this waiting period they have little else to do, as by that time they have generally completed their buying and packing activities. This is one of the points in the process when they report having sex, whilst conversely it was reported that when business activities are concluded swiftly, they have little time to think about or engage in sex. The difficulties in arranging transport are in part a result of the difficulties of the business itself. Maize traders make profits by exploiting price differentials between geographical areas, and so information about price and availability is key. Further, the negotiation process with local village collectors does not always go smoothly, so arranging transport is also difficult if traders do not know the exact prices or availability of maize until they arrive somewhere, or their *a priori* expectations are not met and they decide to travel to other destinations.

This observation has parallels with the work of Stillwaggon (2006), who formalises the work of the Synergy Project (Douglas 2000), which identified delays at border crossings as one of the situations in which truck drivers are likely to drink alcohol and engage in sexual activity²². Stillwaggon forwards the notion that prevention efforts could focus on speeding up customs clearance, and hence reduce the amount of time that truck drivers wait at borders, rather than on more traditional interventions such as condom distribution and promotion. Further, reducing waiting times would also have economic benefits for those transporting the goods in

²² Though this was largely ignored by policy makers who implemented a standard education and condom promotion scheme, see Stillwaggon, E. (2006).

terms of lower transport costs and lower losses of perishable primary goods, viewed as a key production constraint across sub-Saharan Africa (Ben Barka 2012). When applied to the case of the maize trading process, we can identify the inefficiencies of the transportation of maize through the commodity chain as a potential factor that contributes to the dynamics of transmission. This demonstrates the value of mapping out forms of mobility to understand more about the points in the process when risky sexual behaviour may occur. Further, taken together with the findings of Stillwaggon (2006), this evidence suggests that, when processes are fully understood, there are other ways of addressing the dynamics of the epidemic that go beyond standard behavioural approaches. In this case, an alternative prevention policy would focus on improving economic processes, which may have beneficial economic gains, as well as the potential to reduce risky sexual behaviour. This example opens up the possibility of a new paradigm of HIV prevention programmes that are distinct from costly behavioural campaigns, and which may simultaneously produce both better HIV outcomes and economic benefits. Potential interventions may focus on improving the ease of doing business, better flows of information about pricing and availability, investment in infrastructure, and closer integration between transport operators and those working in the value chains. To date, this remains a largely unexplored option, but in a time of decreasing global HIV budgets (Seeley et al. 2012), the mutual gains from this style of prevention should be attractive to donors and developing country governments alike. Future research in this area which may seek to identify other policy complementarities will require an approach that addresses different levels of analysis.

Following directly on from this issue, the role that own-account economic activity and the informal sector has on transmission can also be considered. As noted in chapter two, some recent alternative economic approaches to prevention include the use of microfinance as a way of improving women's economic position, with the hope that this will have a positive impact on relations with their partner or spouse. However, the findings of this project raise some important issues in relation to the workings of the informal sector. Firstly, informal credit relations, whilst fulfilling a vital role for both traders and street sellers in terms of enabling the flow of goods, create opportunities in which sex can be exchanged if the debt cannot be repaid. Secondly, the informal sector is inherently risky (in terms of profitability, not sex in this case), with profits fluctuating over the year, and for some, on a daily basis. The variable nature of these businesses suggest that even if credit were formalised, there would still be situations in which borrowers would get into debt, with sex for exchange remaining an option, though in this case this would likely be with someone else other than the creditor. Further, the fact that these sectors are characterised by many own-account buyers and sellers leads to a situation in which transactions are always open to negotiation, and as we have seen, when this involves

gendered interfaces, sexual interactions enter the equation. Therefore, one can question to what extent investing in the informal and own-account sector is a suitable strategy for HIV prevention. From an economic point of view, HIV prevention may be enhanced through the formalisation of these sectors, and a concentration of market participants. This may create opportunities for stable employment, particularly pertinent in the light of recent work that links female empowerment directly with employment (Kabeer 2012), and thus a reduction in the numbers of individuals engaged in numerous one-on-one negotiations in which gendered economic power is expressed. This perhaps gives a more precise definition to the need for increased economic opportunities for women, as this directs attention to the prospects for employment, rather than investment in risky informal sector own account activities.

A second benefit of formalising these commodity sectors is that overall mobility may be significantly reduced. Currently, the fragmented and informal nature of these markets requires maize traders and dagaa sellers to physically travel to destination areas, inspect the goods, and negotiate the price in person. This is necessary to ensure that they get as good a price as possible, and to monitor the quality and quantity of the goods that they purchase. Added to this, those who operate the transport are then also mobile. However, in a situation in which price, quantity and quality could be discussed and agreed over the phone, and within a regulatory framework in which it was difficult for either party to renege on the deal, it would not be necessary for maize traders to physically travel away each time they wanted to make a purchase, as it is at the moment. Again, this may enhance economic efficiency whilst reducing a form of mobility that is linked with risky sexual behaviour and sex for exchange.

Reducing the imperative for circular mobility may also be a strategy applicable to farmers. For example, policies aimed at increasing fertiliser and other input use to improve land productivity and yields, alongside reforms aimed at ensuring more equitable access to land may reduce the need for farmers to search elsewhere for fertile land to farm. However, whilst it is questionable to what extent these sorts of reforms are compatible with recent reforms aimed at liberalising the economy, and the degree to which development trajectories can be based purely in smallholder agricultural production (Collier et al. 2009), when considered with the previous point relating to the formalisation of the maize and dagaa sectors, this raises questions about whether policy should aim to reduce mobility, or whether prevention would be better served by measures to make engaging in these processes safer. Whilst this debate will not be reconciled here, this is something that needs careful consideration. In the case of the formalisation of the maize and dagaa economic sectors, there is more of a balance between the two, whereas for farmers the suggested economic policies are more focused on reducing mobility.

Reflecting on the epidemiological and public health implications, the findings have highlighted the importance of encouraging condom use with longer term sexual partners, and the potential for rapid transmission across sexual networks that link different places, something which is well known as a priority in current prevention efforts. This is no easy task, as it involves a number of issues that are related to education and the dynamics of relationships which involve trust and intimacy. Added to this, some practical difficulties in accessing condoms in situations when mobile individuals face social and community constraints on their sexual behaviour have also been highlighted. However, in contrast to some accounts in which these social constraints are viewed as protective (Caldwell et al. 1997), it was found that the creative ways in which some mobile individuals circumvent these constraints is a contributing factor in terms of the lack of condom use. This is important insight when thinking about context more generally, and warns us against making assumptions about the impact of traditional social controls over sexual behaviour.

This project also finds some evidence to support the notion, forwarded by Kishamawe et al (2006) that encouraging couples to move together may be protective. However, in this study, the only example of this was a couple who were mobile farmers, and which was enabled by specific family circumstance, suggesting that this is rare. In terms of farming, situations in which partners alternate or only one of them travels at all were more common. Further, the other occupations in this study do not lend themselves to partners moving together, as it is unlikely that families or spouses are able to travel on short maize trading or dagaa selling trips, especially when there are children to look after at home. In terms of farming, there is perhaps more potential for the household to move on a permanent basis, but whether this happens or not will depend on the degree to which the family is settled in Kisesa, and other concerns such as access to services and Mwanza city.

9.3 Limitations

Having summarised the project findings and some of the implications for prevention efforts, it is also necessary to highlight some of the limitations of the study. Firstly, as with any qualitative project, it is not always clear whether what people tell you they do is what they actually do. This is especially relevant to the issue of sexual behaviour. As noted in chapters five and seven, within some mobile groups, no participants directly admitted that they had had sex. In other cases, participants were very open, though this could have been due to male norms around portraying an impression of virility (Nnko et al. 2004). This has implications for the way that information on sexual behaviour is interpreted. Whilst the design of the project

was intended to in part deal with this issue, as participants first commented about sexual behaviour in groups, and then within an in-depth interview setting, care was taken to ensure that any quotes were not taken out of context. Further, the research assistants were also asked for their own impression of what they had heard, which gave the author important insights as to how accurate the self-reported information was.

A second limitation concerns the quantification of the issues highlighted above. Whilst the aims of this project were to uncover the mechanisms through which mobility influences transmission, and to ask questions such as ‘how’ and ‘why’, this does leave out other considerations. It is therefore not clear how important each issue is, and how applicable it is in the study area, nor how often it happens. Again, the themes developed in the qualitative activities are to some extent assumed to be important, especially when they are reported by a number of different participants, but there is the danger that this merely reflects gossip or hearsay.

Closely related to this issue was the way in which the research assistants were used, discussed in chapter five, which was for them to conduct all research activities rather than act as a translator and interpreter. Whilst this was a necessary approach to enable the topic of sexual behaviour to be discussed, especially with female participants, this method placed some limitations on the fieldwork. Due to the need to prepare each research activity thoroughly to ensure that enough data was gathered to answer the research questions, there is a danger that some of these activities were overly structured. There is a delicate balance between making sure the key points are covered and empowering both research assistants and participants to shape what they believe is important during the interview process. This trade-off may have sacrificed some of the richness of the data, but ensured a minimum level of information was collected from each participant that enabled basic comparison and analysis. The author believes that a good balance between the two was achieved, but acknowledges that this was not an ideal scenario. Although there is a good degree of confidence that we got to the main issues, it is entirely possible that some important and relevant information was missed, especially if it fell outside of the structured interview framework.

Other limitations pertain to what was not done, rather than what was. One regret was that despite the authors’ best intentions and efforts, women still remained relatively marginalised in the analysis. In order to ensure women were fully incorporated into the project, we conducted focus groups with women only, and in the exploration stage between phases one and two, tried to identify mobile women. Although in the socio-economic study site it is likely that women are less mobile than men, something reflected in the statistical studies, it proved

difficult to establish who these mobile women were, and the one occupational group we did include were not as mobile as we initially anticipated. Understanding and identifying these women is a matter for further, and perhaps more delicate, research.

Two other issues are linked to the process of data collection. Firstly, the author originally intended to do a round of follow up interviews in the in-depth interview phase, so that all participants would have been interviewed twice. This would have enabled the project team to follow up on and clarify interesting themes that were mentioned in the first interview, to provide more time and space for research assistants to develop rapport with participants, and also an opportunity for the author to give some additional direction to the research assistants. However, due to time and cost constraints, this was not possible. Secondly, the author had hoped to be able to travel to some of the destination areas to enable more of an understanding of the different contexts into which mobile participants moved to. However, time constraints and logistical issues prevented this from being possible. Whilst this was not an essential element of the project, it would have enhanced the analysis and the development of some of the themes noted in chapter six and above, such as the classification of different population flows, and also how pronounced differences between sending and destinations areas were in terms of infrastructure and services.

9.4 Reflections on statistical work

A final objective of this project was to reflect on the statistical methodology used in previous studies on mobility and HIV in Kisesa, with the aim of providing some insights which could lead to the development and improvement of these approaches. Whilst this project has been to some extent critical of this methodology, the need for better epidemiological information is not disputed, and as has been noted above, this qualitative project has been positioned as both critical of but also complementary to previous statistical work. Therefore, the insights from this project form part of an on-going and iterative process between methodologies. It is hoped that these insights may help to improve the data collection process and also the design of more nuanced statistical models. Additionally, these insights may also help to part explain why some of the results from the studies that focused on Kisesa, and indeed other contexts, are not always statistically significant. Whilst some of these factors have been mentioned above, it is worth repeating them in application to this task.

Mobile populations can experience risk in the same way as non-mobile populations

As noted above, one advantage of this project was that it enabled us to identify the ways in which both mobile and non-mobile groups experienced risk in the same way, such as through

the structure of local value chains, local informal credit arrangements, and broader social norms around sex and exchange. The relative weight of these factors compared to those that are more closely associated with mobility will influence the likelihood of statistically significant results on the mobility status variable. Therefore, future surveys may also gather information about these other aspects of risk.

Why people move, and importantly what makes them go to specific places, is important

The analysis presented in this thesis shows that why people move has an impact on a range of issues, such as their patterns of movement, and their conditions of moving. For example, we could contrast the experiences of a mobile farmer who is attracted to a specific destination area due to a kinship network with that of a maize trader who goes somewhere due to price and availability of maize. Future surveys could ask questions about the purpose of trips away, why they go to specific places, and also whether they have kinship connections in destination areas.

Where mobile people have sex is important

The standard methodological approach employed rarely, if ever, includes collecting data on *where* mobile people have sex. This has important implications for the interpretation of results, and also the implicit assumptions that are bound up within the model specification. In particular, this necessitates a reconsideration of the counterfactual. One example outlined in chapter seven was of a mobile farmer who reported having an extra marital partner in both his home area and destination area. In relation to the role of mobility in influencing his sexual behaviour, two very different interpretations can be made. One interpretation would conclude that the risk that this farmer faces has been enhanced due to his mobility, as instead of one extra marital partner, he has had an additional one while away that he might otherwise not have had were he to have stayed at home. Alternatively, we may conclude that his mobility status is irrelevant, as he has had an extra marital partner both home and away which merely reflects his pre-disposition to extra martial affairs, rather than anything to do with his being away or not.

However, within the statistical framework used, the former explanation is implicitly assumed, as in the absence of any means of controlling for this in the analysis, this farmer will be recorded as 'mobile' with '2 extra marital partners'. The number of partners he has will then be compared to the number of partners of 'non-mobile' men, with the inference made that if there are statistical differences, this is due to the mobility status. This has the potential to skew the data and overinflate statistical significances, as the partner that this mobile farmer

has at home is being implicitly ascribed to his mobility status. This should, therefore, act as a note of caution about causality and interpretation of results using this framework. Future statistical work could attempt to gather data on where sexual interactions occur, though this would add to the overall complexity of the questionnaire.

Closely linked to this is the issue that both Kishamawe et al (2006) and Vissers et al (2008) attempt to address, which is the mobility status of the partner. Our qualitative findings corroborate this approach, and highlight how important this may be. For example, in situations when mobile farmers alternate travelling to the destination area with their partner or spouse, there are clearly periods of time when they are at home on their own and may engage in extra martial behaviour. Therefore, asking participants where they engage in extra marital sexual relationships may help to provide further clarification as to whether their own or their partners absence is more closely related to extra-marital behaviour.

More sexual partners does not necessarily mean greater risk

The findings above, in which farmers with one regular partner did not always use condoms, but maize traders who had multiple one-off regular partners did, illustrates that the qualitative nature of the relationships that mobile individuals engage in is important when trying to understand risk. This contributes to the existing literature which highlights that condom use is often less likely with longer term partners than it is with one-off partners. The findings support the approach taken by Kishamawe et al (2006), who attempt to capture this nuance by utilising different categories of partners, a vital and necessary distinction to make. This may be the main factor that explains the lack of statistically significant differences in terms of HIV infection and prevalence rates between mobile groups, and also that observed nominal differences between sexual behaviour and HIV prevalence are not always consistent.

Incorporating the role that mobility plays in linking geographically separate sexual networks, and how moving into other areas with different background prevalence rates impacts the likelihood of infection

Another insight developed from this qualitative work is from the nature of the population flows, which are predominantly to more remote rural and urban areas, and further from the influence of Mwanza city. Whilst it has been argued above that farmers may face a higher risk if they do not use condoms in longer term partnerships, this risk may be mitigated if they are travelling to more remote rural areas where background prevalence rates are generally lower, and hence potential sexual partners are less likely to be infected. Therefore, gathering data on background prevalence rates in both sending and destination areas is also an important

consideration, data that would be made possible by gathering data on where mobile individuals physically go, rather than just whether they are mobile or not.

Whether mobile people move on their own or with their partner is important

The qualitative research highlights another key issue in terms of understanding sexual behaviour. Whilst the Kishamawe et al (2006) study is innovative and stratifies the sample in the second step to account for the mobility status of the partner, the analysis is unable to account for whether mobile individuals travel on their own or with a partner. This is an important oversight, as the experience of moving for a couple who travel together, as opposed to a couple who both travel away from home but do so on their own, may well be markedly different in relation to sexual behaviour.

This can be illustrated by comparing two mobile farmers and their partners who would typically be classified as 'long-term mobile'. One mobile farmer, FM4, reported that he did not have sex while he was away because he travelled with his wife, and was able to do so because his mother lives with them and could stay at home and look after his children (FM4). Another farmer, FM1, takes it in turns to spend time away in the destination area as he does not have an additional family member to look after his children (FM1), and reported having an extra marital partner in the destination area.

The divergent experiences of these two couples who are classified in the same category illustrates one of the factors that may account for the lack of statistical significance in the results of this study, namely that travelling with one's wife may be protective, showing again the importance of moving beyond purely whether someone moves or not to the conditions and experience of that process. It also shows that, despite this additional step to stratify the sample, this category still conflates different lived experiences of mobile individuals. Future statistical work could incorporate this issue by gathering data on whether partners move together or not, as this is likely to have a strong influence over risk behaviours.

Length of time spent away is important, but so are patterns of movement

The qualitative findings presented above suggest that the length of time that mobile groups spend away has important implications for HIV risk, with farmers who stayed away for longer periods of time having, in general, lower numbers of sexual partners. However, using the examples of maize traders and farmers, understanding the patterns of movement, such as frequency and duration of trips and the number of different destinations, is also a vital piece of the jigsaw, and will add to the overall analysis. Current approaches that distinguish mobile groups by the length of time that they spend away are muddled, not only because they don't

account for these patterns, but also because it is unclear a priori what the expected outcomes or hypotheses are. If there is not a clear causal pathway underpinning this, then the definitions used to separate, for example, long-term and short term mobile groups becomes arbitrary. In the Kishamawe study, this arbitrary distinction leads to the two categories being combined in the second step of the analysis as statistically they were not different. This study shows that there are very different patterns of movement that have been conflated in this step.

Understanding in more detail different patterns of movement associated with different forms of mobility could form the basis for more informed categorical distinctions. Future surveys could include questions to establish patterns of movement, such as how long individuals spend away, how often they travel between destinations, and how many different destinations they go to.

9.5 Final conclusion

This project has shown that the dynamics of HIV transmission are extremely complex, and involve an array of different and interlinked contributing factors that operate at varying levels of analysis, from the biomedical and behavioural to the structural. However, if transmission remains predominantly conceptualised at the level of the individual, many important influences on behaviour remain unacknowledged, which can only serve to hinder efforts to stem the flow of new infections. Whilst the issue of structural drivers is now firmly on the global agenda, it is imperative that research within this area continues, as we have barely begun to scratch the surface.

One important implication from the findings presented in this thesis is that it is not always possible for the influence of different factors to be disentangled, as behaviour will be engaged in and shaped by multiple and overlapping factors. Approaches that seek to isolate the individual impact of one factor can only provide a partial analysis, and inevitably fail to cast light on the interplay between different related factors. Whilst it is imperative that research and policy are guided by data and 'knowing your epidemic', it is unclear to what extent some approaches provide us with this underlying understanding. In chapter three, we have seen that a review of the evidence from statistical analyses that test for a relationship between 'mobility status' and HIV and/or HIV risk behaviours finds that the evidence is mixed and inconclusive. It is entirely plausible that this may apply to other factors that are currently seen as risk-enhancing. Whilst care must be taken to not throw the baby out with the bathwater, the findings illustrate the need for more cooperation between statistical and social science approaches (Kippax et al. 2011), and that a constant dialogue between the two is imperative in

the refinement of our understanding of the epidemic, current, past, and future.

Interdisciplinary or multidisciplinary research will necessarily form of the cornerstone of this research agenda.

This project has also touched upon the issue of how social and developmental processes, in this case population mobility and circular migration, are related to the dynamics of transmission. Whilst there appears to be an unstated assumption in many quarters that development and 'progress' will help reduce transmission, there have been some attempts to grapple with this issue (Oster 2010), highlighting the fact that there has been consideration of the possibility that increasing levels of economic activity and growth may be accompanied, in the short-run at least, by increasing levels of transmission. As societies develop, social structures, systems and processes will inevitably change, providing opportunities for greater and more integrated prevention efforts, as well as new avenues through which the virus can be transmitted. In the case of the topic of this project, we can see that population and migration will undoubtedly play a central role in the development process, taking on new forms over time, and may in certain cases contribute to the intensification of the epidemic in certain phases. Whilst static analyses are useful in enabling us to gain a snapshot of the status of the epidemic at specific points in time, more emphasis needs to be placed on understanding the relationship between transmission and social change in a more dynamic sense. This is currently an area which is thoroughly under-researched, though this insight may serve to ignite interest in this area, and points towards potentially fruitful avenues for future research.

This has significant implications for the future role of the economics discipline in helping to both understand and combat the epidemic, by emphasising the need for economic theory that can engage with structures and processes, something which the current economic orthodoxy is ill-equipped to do (Johnston 2013). We have seen in chapter one the growing acknowledgement of and interaction with the notion of structure in relation to HIV within public health and epidemiology. Indeed, some bodies of literature that have previously been predominantly rooted in a form of methodological individualism have called for theoretical developments to address conceptual shortcomings, and to incorporate human relationships and structures into the analysis. However, this has not been the case with neoclassical economics, which is becoming increasingly isolated with regards to its' epistemological underpinnings, and blind to advances in other fields. As Johnston (2013) has argued, the overall response by the economics discipline to the HIV/AIDS epidemic is yet further evidence to suggest that this theoretical approach is redundant. However, the lack of applicability of the technical apparatus of neoclassical economics opens up a space within which alternative economic approaches can make a significant contribution, through incorporating questions of

power, gender, and how engaging in economic activities and specific livelihoods, and the associated lifestyles they bring, influences sexual behaviour and HIV risk.

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Appendix A: Focus group Phase 1 researcher guide – English and Swahili final version

Mwongozo wa Mtafiti wakati wa Mjadala.

People arrive

Washiriki kuwasili.

Welcome participants as they arrive! Greet, welcome, thanks

Kuwakaribisha washiriki wanapowasiri kwa salamu na neon la shukrani kwa kufika kwao.

If it is the morning, offer refreshments (Researchers to decide when)

Kama ni asubuhi washiriki watapewa viburudisho(vinywaji na vitafunwa)

You can greet them in Sukuma, but please inform them that we will need to do the focus group in Swahili, as this subject is difficult to discuss in Sukuma

Ninaweza kuwasalimia katika lugha ya Kisukuma,lakini lakini nitawaeleza kwamba mjadala wetu utafanyika kwa lugha ya Kiswahili kwa sababu ni vigumu kujadili kwa Kisukuma.

Once everyone has arrived, ask people to take a seat

Wakishawasiri wote nitawaomba wakae.

Ask them to sign the consent form.

Nitawaomba washiriki wasaini fomu ya ridhaa.

Once people are sat down,

Wakishakaa,

Thanks and welcome them again

Nitawashukuru na kuwakaribisha kwa mara nyingine.

Introduce yourself

Nitajitambulisha.

Ask them to introduce themselves again

Nitawaomba washiriki wajitambulishe tena.

Ask them to pick a name that they will use for the focus group (to protect their identity), and a name that is not a human name.

Nitawaomba washiriki wachague majina ya bandia ambayo watayatumia kipindi cha majadiliano (majina ambayo sio ya binadamu).

Note – the reasons for asking them to choose other names are:

- To protect their identity
- To ensure that everything they say is confidential
- To make them feel comfortable to say what they think
 - This is especially necessary when personal and sensitive questions are being asked

Sababu za kuwaambia kuchagua majina ya bandia ni:-

- Ni kuwalinda ninyi washiriki ili isibainike kuwa nani alitoa taarifa hizi.
- Kuhakikisha kuwa kila kitu kinachoongelewa kinabaki kuwa siri
- Ilikuwapanya muwe huru kwa kila kitu mnachokiongea na kwa kila kitu mnachofikiri kuwa ni cha muhimu.
 - Hili ni suala la msingi hasa pale mada nyeti inaongelewa au mada kuhusu mtu Fulani.

Introduce the project

Kuutambulisha mradi. (Mradi huu unafanywa na mtafiti kutoka chuo kikuu cha London,Uingereza kwa kushirikiana na mradi wa TAZAMA uliochini ya NIMR,Mwanza)

Tell the participants the aim of the focus group

Lengo la mjadala huu ni kutambua sababu zinazowafanya watu wahame kutoka kata hii ya Kisesa

Tell them why we are doing this

Nitawaambia washiriki kwa nini tunafanya utafiti huu (lengo la utafiti).

Note – if participants ask how the research will benefit the community, explain:

- Understanding more about the links between migration and mobility will enable us to target prevention programmes at mobile populations who are most at risk
- We will also begin to understand the role that the local context plays in influencing risky sexual behaviour, which may help us to design more innovative prevention programmes that address context, rather than just sexual behaviour
- However, we accept that some of the work that we will do here may not have immediate direct benefits – we are grateful for their participation

Ikiwa washiriki watataka kujua jamii itaaidikaje na utafiti huu, nitaelezea kuwa:

- Jamii itaelewa kwa undani uhusiano uliopo kati ya uhamaji na maambukiziny Virus vya UKIMWI, na hii itatuwezesha kuanzisha njia za kuzuia maambukizi ya UKIMWI kwa watu wanao hamahama ambao wako kwenye hatari zaidi.

- Itatusaidia kuelewa ni kwa namna gani mazingira yanavyosababisha tabia hatarishi za ngono, hii itatuwezesha kubuni njia za kujikinga na maambukizi ya UKIMWI.
- Japokuwa tunakiri kwamba baadhi ya kazi tunazozifanya hapa hazitakuwa na faida ya moja kwa moja kwa jamii. Asanteni sana kwa kukubali kushiriki.

Tell them why they have been selected

Tumewachagua ninyi kuwakilisha kata nzima ya Kisesa kwani hatuwezi kufanya mjadala na watu wote wa Kisesa.

What we will do during the focus groups

Mjadala wetu utakuwa na hatua nne,

Hatua ya kwanza : tutajadili sababu zinazowafanya watu wahame kutoka kata hii ya Kisesa.

Hatua ya pili: Tutazipanga sababu kuanzia na ile inayofanyika mara kwa mara na kumaliza na ile inayofanyika mara chache.

Hatua ya tatu: Tutazipanga sababu kuu tano muhimu kwa kuanza na sababu inayofanyika mara kwa mara.

Hatua ya nne: Tutajadili kila sababu iliyotajwa kwa kuuliza maswali mawili;

1. Je, ni watu gani ambao huwa wanaondoka kutokana na sababu hii?
2. Je, wanapoondoka, huwa wanakwenda sehemu gani?

Focus group rules

Taratibu za mjadala.

1. Mshiriki anapotoa hoja, tumsikilize hadi mwisho wa hoja yake.
2. Mshiriki anapotoa hoja tusimzomee wala kumcheka.
3. Wakati wa mjadala hairuhusiwi kutaja jina la mtu yeyote.
4. Kila jibu ni sahihi

Explain tape recorder, ask them permission, and explain why we want to record them.

Ili mjadala wetu usitumiemuda mrefu, kuna chombo hapa kinachoitwa tepu rekoda, kazi yake ni kutunza mazungumzo yetu , Je, mtapenda tukitumie? Wakiridhia

Switch on tape recorder

Ntakiwasha chombo hicho.

Read consent form out loud and ask them to give consent

Nitaisoma kwa sauti fomu ya kuridhia kushiriki kwenye mjadala na kuwaomba iwapo wanaridhia kushiriki katika mjadala husika.

Ask if there any questions

Nitawauliza iwapo wana maswali yoyote.

Researcher notes

Nukuu za utafiti

If participants do not consent:

Iwapo washiriki hawataridhia kushiriki:

- Researchers will also explore, in a sensitive way, reasons for non-consent, and will re-emphasise that discussions will be confidential within NIMR, and that no quotes from the Focus Groups will be used without their permission.
 - Nitawafanulia kwamba, mjadala huu ni siri, Na kwamba hakuna taarifa yoyote itakayotumiwa na mtu, shirika, taasisi au mtafiti yeyote pasipo ruksa yenu.
 - Discuss the purpose of the Focus Group – this focus group does not aim to collect personal/sensitive information, just to understand some of the reasons why people move out of Kisesa
 - Nitawaeleza lengo la mjadala huu kuwa ni kufahamu sababu zinazowafanya watu waondoke kata ya Kisesa na wala siyo kutaka kufahamu taarifa za mtu binafsi.
 - tell the group that anyone who does not want to participate can leave at any time
- kwa yeyote ambaye hajisikii vizuri, anaruhusiwa kwenda kupumzika nyumbani.
- Once the consent has finished, switch off tape recorder during group work.
 - Baada ya kuomba ridhaa, nitazima kinasa sauti wakati majadiliano yanaendelea.

Stage 1

Hatua ya kwanza.

Introduce stage 1

Katika hatua hii tutagawanyika katika makundi ya watu wawili wawili, na kujadili mambo yafuatayo;

Ask a general question – Sometimes people leave their normal households, travel outside the ward and sleep somewhere else overnight. Does this happen in Kisesa? For what reasons do people do that?

Wakati mwingine watu huondoka kwenye makazi yao na kwenda nje ya kata na kulala huko usiku kucha .Je,hali hii huw inatokea hapa Kisesa?kitendo hiki mnakiitaje, na kwa nini watu hufanya hivyo?

Maybe you could discuss this with the person next to you

Nitawaambia wajaadiliane

After a few minutes, researchers then go round the pairs, see how they are getting on, and ask them what sort of reasons they have come up with.

Nitakuwa ninazunguka kwenye vikundi kuona wanachokifanya.

Answer questions they have etc

Nitawajibu maswali watakayouliza.

Encourage participants, but don't make suggestions – ask them what they think!

Nitawatia moyo washiriki ,lakini sitatoa pendekezo

Researchers will note down all reasons that they are told – at this time we only want to know the reasons, although the participants may want to tell you more! But don't worry, we can go back to this later

Nitaandika sababu zote nitakazoambiwa na washiriki.

Then move to the next pair and repeat.

Do this for all pairs.

Then ask the next general question – Sometimes people move away from the ward they live in,

Once you have spoken to all pairs, then ask the third question:

and live somewhere else. Does that happen here? Why do people go and live somewhere else?

Kuna wakati mwingine watu huondoka kwenye kata yao wanayoishi na kwenda kuishi sehemu zingine .Je,hali hii huwa inajitokeza hapa Kisesa?mnafikiri ni sababu zipi huwafanya waondoke?

Again, talk to all pairs, and make notes of the reasons that they give.

Nitauliza swali hili kwa vikundi vyote.

Sometimes people travel outside their ward but return on the same day. Does that happen here? Why do people do that?

Kuna wakati mwingine watu hutoka katani kwao na kwenda kuishi sehemu nyingine, lakini hurudi siku hiyo hiyo.Je,kitendo hiki huwa kinatokea hapa Kisesa?kwa nini watu wanafanya hivyo?

As before, after a few minutes, talk to each pair and make notes of the reasons that they have .

Nitaandika sababu zote zitakazotolewa na kila kundi.

You could also tell each pair what the others have said, as it could help them with their memories!

Ninaweza pia kuwaambia makundi mengine kilichoongelewa na wenzao.

Lastly, do people ever move outside the ward to live permanently? Does that happen here? Why do people do that?

Mwisho, wakati mwingine watu huwa wanaondoka kwenye kata wanayoishi na kwenda kuishi kwingine moja moja, je, hali kama hii huwa inatokea hapa Kisesa? Mnafikiri ni sababu zipi zinawafanya watu wafanye hivyo?

OUTPUT – Both researchers will have a list of reasons for mobility from each pair

MATOKEO-Watafiti wote kwa pamoja watakuwa na orodha ya sababu za watu kuhama kutoka kila kundi.

Researchers will then compare lists, and write a combined list of reasons on a sheet of paper on the wall. Watafiti watalinganisha orodha ya sababu na kuziandika kwenye karatasi kisha kuzibandika ukutani.

OUTPUT – A complete list of reasons for moving that the group have come up with. This will now be the reference list. MATOKEO – Nitakuwa na orodha kamili ya sababu zinazowafanya watu wahame zilizotolewa na makundi yote. Hii orodha itatumika kama mwongozo wa hatua inayofuata.

Note – refreshments now if afternoon session

Nitawapatia washiriki viburudisho kama tumeanza mjadala mchana.

Stage 2

Hatua ya pili

Researchers will thank the group for their participation so far, and all the interesting reasons that they have suggested. Nitawashukuru washiriki kwa ushiriki wao na kwa sababu nzuri walizozitoa.

The researchers will then explain that the group will divide into two groups to discuss which 5 or 6 reasons are the most important in Kisesa. Nitawaambia washiriki kwamba hatua inayofuata tutagawanyika katika makundi mawili yaliyo sawa, na kila kundi litazipanga sababu hizo kuanza na inayofanyika mara kwa mara kwa kumalizia na ile ambayo haifanywi sana.

The group may ask what we mean by 'important', but we want to know what they think is important.

Researchers will facilitate the discussion, asking members in the group what they think.

Researchers will then begin to ask for some agreement in the group in deciding which 5 or 6 reasons are the most important, and will make a list.

Researchers - Manage the discussion of the group:

- Ensure that there is consensus within the group on the most important reasons
- Ensure that all voices are heard!
- You can ask participants why they think certain types of mobility are important etc

OUTPUT - two lists of the 5/6 most important reasons (one from each group)

MATOKEO-Baada ya mjadala huo tutakuwa na orodha mbili na sababu muhimu (kutoka kwa kila kundi)

Thanks the participants for the help!Nitawashukuru washiriki kwa ushiriki wao)

Note to researcher-make sure that you allow discussion, and also that you probe to clarify the reasons for mobility.

Kumbuka-nitajitahidi Kurusu majadiliano ili kila mshiriki aweze kutoa mawazo yake, pia nitajitahidi kudadisi/kuuliza zaidi ili kuweza kupata ufafanuzi wa sababu za watu kuhama.

Stage 3

Switch tape recorder back on

Nitawasha kinasa sauti.

Hatua ya tatu

Bring the group back together as a whole. Hatua hii washiriki wote kwa pamoja tutajumuika .

Researcher from Group 1 writes their list of most important reasons on the wall

Mtafiti kutoka kundi la kwanza ataandika orodha ya sababu za muhimu kwenye karatasi iliyoko ukutani.

Facilitator from Group 2 read their ranked list to the whole group

Researcher from Group 2 writes their list of most important reasons on the wall

Mafiti wa kundi la pili naye ataandika sababu muhimu walizozioorodhesha kwenye karatasi iliyoko ukutani.

Read all the reasons out so that we can capture them on the tape

Soma sababu zote ili ziweze kusikika kwenye kinasa sauti.

The lead researcher (male researcher for male group) will then ask the group:

Mtafiti (mwanamke kwenye kundi la wanawake)ataauliza washiriki:

- Are there some reasons that both group decided were important? Why are these reasons important?Je,kuna sababu ambazo makundi yote mawili waliziona kuwa ni za muhimu.Kwa nini sababu hizi ni za muhimu?
- There are some reasons that are different. Why did the groups think that different reasons were more important?Kuna sababu zingine zinatofautiana.Kwa nini washiriki wanafikiri sababu muhimu zinatofautiana?

Researchers then ask the group: Nitawauliza washiriki:

- Thanks for identifying these reasons as the most important. We have some similarities, but out of the other reasons, can you decide together which are the most important? Nitawashukuru washiriki kwa kuzitambua sababu ambazo ni za muhimu. Katika hatua hii tutakuwa na sababu ambazo zinafanana kutoka kwenye makundi yote, lakini tutaangalia na kuzipanga kwa kuanza na sababu inayofanyika mara kwa mara.

OUTPUT – ONE FINAL LIST OF 5/6 reasons.

Note to researcher-Discussion is good-do not try and cut it short! Probe participants. Ask people to explain what they mean, do not assume I will know!

Kumbuka-majadiliano ni mazuri-haupashwi kuyakatisha! Nitawadadisi/wauliza washiriki. Nitawaomba waelezee wanamaanisha kitu gani, sitakiwi kubashiri kwamba ninajua.

MATOKEO-Baada ya mjadala huo tutakuwa na orodha yenye sababu 5/6 ambazo ni za muhimu.

Stage 4

Hatua ya Nne

In this stage, we will find a bit more out about each type of reason for moving by asking two questions. Katika hatua, kwa kila sababu ya kuhamia tutapenda kujua zaidi kwa kuuliza maswali mawili;

1. For each important reason for moving, who are the people that would move for this reason? Kwa kila sababu inayowafanya watu wahamia, je ni watu wa namna wanafanya hivyo?

Second researcher will take note, Mtafiti atakuwa akiandika maelezo yanayotolewa na washiriki.

Note to researcher: Ask about Mtafiti atakuwa anauliza kuhusu :

- Age-Umri
- Sex-Jinsia
- Where they are from in Kisesa (village etc) Wanatokea sehemu gani ya Kisesa (kijiji gani n.k)
- Wealth/background/social position/ hali yao ya kipato/historia ya maisha yao/ nafasi zao katika jamii.

Once this is done, ask the second question

Baada ya swali la kwanza, nitaauliza swali la pili

2. For each important reason for moving , where do they go?

Nitawauliza washiriki kwa kila sababu ya muhimu inayowafanya waondoke kata hii ya Kisesa, Je huwa wanakwenda wapi?

Note to researcher – actual place names! Nitaandika jina la hiyo sehemu wanayokwenda.

Then thank the participants for all their efforts, and all the interesting things they have told us. Nitawashukuru washiriki kwa jitihada zao ,na sababu nzuri walizoniambia na mambo yote mazuri waliyoyafanya. Say:

“we have asked you lots of questions that we thought were important, but we may have missed something. Is there anything else that we should know?”. Tumewauliza maswali mengi ambayo tuli yofikiri kuwa ni ya muhimu, lakini pengine kuna mambo mengine muhimu ambayo hatukuyaulizia na mngenda tuyafahamu. Je, kuna jambo jingine kuhusiana na huu mjadala mnalopenda tulifahamu?”

Then ask them if they have any questions that they want to ask us

Baada ya hapo nitawauliza washiriki kama wanaswali lolote wanalotaka kuniuliza.

Thank them for coming

Nitawashukuru washiriki kwa kuja na kushiriki kwao

End/Tamati!

Appendix B: Focus group Phase 2 researcher guide: Farmers – English and Swahili final version

Majadiliano hatua ya pili-Mwongozo wa Mtafiti-kilimo

People arrive

Washiriki kuwasili

Welcome participants as they arrive! Greet, welcome, thanks

Washiriki kuwasili! Wakaribishea, wasalimie na uwashukuru kwa kufika

Give them a consent form when they arrive

Niwaipa fomu ya kuridhia kushiriki mara tu washiriki wanapofika

Note – Researchers to decide when it is appropriate to give refreshments to participants.

Mwezesaji ataamua na muda upi unafaa kuwapatia washiriki viburudisho.

You can greet them in Sukuma, but please inform them that we will need to do the focus group in Swahili, as this subject is difficult to discuss in Sukuma

Unaweza kuwasalimia kwa kisukuma, lakini wataarifu kuwa majadiliano yatafanyika kwa Kiswahili kwani ni vigumu kujadili mada hii kwa kisukuma.

Once everyone has arrived, ask people to take a seat

Washiriki wote wakishafika nitawaambia wakae.

Once people are sat down,

Wakishakaa,

Thank and welcome them again

Nitawashukuru na kuwakaribisha kwa mara nyingine tena

Introduce yourself

Nitajitambulisha

Ask them to introduce themselves again

Nitawaomba wajitambulishe tena

Introduce the project

Mradi huu unafanywa na mtafiti kutoka chuo kikuu cha Uingereza kwa kushirikiana na mradi wa TAZAMA, ulio chini ya Taasisi ya taifa ya utafiti wa magonjwa ya binadamu kituo cha Mwanza.

Lengo la Utafiti

- We are studying the relationship between population mobility and HIV
- Tunatafiti kuhusu uhusiano uliopo wa watu kuondoka kwenye makazi yao, unavyosababisha maambukizi ya virusi vya UKIMWI.
- This is the second stage of the project. In the first stage we discussed the reasons people leave Kisesa Ward, and which reasons were the most important in Kisesa.
- Hii ni hatua ya pili ya utafiti. Katika hatua ya kwanza tulijadili sababu zinazowafanya watu waondoke kwenye kata ya Kisesa, na sababu zilizokuwa muhimu sana Kisesa.
- We were told that people leaving the ward to cultivate land outside Kisesa was one of the most important reasons.
- Tuliambiwa kuwa watu huondoka katani kwenda kulima nje ya kata.

Tell the participants the aim of the focus group

Nitawaambia washiriki lengo la majadiliano.

- The aim of the focus group is to understand more about farmers who travel outside the ward to cultivate land, to understand generally what doing this involves, and how this might influence sexual behaviour.
- Lengo la majadiliano ni kuelewa zaidi kuhusu wakulima wanaosafiri nje ya kata kulima, tunataka kuelewa kwa ujumla kitendo cha kuondoka na kwenda kulima nje ya kata kunahusisha mambo gani hasa, na ni kwa jinsi gani hiki kitendo kinavyoweza kinavyopelekea tabia hatarishi katika maswala ya mapenzi.

Note – if participants ask how the research will benefit the community, explain:

Kama washiriki watauliza kwa namna gani utafiti utainufaisha jamii, nitaeleza:

- *Understanding more about the links between migration and mobility will enable us to target prevention programmes to mobile populations who are most at risk of HIV*
- *Kuelewa zaidi uhusiano kati ya watu kuondoka /kuhama na maambukizi ya virusi vya UKIMWI nah ii itatusaidia kubuni mipango ya kuzuia maambukizi kwa watu wanaondoka/kuhama ambao wapo katika hatari katika kupata maambukizi ya virusi vya UKIMWI.*
- *We will also begin to understand the role that the local context plays in influencing risky sexual behaviour, which may help us to design more innovative prevention programmes that address context, rather than just sexual behaviour*
- *Pia tutaelewa jinsi mazingira tunayoishi yanavyochangia tabia hatarishi za kufanya mapenzi, hii itatusaidia kubuni mipango ya kuzuia maambukizi inayoendana na mazingira na siyo tu mikakati inayohusiana na tabia za kujamiana*
- *However, we accept that some of the work that we will do here may not have immediate direct benefits – we are grateful for their participation*
Japokuwa na tunakubaliana kuwa baadhi ya mambo tunayoyafanya yanaweza yasiwe na faida ya moja kwa moja, ila tunashukuru kwa ushiriki wenu.

Tell them why they have been selected

Nitawaambia washiriki kwanini tumewachagua wao

You have been selected because you have been identified as people who:

Mmechaguliwa kwa sababu umetambulika kama watu ambao :

- You are farmers
- Nyinyi ni wakulima
- You travel outside the ward to cultivate
- Huwa mnaenda nje ya kata kulima
- You stay there while you are cultivating
- Huwa mnakaa kule wakati wa kulimo

Ask them – is this correct?

Nitawauliza hii ni kweli?

Note to researcher - If some participants say that they do not meet these basic screening criteria, please politely and sensitively ask them to leave

Wapo baadhi ya washiriki watasema hawana sifa hizi, nitawaomba kwa unyenyekevu na kwa umakini, warudi nyumbani.

Explain the focus group rules

Taratibu za mjadala

- When a participant is speaking, please listen to him/her
- Wakati mshiriki anaongea/anatoa hoja, tumsikilize hadi mwisho wa hoja yake
- When a participant is speaking, please respect his/her views
- Mshiriki anapotoa hoja tusimzomee wala kumcheka
- Please do not mention people's names in the discussion
- Wakati wa mjadala hairuhusiwi kutaja jina la mtu.

Explain tape recorder, ask them permission, and explain why we want to record them

Nitaelezea kuhusu kinasa sauti, nitaomba ruhusa ya kutumia kinasa sauti na nitaeleza kwa nini tunataka kurekodi

Switch on tape recorder

Nitakiwasha kinasa sauti

Read consent form out loud and ask them to give consent

Nitasoma kwa sauti fomu ya ridhaa ya ushiriki

Ask them to sign the consent form

Nitawaomba kuweka sahihi kwenye fomu za ridhaa

Ask if there any questions

Nitawauliza kama wana swali lolote

Researcher notes

Jambo la kuzingatia kwa mwezeshaji

If participants do not consent:

Kama washiriki hawataridhia kushiriki

- Researchers will also explore, in a sensitive way, reasons for non-consent, and will re-emphasise that discussions will be confidential within NIMR, and that no quotes from the Focus Groups will be used without their permission.

- Mtafiti pia atadadisi kwa umakini, sababu za kutoridhia kushiriki na atasisitiza kuwa majadiliano haya yatakuwa ni siri ndani ya NIMR na hakuna nukuu yoyote kutoka kwenye majadiliano itakayotumika bila ridhaa yenu
- Discuss the purpose of the Focus Group – this focus group does not aim to collect personal/sensitive information, just to understand some of the reasons why people move out of Kisesa
- Jadili madhumuni ya majadiliano-majadiliano hayalengi kukusanya au kupata taarifa za mtu binafsi au taarifa nyeti ila kujua baadhi ya sababu zinazowafanya watu waondoke katika kata ya Kisesa.
- tell the group that anyone who does not want to participate can leave at any time
- Nitawaambia washiriki kwamba yeyote asiyetaka kushiriki anaweza kuondoka wakati wowote

Then ask them to pick a name that they will use for the focus group (to protect their identity), and a name that is not a human name

Kasha nitawaomba washiriki wachague majina ya bandia watakayoyatumia wakati wa majadiliano (ili kulinda utambulisho wao) na jina hilo lisiwe la binadamu.

Note – the reasons for asking them to choose other names are:

Sababu za kuwaomba kuchagua majina ya bandia

- To protect their identity
- Kulinda utambulisho wao
- To ensure that everything they say is confidential
- Kuhakikisha kuwa kila kitu wanachosema ni siri
- To make them feel comfortable to say what they think
- Kuwafanya wajisikie huru kusema kile wanachofikiri
 - This is especially necessary when personal and sensitive questions are being asked
 - Hii ni muhimu zaidi pale maswali yanayomhusu mtu na maswali nyeti yanapoulizwa

Focus group discussion

Majadiliano

Introduction

Utangulizi

We want to know what farmers who cultivate land outside Kisesa ward generally do, so today we are going to ask you questions about what farmers typically do, not what YOU do!

Tunataka kujua wakulima wanaoenda nje ya kata ya Kisesa wamekuwa wakifanya nini kwa ujumla, kwaiyo leo tutakwenda kujadili mada juu ya wakulima ni vitu gani hasa huwa wanafanya na sio nini huwa mnafanya!

Later on, we will also be asking you some questions about sexual behaviour – we hope that these questions are not too difficult for you to answer, and again, we will only be asking you what people do, not what you do.

Baadae, tutawauliza mada kuhusu tabia za kufanya mapenzi- tunatarajia mada hiyo haitakuwa ngumu kwenu kujibu, pia tutawauliza ni wakulima hufanya nini na sio huwa mnafanya nini.

Note to researchers - Emphasise that we want to know what people do in general – this will help to protect peoples identities, and hopefully allow them to talk about sensitive issues.

Nitasisitiza kuwa tunataka kujua nini watu hufanya kwa ujumla-hii itasaidia kulinda utambulisho wa watu na hivyo kuleta matumaini ya kuwafanya washiriki kuongea juu ya mada nyeti

General Method – Note to researchers

Mambo ya kuzingatia

The sections are for our benefit – you do not need to tell the participants about each section

Start each section with the first open question, and prompt and probe participants until they have provided answers to the questions detailed in each section.

Vipengele hivi ni kwa faida yetu-hakuna haja ya kuwaambia washiriki juu ya kila kipengele.

Nitaanza kila kipengele kwa swali la utangulizi nitawauliza na kuwadadisi washiriki mpaka watoe majibu ya maswali kwa undani kwa kila kipengele.

Once you are confident that we have the information we need, then ask the next open question at the beginning of the next section.

Nitakapokuwa nimepata uhakika kuwa nimeshapata taarifa ninazozitaka, nitauliza swali linalofuata mwanzo wa kipengele kinachofuata.

The questions can be used as a backup if discussion is going the wrong way, or participants do not talk much.

Maswali yanaweza yakatumika kama mwongozo wa mjadala iwapo majadiliano hayaendi vizuri au kama washiriki hawaongei sana

Allow discussion AND DON'T FORGET TO PROBE! The questions listed here are the minimum amount of information we need! USISAHU KUDADISI! Maswali yaliyoorodheshwa yanatuwezesha kupata baadhi ya taarifa tunazozitaka!

Nitaruhusu majadiliano

We need to understand what people generally do – this means that answers will not always be precise – that is okay!

Tunahitaji kuelewa nini watu hufanya kwa ujumla-hii inamaanisha kwamba majibu mara zote hayawezi kuwa sahihi

Section 1 - (10 mins) Kuelewa ni watu gani wa kisesa ambao huondoka katani kwenda kulima nje ya kata

Sehemu ya kwanza (dk 10)

Opening question:

Swali la utangulizi

What are the characteristics of farmers who leave the ward to cultivate land elsewhere? For example, how old are they, are they male or female?

Kwa mfano, wana umri gani, je ni wanaume au wanawake?

Zipi ni sifa za wakulima wanaondoka katika kata na kwenda kulima sehemu nyingine?

Probe participants until they have also answered the following questions:

Nitawauliza washiriki mpaka wajibu maswali yafuatayo:

- Are Farmers male or female?
- Wakulima huwa ni wanaume au wanawake?
- How old are Farmers?
- Wana umri gani?
- Are Farmers married?
- Wameoa au kuolewa?
- How wealthy are Farmers?
- Hali yao ya kipato ikoje?
- From which part of Kisesa do Farmers come from?
- Wanatoka sehemu gani ya Kisesa
- How many Farmers from Kisesa ward leave the ward to cultivate?
- Ni wakulima wangapi huondoka katani kwenda kulima?

Researchers note – we might also want to ask whether there is anything that prevents Farmers from leaving the ward

Tungependa kujua kama kuna kitu chochote au sababu zinazowazuia wakulima kwenda nje ya kata

Section 2 – (15 mins)

Hatua ya pili- (dk 15)

Opening question:

Swali la utangulizi

Why do Farmers leave the ward to cultivate land?

Kwa nini huwa mnaondoka katani kwenda kulima?

Probe participants until they have also answered the following questions:

Nitawauliza washiriki mpaka wajibu maswali yafuatayo:

- Why do Farmers leave the ward to cultivate?
- Kwa nini wakulima huwa wanaondoka kwenda kulima kwingine?
- Where do Farmers go to farm?

- Huwa wanaenda kulima wapi?
- How do Farmers decide to go there?
- Huwa wanaamua je kwenda kulima huko?
- How do Farmers access land there?
- Huwa wanapataje ardhi ya kulima huko?
- How much land do they farm while away?
- Ni shamba la ukubwa gani huwa mnalima mkiwa kule?

Researcher's notes

Jambo la kuzingatia

In the focus group we heard about shortages of land, increasing land prices and the low fertility of land – if these topics come up, please ask participants to explain them in more detail

Katika majadiliano yaliyopita washiriki walisema kuna uhaba wa ardhi ya kulima, bei ya ardhi ni ghali na ardhi haina rutuba-kama sababu hizi zitajitokeza tafadhali waulize washiriki waelezee kwa undani.

Do Farmers already know people in the places they go? How did they hear about the opportunities?

Je wakulima huwa wana wenyeji kule? Walipataje taarifa juu ya uwepo wa maeneo hayo?

We also might want to know if there is a link between the crops grown and the places they go – please probe this

Tunapenda kujua kuna uhusiano kati ya mazao yanayolimwa na maeneo wanayoenda kulima-tafadhali dadisi kuhusu hili

In terms of accessing land, is the land rented/purchased etc? If purchased, how do they get the money they need to do that?

Katika kupata ardhi, je ardhi huwa inakodiwa/inanunuliwa? Kama inanunuliwa, huwa wanapataje pesa ya kununulia ardhi?

Section 3 - (15mins)

Kipengele cha tatu-(dk 15)

Opening question

Swali la utangulizi

How often do Farmers leave the ward to cultivate land elsewhere?

Ni mara ngapi wakulima huondoka katani na kwenda kulima nje ya kata?

Probe participants until they have also answered the following questions:

Wadadis washiriki mpaka wawe wamejibu maswali yafuatayo:

- How often do Farmers leave the ward to cultivate land elsewhere?
- Ni mara ngapi wakulima huondoka katani na kwenda kulima sehemu zingine?
- Do other household members travel with them?
- Je, wanafamilia wengin huwa wanaondoka nao?
- How long do Farmers stay away?
- Hukaa huko kwa muda gani?
- Do they always go to the same place?
- Mara zote huwa wanaenda sehemu moja?
- How often do they return to Kisesa?
- Huwa wanarudi Kisesa mara ngapi?

Researcher's notes

Mambo ya kukumbuka kwa mwezesaji

We might be expecting Farmers to go own their own. Do other family members or members of the community go with them?

Tunategemea wakulima waende wao wenyewe. Je wanafamilia wengine au wanajamii huwa wanaenda nao?

Section 4 - (20 mins)

Kipengele cha nne-(dk 20)

Opening question

Swali la mjadala

When Farmers travels away to cultivate land, what do they do there? Where do they live?

Wakulima wanapoondoka kwenda kulima kwingine, huwa wanafanya nini huko? Huwa wanakaa wapi?

Probe participants until they have also answered the following questions:

Wadadisi washiriki mpaka wawe wamejibu maswali yafuatayo:

- Where do Farmers stay/who do Farmers stay with while away?
- Wakulima huwa wanakaa wapi/huwa wanaishi na nani wanapokuwa huko?
- What do Farmers do while away? (note – in relation to farming)
- Huwa wanafanya shughuli gani za kilimo wakiwa kule?
- What crops do Farmers cultivate?
- Ni aina gani ya mazao wanayolima?
- Do Farmers engage in any other income generating activities while away?
- Je, wakulima huwa wanajihusisha na shughuli zingine za uzalishaji wakiwa kule?

Researcher's notes - if time, ask what the main difficulties that farmers face while away are

Jambo la kukumbuka-muda ukiuhusu, nitawauliza ni matatizo gani huwapata wakulima wakiwa kule

Section 5 - (30 mins)

Kipengele cha tano- (dk 30)

Tell them we are now going to ask them some sensitive questions, and that we hope that this is not too difficult for them. Remind them that we are not asking what they do, but just what happens in general

Nitawaambia kuwa tunaenda kujadili mada nyeti, na nafikiri jambo hili si gumu kwenu.

Nitawakumbusha kuwa hatutajadili mnachokifanya nyinyi binafsi bali kile wanachofanya wakulima kwa ujumla.

Opening question

Swali la utanguliza

What do Farmers do in their free time while away?

Ni mambo gani wakulima huyafanya wakiwa hawafanyi shughuli za kilimo?

Probe participants until they have also answered the following questions:

Wadadisi washiriki mpaka wajibu maswali yafuatayo:

- Do Farmers have sex with anyone while they are away?
- Je, wakulima huwa wanafanya mapenzi na mtu yeyote wakiwa kule?
- If so, why?
- Kama ni ndio kwa nini?
- How often does this happen?
- Huwa inatokea mara ngapi kitendo hiki kinafanyanyika?
- Does this happen in certain situations?
- Huwa inatokea katika mazingira gani?
- Who do Farmers have sex with?
- Wakulima huwa wanafanya mapenzi na watu gani?
- Do Farmers use protection? (or ask their partners to use protection)?
- Je, wakulima huwa wanatumia kinga? (au huwa wanawaambia wapenzi wao kutumia kinga?)

Section 6 - (20 mins)

Kipengele cha sita-(dk 20)

Opening question

Swali la utangulizi

What happens when Farmers return home?

Huwa wanafanya nini wanaporudi nyumbani?

Probe participants until they have also answered the following questions:

Wadadisi washiriki mpaka wajibu maswali yafuatayo:

- What do Farmers do when they get back?
- Wakulima huwa wanafanya nini wanaporudi nyumbani?
- What do Farmers do with their harvest?
- Huwa wanayatumiaje mazao yao?
- What does Farmers do with the money they earn?

- Huwa wanazitumiaje pesa wanazozipata kutokana na mazao?
- How does being away affect Farmers' relationship with their spouses/partners?
- Ni kwa namna gani kutokuwepo kwao nyumbani kunaathiri mahusiano yao na wenzi /wapenzi wao?

Closing the focus group

Kufunga majadiliano

We have asked you questions about what farmers do now, but would also like to know if this used to happen in the past – did this process used to be different?

Tumewauliza maswali kuhusu wakulima wanavyofanya, lakini pia tunapenda kujua kama wakulima walikuwa wanafanya hivi kipindi cha nyuma ,je kitendo hiki ni tofauti na sasa?

Say

“we have asked you lots of questions that we thought were important, but we may have missed something. Is there anything else that we should know about Farmers travelling outside the ward to cultivate land?”

“tumewauliza maswali mengi ambayo tulifikiri ni ya msingi, lakini pengine tunaweza kuwa tumesau kitu Fulani ambacho ni cha muhimu. Je, kuna kitu chochote muhimu kuhusiana na wakulima kwenda nje ya kata kulima?”

Then ask them if they have any questions that they want to ask us

Halafu waulize washiriki kama wanaswali lolote ambalo wangependa kuuliza

Thank them for coming

Nitawashukuru wakulima kwa kushiriki

End/ mwisho

Appendix C: Focus group Phase 2 researcher guide: Maize traders – English and Swahili final version

Majadiliano hatua ya pili- Mwongozo wa mtafiti- Biashara ya mahindi.

People arrive

Washiriki wakishawasiri,

Welcome participants as they arrive! Greet, welcome, thanks

Nitawakaribisha , nitawasalimu na kuwashukuru kwa kufika kwao.

Nitawapa fomu ya kuridhia kushiriki mara tu washiriki wanapofika.

If it is the morning, offer refreshments

Mwezeshaji ataamu ni muda gani unafaa kuwapatia washiriki vinywaji

You can greet them in Sukuma, but please inform them that we will need to do the focus group in Swahili, as this subject is difficult to discuss in Sukuma

Unaweza kuwasalimu kwa kisukuma, lakini nitawatarifu kuwa majadiliano yatafanyika kwa lugha ya Kiswahili kwani ni vigumu kujadili mada hii kwa kisukuma.

Once everyone has arrived, ask people to take a seat

Washiriki wote wakishafika nitawaambia wakae.

Once people are sat down,

Washiriki wakishakaa,

Thank and welcome them again

Nitawashukuru na kuwakaribisha kwa mara nyingine.

Introduce yourself

Nitajitambulisha .

Ask them to introduce themselves again

Nitawomba washiriki wajitambulishe tena.

Mradi huu unafanywa na mtafiti kutoka chuo kikuu cha Uingereza kwa kushirikiana na mradi wa TAZAMA uliochini ya taasisi ya Taifa ya utafiti wa magonjwa ya binadamu kituo cha Mwanza.

Lengo la utafiti.

- **Tunatafiti kuhusu uhusiano uliopo wa watu kuondoka kwenye makazi yao, unavyosababisha maambukizi ya virusi vya UKIMWI.**
- **Hii ni hatua ya pili ya utafiti. Katika hatua ya kwanza tulijadili sababu muhimu zinazowafanya watu waondoke kwenye kata ya Kisesa na Bukandwe.**
- **Tuliambiwa kuwa watu huondoka katani kwenda kufanya biashara ya mahindi nje ya kata.**

- We are studying the relationship between population mobility and HIV
- This is the second stage of the project. In the first stage we discussed the reasons people leave Kisesa Ward, and which reasons were the most important in Kisesa
- We were told that one of the most important reasons was people travelling outside the ward to conduct business

Tell the participants the aim of the focus group

Nitaambia washiriki lengo la majadiliano.

- The aim of the focus group is to understand more about maize trading, and to understand generally what doing maize trading involves, and how this might influence sexual behaviour.
- Lengo la majadiliano ni kuelewa zaidi kuhusu biashara ya mahindi, na kuelewakwa ujmla kitendo cha kufanya biashara ya mahindi kinahusisha mambo gani hasa na in kwa jinsi gani kitendo hiki kinaweza kupelekea tabia za kufanya mapenzi.

Note – if participants ask how the research will benefit the community, explain:

Kama washiriki watauliza kwa namna gani utafiti utainufaisha jamii, nitaeleza :

Understanding more about the links between migration and mobility will enable us to target prevention programmes to mobile populations who are most at risk of HIV

- Kuelewa zaidi kati ya watu kuondoka/kuhama na maambukizi ya virusi vya UKIMWI, hii itatusaidia kubuni mipango ya kuzuia maambukizi kwa watu wanaoondoka au kuhama ambao wapo katika hatari ya kupata maambukizi ya virusi vya UKIMWI.
- We will also begin to understand the role that the local context plays in influencing risky sexual behaviour, which may help us to design more innovative prevention programmes that address context, rather than just sexual behaviour
- Pia tutaelewa mazingira tunayoishi yanavyochangia tabia za kufanya mapenzi, hii itatusaidia kubuni mipango ya kuzuia maambukizi yanayoendana na mazingira na siyo tu mikakati inayohusiana na tabia za kujamiiana.
- However, we accept that some of the work that we will do here may not have immediate direct benefits – we are grateful for their participation

- Japokuwa tunakubaliana kuwa baadhi ya mambo tunayoyafanya yanaweza yasiwe na faida ya moja kwa moja, ila tunashukuru kwa ushiriki wenu.

Tell them why they have been selected

Nitawaambia washiriki kwanini tumewachagua wao.

Mmechaguliwa kwasabaabu mmetambulika kama watu ambao:

- Ninyi ni wafanyabiashara ya mahindi
- Huwa mnaenda nje ya kata kufanya biashara ya mahindi
- Huwa mnakaa kule wakati wa biashara yenu.

Ask them – is this correct?

Nitawauliza, je, hii ni kweli?

Note to researcher - If some participants say that they do not meet these basic screening criteria, please politely and sensitively ask them to leave

Iwapo baadhi ya washiriki watasema hawana sifa hizi, nitawaomba kwa unyenyekevu na umakini warudi nyumbani.

Explain the focus group rules

Nitaeleza taratibu za mjadala.

- When a participant is speaking, please listen to him/her
- Wakati mshiriki anatoa hoja tumsikilize hadi mwisho wa hoja yake.
- When a participant is speaking, please respect his/her views
- Mshiriki anapotoa hoja tumsicheke wala tusimzomee
- Please do not mention people's names in the discussion

Wakati wa mjadala hairuhusiwi kutaja jina la mtu.

Nitaelezea kuhusu kinasa sauti, nitaomba ruhusa ya kutumia kinasa sauti na nitaeleza kwa nini tunataka kurekodi

Nitakiwasha kinasa sauti

Nitasoma kwa sauti fomu ya ridhaa ya ushiriki

Nitawaomba kuweka saini kwenye fomu za ridhaa

Nitawauliza kama wana swali lolote

Jambo la kuzingatia kwa mwezeshaji

Kama washiriki hawataridhia kushiriki

- Mtafiti pia atadadisi kwa umakini, sababu za kutoridhia kushiriki na atasisitiza kuwa majadiliano haya yatakuwa ni siri ndani ya NIMR na hakuna nukuu yoyote kutoka kwenye majadiliano itakayotumika bila ridhaa yenu
- Jadili madhumuni ya majadiliano-majadiliano hayalengi kukusanya au kupata taarifa za mtu binafsi au taarifa nyeti ila kujua baadhi ya sababu zinazowafanya watu waondoke katika kata ya Kisesa.
- Nitawaambia washiriki kwamba yeyote asiyetaka kushiriki anaweza kuondoka wakati wowote

Kisha nitawaomba washiriki wachague majina ya bandia watakatayoyatumia wakati wa majadiliano (ili kulinda utambulisho wao) na jina hilo lisiwe la binadamu.

Sababu za kuwaomba kuchagua majina ya bandia

- Kulinda utambulisho wao
- Kuhakikisha kuwa kila kitu wanachosema ni siri
- Kuwafanya wajisikie huru kusema kile wanachofikiri
 - Hii ni muhimu zaidi pale maswali yanayomhusu mtu na maswali nyeti yanapoulizwa

Majadiliano

Utangulizi

Tunataka kujua kuhusu wafanyabiashara wa mahindi wanaoenda nje ya kata ya Kisesa wamekuwa wakifanya nini kwa ujumla, kwa hiyo leo tutajadili mada juu ya wafanyabiashara wa mahindi ni vitu gani hasa huwa wanafanya na sio nini huwa mnafanya!

Baadae, tutawauliza mada kuhusu tabia za kufanya mapenzi- tunatarajia mada hiyo haitakuwa ngumu kwenu kujibu, pia tutawauliza wafanyabiashara wa mahindi hufanya nini na sio ninyi huwa mnafanya nini.

Nitasisitiza kuwa tunataka kujua ni nini watu hufanya kwa ujumla-hii itasaidia kulinda utambulisho wa watu na hivyo kuleta matumaini ya kuwafanya washiriki kuongea juu ya mada nyeti

Mambo ya kuzingatia

Vipengele hivi ni kwa faida yetu-hakuna haja ya kuwaambia washiriki juu ya kila kipengele.

Nitaanza kila kipengele kwa swali la utangulizi nitawauliza na kuwadadisi washiriki mpaka watoe majibu ya maswali kwa undani kwa kila kipengele.

Nitakapokuwa nimepata uhakika kuwa nimeshapata taarifa ninazozitaka, nitauliza swali linalofuata mwanzo wa kipengele kinachofuata.

Maswali yanaweza yakatumika kama mwongozo wa mjadala iwapo majadiliano hayaendi vizuri au kama washiriki hawaongei sana

Nitaruhusu majadiliano. USISAHAU KUDADISI! Maswali yaliyoorodheshwa yanatuwezesha kupata baadhi ya taarifa tunazozitaka!

Explain tape recorder, ask them permission, and explain why we want to record them

Switch on tape recorder

Ask people if they understand the consent form, or need any of it explaining.

Ask them to sign the consent form

Ask if there any questions

Researcher notes

If participants do not consent:

- Researchers will also explore, in a sensitive way, reasons for non-consent, and will re-emphasise that discussions will be confidential within NIMR, and that no quotes from the Focus Groups will be used without their permission.
- Discuss the purpose of the Focus Group – this focus group does not aim to collect personal/sensitive information, just to understand some of the reasons why people move out of Kisesa
- tell the group that anyone who does not want to participate can leave at any time

Then ask them to pick a name that they will use for the focus group (to protect their identity), and a name that is not a human name

Note – the reasons for asking them to choose other names are:

- To protect their identity
- To ensure that everything they say is confidential
- To make them feel comfortable to say what they think
 - This is especially necessary when personal and sensitive questions are being asked

Focus group discussion

We want to know what maize traders generally do, and also what happens when they leave the ward. Today we are going to ask you questions about what maize traders typically do, not what YOU do!

Later on, we will also be asking you some questions about sexual behaviour – we hope that these questions are not too difficult for you to answer, and again, we will only be asking you to tell us what people generally do, not what you do.

Note to researchers - Emphasise that we want to know what people do in general – this will help to protect peoples identities, and hopefully allow them to talk about sensitive issues.

General Method – Note to researchers

The sections are for our benefit – you do not need to tell the participants about each section

Start each section with the first open question, and prompt and probe participants until they have provided answers to the questions detailed in each section.

Once you are confident that we have the information we need, then ask the next open question at the beginning of the next section.

The questions can be used as a backup if discussion is going the wrong way, or participants do not talk much.

Allow discussion AND DON'T FORGET TO PROBE! The questions listed here are the minimum amount of information we need!

DON'T FORGET THAT I NEED TO BE ABLE TO UNDERSTAND THE ISSUES

KEY QUESTIONS – WHY AND HOW!

We need to understand what people generally do – this means that answers will not always be precise – that is okay

Tunahitaji kuelewa ni nini watu hufanya kwa ujumla- hii ina maanisha kwamba majibu mara zote hayawezi kuwa sahihi.

Pia nitasisitiza kuwa mada tutakazo jadili zinahusiana na biashara yao ya mahindi.

We must also emphasise that the questions we are asking below are related to their business of maize trading.

Section 1 - (10 mins) - Understand who maize traders are

Sehemu ya kwanza-(10mins)

Opening question:

What are the characteristics of maize traders who leave the ward ? For example, how old are they, are they male or female?

Probe participants until they have also answered the following questions:

- Are maize traders male or female?
- How old are they?

Sehemu ya kwanza (dk 10) - Kuelewa ni watu gani wa kisesa ambao huondoka katani kwenda kufanya biashara ya mahindi nje ya kata

Swali la utangulizi

Zipi ni sifa za wafanya biashara wa mahindi wanaoondoka katika kata na kwenda kufanya biashara ya mahindi sehemu nyingine? Kwa mfano, wana umri gani, je ni wanaume au wanawake?

Nitawauliza washiriki mpaka wajibu maswali yafuatayo:

- Wafanyabiashara huwa ni wanaume au wanawake?

- Wana umri gani?
- Wameoa au kuolewa?
- Hali yao ya kipato ikoje?
- Wanatoka sehemu gani ya Kisesa
- Ni wafanyabiashara wangapi huondoka katani kwenda kununua mahindi?

Tungependa kujua kama kuna kitu chochote au sababu zinazowazuia wafanyabiashara kwenda nje ya kata kufanya biashara ya mahindi.

Pia tungependa kujua ni huamua kuwa wafanyabiashara wa mahindi.

Hatua ya pili- (dk 15) – Kuelewa zaidi kuhusu biashara ya mahindi.

Swali la utangulizi

Kwa nini watu huamua kufanya biashara ya mahindi?

Nitawauliza washiriki mpaka wajibu maswali yafuatayo:

- Biashara ya mahindi huhusisha shughuli gani?
- Kwanini huwa wanaondoka katani kwenda kufanya biashara ya mahindi?
- Huwa wanaenda wapi kufanya biashara zao?
- Huwa wanaamua kuwa kwenda huko?
- Huwa wanapataje taarifa za kufanyabiashara huko?

Are they generally married?

- How wealthy are Maize Traders?
- From which part of Kisesa do they come from?

Researchers note –

We also want to know how people decide to become Maize Traders

Note – how many can be a percentage, but also ‘how common’

Section 2 – (15 mins) – Understand more about maize trading

Opening question:

Why do people decide to become/ get involved in Maize Trading?

Probe participants until they have also answered the following questions:

- What does maize trading involve doing?
- Why do they leave the ward to trade maize?
- Where do they go to trade maize
- How do they decide to go there?

How do they hear about opportunities to trade?

Kipengele cha tatu-(dk 15) - Elewa aina za mzunguko wao

Swali la utangulizi

Ni mara ngapi wafanya biashara huondoka katani na kwenda kununua mahindi nje ya kata?

Wadadisi washiriki mpaka wawe wamejibu maswali yafuatayo:

- Ni mara ngapi wafanya biashara wa mahindi huondoka katani na kwenda kununua mahindi sehemu zingine?
- Hukaa huko kwa muda gani?
- Mara zote huwa wanaenda sehemu moja?
- Huwa wanarudi mara ngapi sehemu hiyo hiyo?
- Huwa wanarudi mara ngapi Kisesa?
- Huwa wanasafiri na nani?
- Huwa wanafikaje maeneo wanayoenda?
- Ni sehemu ngapi huwa wanaenda kwa safari moja?

Katika majadiliano yaliyopita, tumesikia kwamba, wafanya biashara wa mahindi huwa wanasafiri kwa pamoja ili kupunguza gharama za usafiri.

Kipengele cha nne-(dk 20)- Elewa uzoefu wanaoupata wanapokuwa kule

Swali la mjadala

Wafanyabiashara wanapoondoka kwenda kufanya biashara kwingine, huwa wanafanya nini huko? Huwa wanakaa wapi?

Wadadisi washiriki mpaka wawe wamejibu maswali yafuatayo:

- Huwa wanakaa wapi/huwa wanaishi na nani wanapokuwa huko?
- Je, huwa wanajihusisha na shughuli zingine za uzalishaji wakiwa kule?

- Huwa wananunua kwa bei gani?
- Huwa wanapata faida kiasi gani? Mfano kwa debe moja, gunia moja.

Jambo la kukumbuka-muda ukiruhusu, nitawauliza ni matatizo gani huwapata wafanyabiashara wa mahindi wakiwa kule. Pia nitauliza ni kiasi gani cha magunia ya mahindi wanayonunua wafanyabiashara wa mahindi na hununua na kuuza kwa bei gani.

Kipengele cha tano- (dk 30) - Elewa tabia za kufanya mapenzi.

Nitawaambia kuwa tunaenda kujadili mada nyeti, na nafikiri jambo hili si gumu kwenu. Nitawakumbusha kuwa hatutajadili mnachokifanya nyinyi binafsi bali kile wanachofanya wafanyabiashara wa mahindi kwa ujumla.

Swali la utanguliza

Ni mambo gani wafanyabiashara wa mahindi huyafanya wakiwa hawafanyi shughuli za biashara?

Wadadisi washiriki mpaka wajibu maswali yafuatayo:

- Je, huwa wanafanya mapenzi na mtu yeyote wakiwa kule?
- Kama ni ndio kwa nini?
- Huwa inatokea mara ngapi kitendo hiki kinafanyanyika?
- Huwa inatokea katika mazingira gani?
- Huwa wanafanya mapenzi na watu gani?
- Je, huwa wanatumia kinga? (au huwa wanawaambia wapenzi wao kutumia kinga?)

Kipengele cha sita-(dk 20) - wanaporudi

Swali la utangulizi

Huwa wanafanya nini wanaporudi nyumbani?

Wadadisi washiriki mpaka wajibu maswali yafuatayo:

- Huwa wanafanya nini wanaporudi nyumbani?
- Huwa wanazitumiaje pesa wanazozipata kutokana na biashara yao?

- Ni kwa namna gani kutokuwepo kwao nyumbani kunaathiri mahusiano yao na wenzi /wapenzi wao?

Kufunga majadiliano

Tumewauliza maswali kuhusu wafanyabiashara wa mahindi wanavyofanya, lakini pia tunapenda kujua kama wafanyabiashara walikuwa wanafanya hivi kipindi cha nyuma ,je kitendo hiki ni tofauti na sasa?

“tumewauliza maswali mengi ambayo tulifikiri ni ya msingi, lakini pengine tunaweza kuwa tumesahau kitu fulani ambacho ni cha muhimu. Je, kuna kitu chochote muhimu kuhusiana na wafanyabiashara kwenda nje ya kata kununua mahindi?”

Halafu waulize washiriki kama wanaswali lolote ambalo wangependa kuuliza

Nitawashukuru wafanyabiashara wa mahindi kwa kushiriki.

mwisho

Appendix D: Focus group Phase 2 researcher guide: Dagaa sellers (female) – English and Swahili final version

Majadiliano hatua ya pili-Mwongozo wa Mtafiti-wafanyabiashara wa Dagaa (wanawake)

People arrive

Washiriki kuwasili

Welcome participants as they arrive! Greet, welcome, thanks

Washiriki kuwasili! Wakaribishea, wasalimie na uwashukuru kwa kufika

Note – Researchers to decide when it is appropriate to give refreshments to participants.

Mwezes haji ataamua na muda upi unafaa kuwapatia washiriki viburudisho.

You can greet them in Sukuma, but please inform them that we will need to do the focus group in Swahili, as this subject is difficult to discuss in Sukuma

Unaweza kuwasalimia kwa kisukuma, lakini wataarifu kuwa majadiliano yatafanyika kwa Kiswahili kwani ni vigumu kujadili mada hii kwa kisukuma.

Give them a consent form when they arrive

Nitawapa fom u ya kuridhia kushiriki mara tu washiriki wanapofika

Once everyone has arrived, ask people to take a seat

Washiriki wote wakishafika nitawaambia wakae.

Once people are sat down,

Wakishakaa,

Thank and welcome them again

Nitawashukuru na kuwakaribisha kwa mara nyingine tena

Introduce yourself

Nitajitambulisha

Ask them to introduce themselves again

Nitawaomba wajitambulishe tena

Introduce the project

Mradi huu unafanywa na mtafiti kutoka chuo kikuu cha Uingereza kwa kushirikiana na mradi wa TAZAMA, ulio chini ya Taasisi ya taifa ya utafiti wa magonjwa ya binadamu kituo cha Mwanza.

Lengo la Utafiti

- We are studying the relationship between population mobility and HIV
- Tunatafiti kuhusu uhusiano uliopo wa watu kuondoka kwenye makazi yao, unavyosababisha maambukizi ya virusi vya UKIMWI.
- This is the second stage of the project. In the first stage we discussed the reasons people leave Kisesa Ward, and which reasons were the most important in Kisesa.
- Hii ni hatua ya pili ya utafiti. Katika hatua ya kwanza tulijadili sababu zinazowafanya watu waondoke kwenye kata ya Kisesa, na sababu zilizokuwa muhimu sana Kisesa.
- We were told that one of the main reasons that people leave the ward is to conduct business
- Tuliambiwa kuwa sababu moja kuu inayowafanya watu waende nje ya kata ni kufanya biashara.

Tell the participants the aim of the focus group

Nitawaambia washiriki lengo la majadiliano.

- The aim of the focus group is to understand more about the business of dagaa selling in general. Also we need to know more about dagaa sellers who travel outside the ward and how this might influence sexual behaviour. However, we also know that not all dagaa sellers travel outside the ward, so we would be interested in understanding what they do.

- Lengo la majadiliano ni kuelewa zaidi kuhusu biashara ya dagaa kwa ujumla. Pia ni tunapenda kufahamu wauza dagaa wanaoenfa nje ya kata nah ii ni kwa jinsi gani inavyopelekea tabia hatarishi katika maswala ya mapenzi. Japokuwa, tunaielewa kuwa si wafanyabiashara wote wa dagaa wanaosafiri nje ya kata, pia tunapenda kufahamu wanafanya nini.

Note – if participants ask how the research will benefit the community, explain:

Kama washiriki watauliza kwa namna gani utafiti utainufaisha jamii, nitaeleza:

- *Understanding more about the links between migration and mobility will enable us to target prevention programmes to mobile populations who are most at risk of HIV*
- *Kuelewa zaidi uhusiano kati ya watu kuondoka /kuhama na maambukizi ya virusi vya UKIMWI nah ii itatusaidia kubuni mipango ya kuzuia maambukizi kwa watu wanaondoka/kuhama ambao wapo katika hatari katika kupata maambukizi ya virusi vya UKIMWI.*
- *We will also begin to understand the role that the local context plays in influencing risky sexual behaviour, which may help us to design more innovative prevention programmes that address context, rather than just sexual behaviour*
- *Pia tutaelewa jinsi mazingira tunayoishi yanavyochangia tabia hatarishi za kufanya mapenzi, hii itatusaidia kubuni mipango ya kuzuia maambukizi inayoendana na mazingira na siyo tu mikakati inayohusiana na tabia za kujamiana*
- *However, we accept that some of the work that we will do here may not have immediate direct benefits – we are grateful for their participation*
Japokuwa na tunakubaliana kuwa baadhi ya mambo tunayoyafanya yanaweza yasiwe na faida ya moja kwa moja, ila tunashukuru kwa ushiriki wenu.

Tell them why they have been selected

Nitawaambia washiriki kwanini tumewachagua wao

You have been selected because you have been identified as people who:

Mmechaguliwa kwa sababu umetambulika kama watu ambao :

- Are dagaa sellers
- Niwafanyabiashara wa dagaa
- Some of you travel outside the ward to conduct your business.

- Baadhi yenu huwa mnaenda nje ya kata kufanyabiashara.

Ask them – is this correct?

Nitawauliza hii ni kweli?

Note to researcher - If some participants say that they do not meet these basic screening criteria, please politely and sensitively ask them to leave

Wapo baadhi ya washiriki watasema hawana sifa hizi, nitawaomba kwa unyenyekevu na kwa umakini, warudi nyumbani.

Explain the focus group rules

Taratibu za mjadala

- When a participant is speaking, please listen to him/her
- Wakati mshiriki anaongea/anatoa hoja, tumsikilize hadi mwisho wa hoja yake
- When a participant is speaking, please respect his/her views
- Mshiriki anapotoa hoja tusimzomee wala kumcheka
- Please do not mention people's names in the discussion
- Wakati wa mjadala hairuhusiwi kutaja jina la mtu.

Explain tape recorder, ask them permission, and explain why we want to record them

Nitaelezea kuhusu kinasa sauti, nitaomba ruhusa ya kutumia kinasa sauti na nitaeleza kwa nini tunataka kurekodi

Switch on tape recorder

Nitakiwasha kinasa sauti

Ask people if they understand the consent form, or need any of it explaining.

Nitawauliza washiriki kama wanailewa fomu ya kuridhia kushiriki, au wanahitaji ufafanuzi.

Ask them to sign the consent form

Nitawaomba kuweka sahihi kwenye fomu za ridhaa

Ask if there any questions

Nitawauliza kama wana swali lolote

Researcher notes

Jambo la kuzingatia kwa mwezesaji

If participants do not consent:

Kama washiriki hawataridhia kushiriki

- Researchers will also explore, in a sensitive way, reasons for non-consent, and will re-emphasise that discussions will be confidential within NIMR, and that no quotes from the Focus Groups will be used without their permission.
- Mtafiti pia atadadisi kwa umakini, sababu za kutoridhia kushiriki na atasisitiza kuwa majadiliano haya yatakuwa ni siri ndani ya NIMR na hakuna nukuu yoyote kutoka kwenye majadiliano itakayotumika bila ridhaa yenu
- Discuss the purpose of the Focus Group – this focus group does not aim to collect personal/sensitive information, just to understand some of the reasons why people move out of Kisesa
- Jadili madhumuni ya majadiliano-majadiliano hayalengi kukusanya au kupata taarifa za mtu binafsi au taarifa nyeti ila kujua baadhi ya sababu zinazowafanya watu waondoke katika kata ya Kisesa.
- tell the group that anyone who does not want to participate can leave at any time
- Nitawaambia washiriki kwamba yeyote asiyetaka kushiriki anaweza kuondoka wakati wowote

Then ask them to pick a name that they will use for the focus group (to protect their identity), and a name that is not a human name

Kisha nitawaomba washiriki wachague majina ya bandia watakayoyatumia wakati wa majadiliano (ili kulinda utambulisho wao) na jina hilo lisiwe la binadamu.

Note – the reasons for asking them to choose other names are:

Sababu za kuwaomba kuchagua majina ya bandia

- To protect their identity
- Kulinda utambulisho wao
- To ensure that everything they say is confidential
- Kuhakikisha kuwa kila kitu wanachosema ni siri
- To make them feel comfortable to say what they think
- Kuwafanya wajisikie huru kusema kile wanachofikiri

- This is especially necessary when personal and sensitive questions are being asked
- Hii ni muhimu zaidi pale maswali yanayomhusu mtu na maswali nyeti yanapoulizwa

Focus group discussion

Majadiliano

Introduction

Utangulizi.

We want to know what dagaa sellers generally do, and also what happens when they leave the ward. Today we are going to ask you questions about what dagaa sellers typically do, not what YOU do!

Tunataka kujua wafanyabiashara wa dagaa huwa wanafanya nini kwa ujumla, na nini huwa kinatokea pale wapokwenda nje ya kata. Kwa leo tutakwenda kujadili mada juu ya wafanyabiashara wa dagaa huwa wanafanya nini hasa, na sio nini huwa mnafanya!

Later on, we will also be asking you some questions about sexual behaviour – we hope that these questions are not too difficult for you to answer, and again, we will only be asking you to tell us what people generally do, not what you do.

Baadae, tutawauliza mada kuhusu tabia za kufanya mapenzi- tunatarajia mada hiyo haitakuwa ngumu kwenu kujibu, pia tutawauliza wafanyabiashara wa dagaa hufanya nini na sio huwa mnafanya nini.

Note to researchers - Emphasise that we want to know what people do in general – this will help to protect peoples identities, and hopefully allow them to talk about sensitive issues.

Nitasisitiza kuwa tunataka kujua nini watu hufanya kwa ujumla-hii itasaidia kulinda utambulisho wa watu na hivyo kuleta matumaini ya kuwafanya washiriki kuongea juu ya mada nyeti.

General Method – Note to researchers

Mambo ya kuzingatia

The sections are for our benefit – you do not need to tell the participants about each section

Start each section with the first open question, and prompt and probe participants until they have provided answers to the questions detailed in each section.

Vipengele hivi ni kwa faida yetu-hakuna haja ya kuwaambia washiriki juu ya kila kipengele.

Nitaanza kila kipengele kwa swali la utangulizi nitawauliza na kuwadadisi washiriki mpaka watoe majibu ya maswali kwa undani kwa kila kipengele.

Once you are confident that we have the information we need, and then ask the next open question at the beginning of the next section.

Nitakapokuwa nimepata uhakika kuwa nimeshapata taarifa ninazozitaka, nitauliza swali linalofuata mwanzo wa kipengele kinachofuata.

The questions can be used as a backup if discussion is going the wrong way, or participants do not talk much.

Maswali yanaweza yakatumika kama mwongozo wa majadala iwapo majadiliano hayaendi vizuri au kama washiriki hawaongei sana

Allow discussion AND DON'T FORGET TO PROBE! The questions listed here are the minimum amount of information we need! Nitaruhusu majadiliano, USISAHU KUDADISI! Maswali yaliyoorodheshwa yanatuwezesha kupata baadhi ya taarifa tunazozitaka!

DON'T FORGET THAT I NEED TO BE ABLE TO UNDERSTAND THE ISSUES

USISAHU KUWA NAHITAJI KUFHAMU TAARIFA.

KEY QUESTIONS – WHY AND HOW!

MASWALI YA MSINGI-KWA NINI NA KWA NAMNA GANI!

We need to understand what people generally do – this means that answers will not always be precise – that is okay!

Tunahitaji kuelewa nini watu hufanya kwa ujumla-hii inamaanisha kwamba majibu mara zote hayawezi kuwa sahihi!

We must also emphasise that the questions we are asking below are related to their business of dagaa selling.

Lazima tuisitize kuwa maswali tutakayoyauliza hapa chini yanaendana na biashara yao ya dagaa

Section 1 - (10 mins) – Understand who dagaa sellers are

Hatua ya 1-(dk 10)- kuelewa ni watu gani hufanya biashara ya dagaa

Opening question:

Swali la utangulizi

What are the characteristics of dagaa sellers? For example, how old are they, are they mainly male

or female?

Zipi ni sifa za wafanyabiashara wa dagaa? Kwa mfano, wa umri gani, je, ni wanaume au wanawake?

Probe participants until they have also answered the following questions:wadadisi washiriki mpaka wajibu maswali yafuatayo:

- Are dagaa sellers male or female?
- Je wafanyabiashara wa dagaa ni wanawake au wanaume?
 - Are there any differences between male and female dagaa sellers?
 - Je, kuna tofauti kati ya wafanyabiashara wa kike na wa kiume?
 - What proportion of dagaa sellers are female/male
 - Uwiano kati ya wanaume na wanawake ukoje
- How old are they?
- Wana umri gani?
- Are they married?
- Je, wameoa au kuolewa?
- How wealthy are they?
- Hali yao ya kiuchumi/kipato ikoje?
 - What are the differences between richer and poorer dagaa sellers?
 - Ipi ni tofauti kati ya wafanyabiashara wa dagaa majiri na masikini?
- From which part of Kisesa/Bukandwe do they come from?
- Wanatokea sehemu gani ya Kisesa/Bukandwe?

Section 2 – (15 mins) – Understand more about dagaa selling

Hatua ya 2-(dk 15)-Elewa zaidi kuhusu biashara ya dagaa

Opening question:

Swali la utangulizi:

Can you tell us more about how the dagaa business works? What might a typical week for a dagaa seller look like?

Mnaweza kutuambia kwa undani kuhusu biashara ya samaki inavyofanyika?ratiba ya wauza dagaa kwa wiki ikoje?

Then

Kisha

- How much would a dagaa seller buy/sell each day? How much profit would they make? Ni dagaa kiasi gani muuzaji hununua/huuzwa kwa siku? Ni faida kiasi gani huwa anapata?
- Where do dagaa sellers get their capital from?
- Wafanyabiashara wa dagaa huwa wanapata wapi mtaji?
- For what reasons do dagaa sellers leave the ward to conduct their business?
- Ni sababu zipi huwafanya wafanyabiashara wa dagaa waondoke katani na kwenda kufanyabiashara sehemu zingine?
- We also want to know where they go to:
- Tunapenda kufahamu pia ni wapi huwa wanakwenda:
 - Buy fish
 - Kununua samaki
 - Sell fish
 - Kuuza samaki
- How do they decide to go there?
- Huwa wanaamua je kwenda kule?
- For what reasons do some dagaa sellers leave the ward to conduct their business, but others do not?
- Ni sababu zipi zinawafanya wafanyabiashara baadhi wadagaa waende kufanyabiashara nje ya kata na wengine hawaendi?

Researchers note – we are very interested in what factors determine who does and does not leave the ward to conduct their business

Jambo la kukumbuka kwa mtafiti- tunapenda kufahamu ni sababu zipi huwafanya wafanyabiashara wengine waende kufanyabiashara nje ya kata na wengine wasiende

CONSIDER A BREAK NOW OR AFTER SECTION 3. DURING THE BREAK, STOP RECORDING, MOVE TO FOLDER B AND RESTART THE RECORDING

ZINGATIA MUDA WA MAPUMZIKO BAADA YA HATUA HII AU HATUA YA TATU, SITISHA KUREKODI, KUPELEKA KWENYE FOLDER B NA UANZE KUREKODI TENA

Section 3 - (15mins) Patterns of movement

Hatua ya 3- (dk 15) mizunguko ya yao katika kufanya biashara

Opening question

Swali la utangulizi

For dagaa sellers that leave the ward, how often do they go?

Kwa wafanyabiashara wa dagaa wanaoondoka katani na kwenda kufanyabiashara sehemu nyingine, huwa wanaondoka mara ngapi?

Probe participants until they have also answered the following questions:

Wadadisi washiriki mpaka wawe wamejibu maswali yafuatayo:

- How long do they stay away?
- Huwa wanakaa huko nkwa muda gani?
- Do they always go to the same place?
- Je, huwa wanaenda sehemu moja?
- Who do they travel with?
- Huwa wanaenda/safari na nani?
- Do they stay there overnight?
- Je, huwa wanakaa huko usiku kucha?

Section 4 - (20 mins) – what happens when they are away?

Hatua ya 4- (dk 20)- nini huwa kinafanyika wanapokuwa kule?

Opening question

Swali la utangulizi

When dagaa sellers leave the ward, what do they do?

Lini huwa wanaondoka katani, huwa wanafanya nini?

Probe participants until they have also answered the following questions:

Wadadisi washiriki mpaka wawe wamejibu maswali yafuatayo:

- If they stay overnight, where do they stay? Who do they stay with?
- Kama hulala huko usiku kucha, huwa wanakaa wapi? Huwa wanaishi na nani?

Researchers notes - also ask what are the main difficulties that dagaa sellers face while away

Jambo la kukumbuka kwa Mtafiti- pia waulize wauza dagaa huwa wanakumbana na matatizo gani wanapokuwa wameenda nje ya kata.

Section 5 - (30 mins) – Sexual Behaviour

Hataua 5- (dk 30)- Tabia za kufanya mapenzi

Tell them we are now going to ask them some sensitive questions, and that we hope that this is not too difficult for them. Remind them that we are not asking what they do, but just what happens in general

Nitawaambia kuwa tunaenda kujadili mada nyeti, na nafikiri jambo hili si gumu kwenu.

Nitawakumbusha kuwa hatutajadili mnachokifanya nyinyi binafsi bali kile wanachofanya wakulima kwa ujumla.

Opening question

Swali la utangulizi

Do dagaa sellers have relationships with people other than their spouses or partners while they are outside the ward conducting their business?

Je, wauza dagaa huwa wanamahusiano na watu wengine tofauti na wenzi au wapenzi wao wakiwa wanafanyabiashara zao nje ya kata?

Probe participants until they have also answered the following questions:

Wadadisi washiriki mpaka wawe wamejibu maswali yafuatayo:

- Do they have sex with anyone while they are away from the ward?

- Je, huwa wanafanya mapenzi na mtu yeyote wakiwa nje ya kata?
- If so, why?
- kama ni hivyo, ni kwa nini?
- How often does this happen?
- Ni mara ngapi huwa wanafanya hivyo?
- Does this happen in certain situations?
- Huwa inatokea katika mazingira gani?
- Who do they have sex with?
- Huwa wanafanya mapenzi na nani?
- Is this ever for exchange of goods or fish?
- Je, hii inafanyika kwa kubadilishina na vitu au samaki?
- Do they use protection? (or ask their partners to use protection)?
- Je, huwa wanatumia kinga? (au huwa wanawaambia wapenzi wao kutumia kinga?)

Researchers Note – We have heard in the focus group that dagaa sellers have sex with middlemen in return for fish. We want to understand more about this, and also if both mobile and non-mobile dagaa sellers do this

Jambo la kukumbuka kwa Mtafiti-Tulisikia kwenye majadiliano yaliyopita kuwa wauza dagaa huwa wanafanya mapenzi na walanguzi ili wapewe samaki. Tunahitaji kufahamu zaidi kuhusiana na hili, na pia kama wote wanaoondoka na wale ambao hawaondoki wanafanya hili pia.

Section 6 - (20 mins)

Hatua ya 6- (dk 20)

Opening question

Swali la utangulizi

- How does their business affect their relationship with their spouses/partners?

Ni kwa namna gani kutokuwepo kwao nyumbani kunaathiri mahusiano yao na wenzi /wapenzi wao?

Closing the focus group

Kufunga majadiliano

We have asked you questions about what dagaa sellers do now, but would also like to know if this has always taken place in Kisesa

Tumewauliza maswali kuhusu wafanyabiashara wa dagaa wanavyofanya, lakini tunapenda pia tungependa kujua kama kitu hiki huwa kinafanyika hapa Kisesa kila mara?

Say

“we have asked you lots of questions that we thought were important, but we may have missed something. Is there anything else that we should know about the business of dagaa selling?”

“tumewauliza maswali mengi ambayo tulifikiri ni ya msingi, lakini pengine tunaweza kuwa tumesau kitu Fulani ambacho ni cha muhimu. Je, kuna kitu chochote muhimu kuhusiana na wafanyabiashara wa dagaa ambacho mngependa tukifahamu?”

Then ask them if they have any questions that they want to ask us

Halafu waulize washiriki kama wanaswali lolote ambalo wangependa kuuliza

Thank them for coming

Nitawashukuru wakulima kwa kushiriki

End/ mwisho

We have asked you questions about what dagaa sellers do now, but would also like to know if this has always taken place in Kisesa?

Say

“we have asked you lots of questions that we thought were important, but we may have missed something. Is there anything else that we should know about the business of dagaa selling?”

Then ask them if they have any questions that they want to ask us

Thank them for coming

End

Appendix E: Focus group Phase 2 researcher guide: Dagaa sellers (male) – English and Swahili final version

Majadiliano hatua ya pili-Mwongozo wa Mtafiti-wafanyabiashara wa Dagaa (wanamume)

People arrive

Washiriki kuwasili

Welcome participants as they arrive! Greet, welcome, thanks

Washiriki kuwasili! Wakaribishea, wasalimie na uwashukuru kwa kufika

Note – Researchers to decide when it is appropriate to give refreshments to participants.

Mwezes haji ataamua na muda upi unafaa kuwapatia washiriki viburudisho.

You can greet them in Sukuma, but please inform them that we will need to do the focus group in Swahili, as this subject is difficult to discuss in Sukuma

Unaweza kuwasalimia kwa kisukuma, lakini wataarifu kuwa majadiliano yatafanyika kwa Kiswahili kwani ni vigumu kujadili mada hii kwa kisukuma.

Give them a consent form when they arrive

Nitawapa fom u ya kuridhia kushiriki mara tu washiriki wanapofika

Once everyone has arrived, ask people to take a seat

Washiriki wote wakishafika nitawaambia wakae.

Once people are sat down,

Wakishakaa,

Thank and welcome them again

Nitawashukuru na kuwakaribisha kwa mara nyingine tena

Introduce yourself

Nitajitambulisha

Ask them to introduce themselves again

Nitawaomba wajitambulishe tena

Introduce the project

Mradi huu unafanywa na mtafiti kutoka chuo kikuu cha Uingereza kwa kushirikiana na mradi wa TAZAMA, ulio chini ya Taasisi ya taifa ya utafiti wa magonjwa ya binadamu kituo cha Mwanza.

Lengo la Utafiti

- We are studying the relationship between population mobility and HIV
- Tunatafiti kuhusu uhusiano uliopo wa watu kuondoka kwenye makazi yao, unavyosababisha maambukizi ya virusi vya UKIMWI.
- This is the second stage of the project. In the first stage we discussed the reasons people leave Kisesa Ward, and which reasons were the most important in Kisesa.
- Hii ni hatua ya pili ya utafiti. Katika hatua ya kwanza tulijadili sababu zinazowafanya watu waondoke kwenye kata ya Kisesa, na sababu zilizokuwa muhimu sana Kisesa.
- We were told that one of the main reasons that people leave the ward is to conduct business
- Tuliambiwa kuwa sababu moja kuu inayowafanya watu waende nje ya kata ni kufanya biashara.

Tell the participants the aim of the focus group

Nitawaambia washiriki lengo la majadiliano.

- The aim of the focus group is to understand more about the business of dagaa selling in general. Also we need to know more about dagaa sellers who travel outside the ward and how this might influence sexual behaviour
- Lengo la majadiliano ni kuelewa zaidi kuhusu biashara ya dagaa kwa ujumla. Pia ni tunapenda kufahamu wauza dagaa wanaoenfa nje ya kata nah ii ni kwa jinsi gani inavyopelekea tabia hatarishi katika maswala ya mapenzi.

Note – if participants ask how the research will benefit the community, explain:

Kama washiriki watauliza kwa namna gani utafiti utainufaisha jamii, nitaeleza:

- Understanding more about the links between migration and mobility will enable us to target prevention programmes to mobile populations who are most at risk of HIV*
- Kuelewa zaidi uhusiano kati ya watu kuondoka /kuhama na maambukizi ya virusi vya UKIMWI nah ii itatusaidia kubuni mipango ya kuzuia maambukizi kwa watu wanaondoka/kuhama ambao wapo katika hatari katika kupata maambukizi ya virusi vya UKIMWI.*
- We will also begin to understand the role that the local context plays in influencing risky sexual behaviour, which may help us to design more innovative prevention programmes that address context, rather than just sexual behaviour*
- Pia tutaelewa jinsi mazingira tunayoishi yanavyochangia tabia hatarishi za kufanya mapenzi, hii itatusaidia kubuni mipango ya kuzuia maambukizi inayoendana na mazingira na siyo tu mikakati inayohusiana na tabia za kujamiana*
- However, we accept that some of the work that we will do here may not have immediate direct benefits – we are grateful for their participation*
Japokuwa na tunakubaliana kuwa baadhi ya mambo tunayoyafanya yanaweza yasiwe na faida ya moja kwa moja, ila tunashukuru kwa ushiriki wenu.

Explain tape recorder, ask them permission, and explain why we want to record them

Nitaelezea kuhusu kinasa sauti, nitaomba ruhusa ya kutumia kinasa sauti na nitaeleza kwa nini tunataka kurekodi

Switch on tape recorder

Nitakiwasha kinasa sauti

Ask people if they understand the consent form, or need any of it explaining.

Nitawauliza washiriki kama wanailewa fomu ya kuridhia kushiriki, au wanahitaji ufafanuzi.

Ask them to sign the consent form

Nitawaomba kuweka sahihi kwenye fomu za ridhaa

Ask if there any questions

Nitawauliza kama wana swali lolote

Researcher notes

Jambo la kuzingatia kwa mwezesaji

If participants do not consent:

Kama washiriki hawataridhia kushiriki

- Researchers will also explore, in a sensitive way, reasons for non-consent, and will re-emphasise that discussions will be confidential within NIMR, and that no quotes from the Focus Groups will be used without their permission.
- Mtafiti pia atadadisi kwa umakini, sababu za kutoridhia kushiriki na atasisitiza kuwa majadiliano haya yatakuwa ni siri ndani ya NIMR na hakuna nukuu yoyote kutoka kwenye majadiliano itakayotumika bila ridhaa yenu
- Discuss the purpose of the Focus Group – this focus group does not aim to collect personal/sensitive information, just to understand some of the reasons why people move out of Kisesa
- Jadili madhumuni ya majadiliano-majadiliano hayalengi kukusanya au kupata taarifa za mtu binafsi au taarifa nyeti ila kujua baadhi ya sababu zinazowafanya watu waondoke katika kata ya Kisesa.
- tell the group that anyone who does not want to participate can leave at any time
- Nitawaambia washiriki kwamba yeyote asiyetaka kushiriki anaweza kuondoka wakati wowote

Then ask them to pick a name that they will use for the focus group (to protect their identity), and a name that is not a human name

Kisha nitawaomba washiriki wachague majina ya bandia watakayoyatumia wakati wa majadiliano (ili kulinda utambulisho wao) na jina hilo lisiwe la binadamu.

Note – the reasons for asking them to choose other names are:

Sababu za kuwaomba kuchagua majina ya bandia

- To protect their identity
- Kulinda utambulisho wao
- To ensure that everything they say is confidential
- Kuhakikisha kuwa kila kitu wanachosema ni siri

- To make them feel comfortable to say what they think
- Kuwafanya wajisikie huru kusema kile wanachofikiri
 - This is especially necessary when personal and sensitive questions are being asked
 - Hii ni muhimu zaidi pale maswali yanayomhusu mtu na maswali nyeti yanapoulizwa

Focus group discussion

Majadiliano

Introduction

Utangulizi.

We want to know what dagaa sellers generally do, and also what happens when they leave the ward. Today we are going to ask you questions about what dagaa sellers typically do, not what YOU do!

Tunataka kujua wafanyabiashara wa dagaa huwa wanafanya nini kwa ujumla, na nini huwa kinatokea pale wapokwenda nje ya kata. Kwa leo tutakwenda kujadili mada juu ya wafanyabiashara wa dagaa huwa wanafanya nini hasa, na sio nini huwa mnafanya!

Later on, we will also be asking you some questions about sexual behaviour – we hope that these questions are not too difficult for you to answer, and again, we will only be asking you to tell us what people generally do, not what you do.

Baadae, tutawauliza mada kuhusu tabia za kufanya mapenzi- tunatarajia mada hiyo haitakuwa ngumu kwenu kujibu, pia tutawauliza wafanyabiashara wa dagaa hufanya nini na sio huwa mnafanya nini.

Note to researchers - Emphasise that we want to know what people do in general – this will help to protect peoples identities, and hopefully allow them to talk about sensitive issues.

Nitasisitiza kuwa tunataka kujua nini watu hufanya kwa ujumla-hii itasaidia kulinda utambulisho wa watu na hivyo kuleta matumaini ya kuwafanya washiriki kuongea juu ya mada nyeti.

General Method – Note to researchers

Mambo ya kuzingatia

The sections are for our benefit – you do not need to tell the participants about each section

Start each section with the first open question, and prompt and probe participants until they have provided answers to the questions detailed in each section.

Vipengele hivi ni kwa faida yetu-hakuna haja ya kuwaambia washiriki juu ya kila kipengele.

Nitaanza kila kipengele kwa swali la utangulizi nitawauliza na kuwadadisi washiriki mpaka watoe majibu ya maswali kwa undani kwa kila kipengele.

Once you are confident that we have the information we need, and then ask the next open question at the beginning of the next section.

Nitakapokuwa nimepata uhakika kuwa nimeshapata taarifa ninazozitaka, nitauliza swali linalofuata mwanzo wa kipengele kinachofuata.

The questions can be used as a backup if discussion is going the wrong way, or participants do not talk much.

Maswali yanaweza yakatumika kama mwongozo wa majadala iwapo majadiliano hayaendi vizuri au kama washiriki hawaongei sana

Allow discussion AND DON'T FORGET TO PROBE! The questions listed here are the minimum amount of information we need! Nitaruhusu majadiliano, USISAHU KUDADISI! Maswali yaliyoorodheshwa yanatuwezesha kupata baadhi ya taarifa tunazozitaka!

DON'T FORGET THAT I NEED TO BE ABLE TO UNDERSTAND THE ISSUES

USISAHU KUWA NAHITAJI KUFAHAMU TAARIFA.

KEY QUESTIONS – WHY AND HOW!

MASWALI YA MSINGI-KWA NINI NA KWA NAMNA GANI!

We need to understand what people generally do – this means that answers will not always be precise – that is okay!

Tunahitaji kuelewa nini watu hufanya kwa ujumla-hii inamaanisha kwamba majibu mara zote hayawezi kuwa sahihi!

We must also emphasise that the questions we are asking below are related to their business of dagaa selling.

Lazima tasisitize kuwa maswali tutakayoyauliza hapa chini yanaendana na biashara yao ya dagaa

Section 1 - (10 mins) – Understand who dagaa sellers are

Hatua ya 1-(dk 10)- kuelewa ni watu gani hufanya biashara ya dagaa

Opening question:

Swali la utangulizi

What are the characteristics of dagaa sellers? For example, how old are they, are they mainly male

or female?

Zipi ni sifa za wafanyabiashara wa dagaa? Kwa mfano, wa umri gani, je, ni wanaume au wanawake?

Probe participants until they have also answered the following questions:wadadisi washiriki mpaka wajibu maswali yafuatayo:

- Are dagaa sellers male or female?
- Je wafanyabiashara wa dagaa ni wanawake au wanaume?
 - Are there any differences between male and female dagaa sellers?
 - Je, kuna tofauti kati ya wafanyabiashara wa kike na wa kiume?
 - What proportion of dagaa sellers are female/male
 - Uwiano kati ya wanaume na wanawake ukoje
- How old are they?
- Wana umri gani?
- Are they married?
- Je, wameoa au kuolewa?
- How wealthy are they?
- Hali yao ya kiuchumi/kipato ikoje?
 - What are the differences between richer and poorer dagaa sellers?
 - Ipi ni tofauti kati ya wafanyabiashara wa dagaa majiri na masikini?
- From which part of Kisesa/Bukandwe do they come from?
- Wanatokea sehemu gani ya Kisesa/Bukandwe?

Section 2 – (15 mins) – Understand more about dagaa selling

Hatua ya 2-(dk 15)-Elewa zaidi kuhusu biashara ya dagaa

Opening question:

Swali la utangulizi:

Can you tell us more about how the dagaa business works? What might a typical week for a dagaa seller look like?

Mnaweza kutuambia kwa undani kuhusu biashara ya samaki inavyofanyika?ratiba ya wauza dagaa kwa wiki ikoje?

Then

Kisha

- How much would a dagaa seller buy/sell each day? How much profit would they make? Ni dagaa kiasi gani muuzaji hununua/huuza kwa siku? Ni faida kiasi gani huwa anapata?
- Where do dagaa sellers get their capital from?
- Wafanyabiashara wa dagaa huwa wanapata wapi mtaji?
- For what reasons do dagaa sellers leave the ward to conduct their business?
- Ni sababu zipi huwafanya wafanyabiashara wa dagaa waondoke katani na kwenda kufanyabiashara sehemu zingine?
- We also want to know where they go to:
- Tunapenda kufahamu pia ni wapi huwa wanakwenda:
 - Buy fish
 - Kununua dagaa
 - Sell fish
 - Kuuza dagaa
- Who do male dagaa sellers sell dagaa to?
- Huwa wanawauzia watu gani dagaa?
- How do they decide to go there?
- Huwa wanaamua je kwenda kule?

Researchers note – In the previous focus groups and informal discussions we have understood that male dagaa sellers are often middlemen. We want to know more about this especially if any of our participants are middlemen

Kumbuka- katika majadiliano yaliyopita tuliambiwa kuwa wauza dagaa wa kiume mara nyingi ni walanguzi. Tungependa kujua zaidi kuhusu hili hasa kama kuna mshiriki ambaye ni mlanguzi.

CONSIDER A BREAK NOW OR AFTER SECTION 3. DURING THE BREAK, STOP RECORDING, MOVE TO FOLDER B AND RESTART THE RECORDING

ZINGATIA MUDA WA MAPUMZIKO BAADA YA HATUA HII AU HATUA YA TATU, SITISHA KUREKODI, KUPELEKA KWENYE FOLDER B NA UANZE KUREKODI TENA

Section 3 - (15mins) Patterns of movement

Hatua ya 3- (dk 15) mizunguko ya yao katika kufanya biashara

Opening question

Swali la utangulizi

For dagaa sellers that leave the ward, how often do they go?

Kwa wafanyabiashara wa dagaa wanaoondoka katani na kwenda kufanyabiashara sehemu nyingine, huwa wanaondoka mara ngapi?

Probe participants until they have also answered the following questions:

Wadadisi washiriki mpaka wawe wamejibu maswali yafuatayo:

- How long do they stay away?
- Huwa wanakaa huko nkwa muda gani?
- Do they always go to the same place?
- Je, huwa wanaenda sehemu moja?
- Who do they travel with?
- Huwa wanaenda/safari na nani?
- Do they stay there overnight?
- Je, huwa wanakaa huko usiku kucha?

Section 4 - (20 mins) – what happens when they are away?

Hatua ya 4- (dk 20)- nini huwa kinafanyika wanapokuwa kule?

Opening question

Swali la utangulizi

When dagaa sellers leave the ward, what do they do?

Lini huwa wanaondoka katani, huwa wanafanya nini?

Probe participants until they have also answered the following questions:

Wadadisi washiriki mpaka wawe wamejibu maswali yafuatayo:

- If they stay overnight, where do they stay? Who do they stay with?
- Kama hulala huko usiku kucha, huwa wanakaa wapi? Huwa wanaishi na nani?

Researchers notes - also ask what are the main difficulties that dagaa sellers face while away

Jambo la kukumbuka kwa Mtafiti- pia waulize wauza dagaa huwa wanakumbana na matatizo gani wanapokuwa wameenda nje ya kata.

Section 5 - (30 mins) – Sexual Behaviour

Hataua 5- (dk 30)- Tabia za kufanya mapenzi

Tell them we are now going to ask them some sensitive questions, and that we hope that this is not too difficult for them. Remind them that we are not asking what they do, but just what happens in general

Nitawaambia kuwa tunaenda kujadili mada nyeti, na nafikiri jambo hili si gumu kwenu.

Nitawakumbusha kuwa hatutajadili mnachokifanya nyinyi binafsi bali kile wanachofanya wakulima kwa ujumla.

Opening question

Swali la utangulizi

Do dagaa sellers have relationships with people other than their spouses or partners while they are outside the ward conducting their business?

Je, wauza dagaa huwa wanamahusiano na watu wengine tofauti na wenzi au wapenzi wao wakiwa wanafanyabiashara zao nje ya kata?

Probe participants until they have also answered the following questions:

Wadadisi washiriki mpaka wawe wamejibu maswali yafuatayo:

- Do they have sex with anyone while they are away from the ward?
- Je, huwa wanafanya mapenzi na mtu yeyote wakiwa nje ya kata?
- If so, why?
- kama ni hivyo, ni kwa nini?
- How often does this happen?
- Ni mara ngapi huwa wanafanya hivyo?
- Does this happen in certain situations?
- Huwa inatokea katika mazingira gani?
- Who do they have sex with?
- Huwa wanafanya mapenzi na nani?
- Is this ever for exchange of goods or fish?
- Je, hii inafanyika kwa kubadilishina na vitu au dagaa?
- Do they use protection? (or ask their partners to use protection)?
- Je, huwa wanatumia kinga? (au huwa wanawaambia wapenzi wao kutumia kinga?)

Researchers Note – We have heard in previous focus groups that sometimes middlemen have sex with female dagaa sellers in return for fish. We want to understand more about this.

Jambo la kukumbuka kwa Mtafiti-Tulisikia kwenye majadiliano yaliyopita wakati mwingine wauza dagaa huwa wanafanya mapenzi na walanguzi ili wapewe samaki. Tunahitaji kufahamu zaidi kuhusiana na hili.

Section 6 - (20 mins)

Hatua ya 6- (dk 20)

Opening question

Swali la utangulizi

- How does their business affect their relationship with their spouses/partners?

Ni kwa namna gani kutokuwepo kwao nyumbani kunaathiri mahusiano yao na wenzi /wapenzi wao?

Closing the focus group

Kufunga majadiliano

We have asked you questions about what dagaa sellers do now, but would also like to know if this has always taken place in Kisesa

Tumewauliza maswali kuhusu wafanyabiashara wa dagaa wanavyofanya, lakini tunapenda pia tungependa kujua kama kitu hiki huwa kinafanyika hapa Kisesa kila mara?

Say

“we have asked you lots of questions that we thought were important, but we may have missed something. Is there anything else that we should know about the business of dagaa selling?”

“tumewauliza maswali mengi ambayo tulifikiri ni ya msingi, lakini pengine tunaweza kuwa tumesau kitu Fulani ambacho ni cha muhimu. Je, kuna kitu chochote muhimu kuhusiana na wafanyabiashara wa dagaa ambacho mngependa tukifahamu?”

Then ask them if they have any questions that they want to ask us

Halafu waulize washiriki kama wanaswali lolote ambalo wangependa kuuliza

Thank them for coming

Nitawashukuru wakulima kwa kushiriki

End/ mwisho

We have asked you questions about what dagaa sellers do now, but would also like to know if this has always taken place in Kisesa?

Say

“we have asked you lots of questions that we thought were important, but we may have missed something. Is there anything else that we should know about the business of dagaa selling?”

Then ask them if they have any questions that they want to ask us

Thank them for coming

End

Appendix F: In-depth Interviews Phase 3 researcher guide:

Farmers – English and Swahili final version

Demographic information

Taarifa ya mtu binafsi

- Age
- umri
- Marital status/children/other household members/dependents
- Umeoa/kuolewa/watoto/wanafamilia wengine(ndugu)/wanaokutegemea
- Social position?
- Una nafasi/wadhifa gani katika jamii?
- Wealth – assets owned, capital, income
- Utajiri- mali unazomiliki, mtaji, kipato
- Land owned in Kisesa
- Ardhi inavyomilikiwa hapa kisesa
- How does his household survive economically?
- Namna gani familia yako inavyojimudu kiuchumi?

Moving

Mizunguko

Thinking about the last year:

Fikiria mwaka uliopita:

- Where did you go to cultivate land?
- Ulienda kulima wapi?
- Was this the first time you left the ward to farm?
- Je, ilikuwa mara yako ya kwanza kuondoka katani kwenda kulima sehemu nyingine?
- What factors made him leave the ward to farm?
- Ni vitu/sababu gani vilikufanya uondoke katani na kwenda kulima sehemu nyingine?
 - How have these changed in recent years?
 - Je, vitu hivi vimebadilika kwenye miaka ya hivi karibuni?
- What were his expectations before he left?
- Yapi yalikuwa mataarifa yako kabla hujaondoka na kwenda kulima kwingin?
- How did he make the decision to go there/hear about opportunities?
- Je, uliamuje kwenda huko au ulisikia huko kuna mafanikio sana?
 - What other options were available to him?
 - Je, unafanya na shughuli nyingine?
- Does he have other family/friends there?
- J, unafamilia au marafiki huko?
- Did his family travel with him? If not, why not?
- Je, huwa unaenda na familia yako? Kama ni hapana, kwa nini hapana?
- Would he consider moving his household there permanently?
- Je, unampanga wa kuihamishia familia yako kule?

- Why or why not
- kwa nini/ kama hapana kwa nini?
- How does the place he goes to compare to Kisesa?
- Je, sehemu unayoenda ikoje ukilinganisha na Kisesa?

Patterns of movement

Jinsi mizunguko inavyofanyika

Over the last year

Kwa mwaka uliopita

- How many times did he farm land there?
- Ni mara ngapi umelima huko?
- How long was each period?
- Kila kipindi huwa kinachukua muda gani?
- Does this differ depending on the season?
- Je, hali hii huwa iatofautian kulingana na majira?
- Did he return home? If so, how often?
- Huwa unarudi nyumbani/ kama ni hivyo ni mara ngapi?
- How much contact did he have with home?
- Uliwasiliana na familia yako mara ngapi?

What he did when he was there

Ulikuwa iunafanya nini ulipokuwa kule?

- How much land did he farm each time he went?
- Unapoenda huko huwa unalima shamba la ukubwa gani?
- How did he access this land? Rented, purchased?
- Ulilipataje hilo/ huwa unapataje shamba
- How much capital did he need?
- Ulihitaji/ulikuwa na mtaji kiasi gani
- What crops did he grow? Was this different for each trip?
- Ni mazao ya aina gani huwa unalima? Je, huwa yanatofautiana kila mara unapoenda?
- What inputs did he use (if any)?
- Ulitumia vitu gani (kama vipo)
- Did he hire other labour?
- Je, uliajiri vibarua?
- How much did he harvest?
- Ulipata mavuno kiasi gani?
- What were the difficulties that he faced while away?
- Matatizo gani ulikumbana nayo ulipokuwa kule?
- Were his trips successful? Why (or why not)?
- Je, safari zako zilikuwa na mafanikio au la kwa nini?
- Were his expectations met?
- je, ulitimiza matarajio yako?

- Where does he stay? Who does he stay with?
- Ulikuwa unakaa wapia? Ulikuwa unakaa na nani?
- What is his relationship like with the local villagers/residents?
- Je, uhusiano wako na wanakijiji ulikuwaje?
- How easy was it for him to live there temporarily?
- Ilikuwa rahisi kiasi wewe kuishi kule kwa muda mfupi?
- How was this year different to previous years?
- Mwaka huu ulikuwa na tofauti gani mwaka uliopita?

Sexual behaviour

Tabia za mahusiano/ mapenzi.

- What did he do in his spare time?
- Huwa unafanya nii kwenye muda wako wa ziada (unapokuwa hufanyi shughuli za shamba)?
- Did he have relationships with people other than his spouse over the last year?
- Je, ulikuwa na mahusiano ya kimapenzi na watu wengine ambao sio wenzi/ wapenzi wako?
- Did he have sex while away?
- Je, ulifanya mapenzi ulipokuwa kule?
 - If so, who with?
 - Kama ni ndiyo, na nani?
 - Why?
 - Kwa nini?
- How often did this happen?
- Ni mara ngapi?
- Was this in certain situations?
- Je, hii ilitokea katika mazingira Fulani/gani?
- Did he use protection?
- Ulitumia kinga?
- Does he think he is at risk of HIV?
- Je, unafikiria uko katika hatari ya kupata maambukizi ya Virusi Vya UKIMWI?

On return home

Unaporudi nyumbani

- How did being away influence his relationship with his spouse?
- Je, kuwa mbali na mwenzi wako kunaathiri vipi mahusiano yenu?
- Did this cause any difficulties?
- Je, hali hii ilileta matatizo yoyote?
 - If so, why?
 - Kama ni ndiyo kwa nini?

Appendix G: In-depth Interviews Phase 3 researcher guide: Dagaa sellers (female) – English and Swahili final version

Demographic information

Taarifa za mtu binafsi

- Age
- umri
- Marital status/children/other household members/dependents
- Umeolewa/watoto/watu wengine katik familia(ndugu)/wanaokutegemea
- Social position?
- Nafasi yako katika jamii?
- Wealth – assets owned, capital, income
- Utajiri-mali unazomiliki, mtaji, kipato
- How does her household survive economically?
- Kaya yako inajimudu vipi kiuchumi?
- Where is she from in Kisesa?
- Unatokea sehemu gani ya Kisesa?
- How long have you been a dagaa seller? (Probe – how did she become a dagaa seller?)
- Ni muda gani sasa umekuwa ukifanyabiashara hii ya dagaa? (dadisi-ni namna gani alianza kuuza dagaa?)

The dagaa business

Biashara ya dagaa

Thinking about the last 2 months

Fikiri kuhusu miezi miwili iliyopita

- How have you conducted your business?
- Huwa unafanyaje biashara yako?
 - Where do you get your capital from?
 - Ulipata wapi mtaji?
 - How much dagaa did you buy and sell? (estimate, or on average)
 - Huwa unanunua dagaa kiasi gani na unauza kiasi gani? (kadiria, au wasitani)
- Who did you buy from/ who did you sell to?
- Huwa unanunua kutoka kwa nani? Na huwa unawauzia wakina nani?
- How has the last 2 months compared to the last year?
- Vipi kuhusu biashara yako miezi miwili iliyopita ukilinganisha na mwaka uliopita?
 - Does business change over the seasons?
 - Je, biashara inabadilika kulingana na msimu?
 - What factors are influencing business now?
 - Ni mambo gani yanayochangia biashara yako kwa sasa?
- Did you leave the ward to conduct your business? (No – skip to page 3)

- Je, huwa unaondoka katani kwa ajili ya kufanya biashara yako? (kama ni hapana-nenda uk.3)

For those that leave the ward

Kwa wale wanaoondoka katani

Moving

Mizunguko

Why did you leave the ward to conduct your business? (probe – is this different for buying and selling)

Kwa nini huwa unaoondoka katani kwa ajili ya kufanya biashara yako? (dadisi –je, hii ni unapouza daga na kununua).

- Where did you go to buy/sell daga?
- Huwa unaenda kununua daga wapi/ na wapi huwa unaenda kuuza?
- How did you make the decision to go there/hear about opportunities?
- Ulifikiaje uamuzi wa kwenda huko au ulsikia kuwa kuna biashara nzuri?
 - What other options were available to you?
 - Je, kuna shughuli zingine huwa unafanya?
- How did you travel to the place(s) you went to?
- Je, huwa (safirije) unaendaje kwenye sehemu ambazo huwa unaenda?
- How do the places you go to compare to Kisesa?
- Je, unaweza kulinganishaje hizo sehemu na Kisesa?

Patterns of movement

Jinsi unavyofanya mizunguko

Over the last 2 months

Miezi miwili iliyopita

- How often did you go to the places you mentioned above?
- Huwa unaenda mara ngapi kwenye sehemu ulizotaja hapo juu?
- Do you always go there, or do you go to different places sometimes?
- Huwa unaenda huko mara kwa mara, au huwa unaenda maeneo mengine wakati mwingine?
 - If so, why?
 - Kama ni ndiyo, kwa nini?
- How long did you stay away?
- Huwa unakaa huko kwa muda gani?
- Did you stay overnight?
- Huwa unalala huko?
 - If so, why?

- Kama ni ndiyo kwa nini?
- How often?
- Ni mara ngapi?

What she does when she is there

Huwa unafanya nini ukiwa huko?

- How did you conduct your business while away?
- Je, huwa unafanyaje biashara zako ukiwa kule?
- What were the difficulties that you faced while away?
- Je, unakumbana na matatizo gani unapokuwa kule?
- Were your trips successful? Why (or why not)?
- Je, safari zako zinamanufaa? Kwa nini au (kwa nini hapana)
- Where did you stay? Who did you stay with?
- Wapi huwa unakaa? Na huwa unakaa na nani?
- How was this month different to previous months?
- Mwezi huu unatofauti gani ukilinganisha na uliopita?

Sexual behaviour (mobile)

Tabia za mahusiano/mapenzi (kwa wale wanaooodoka)

- What did you do in your spare time?
- Huwa unafanya nini wakati a muda wa ziada
- Did you have relationships with people other than your spouse over the last year?
- Je, ulishawahi kuwa kwenye mahusiano na mtu yeyote ambaye sio mume wako mwaka uliopita?
- Did you have sex while away?
- Je, ulifanya mapenzi wakati ukiwa nje ya kata?
 - If so, who with?
 - Kama ni ndiyo, na nani?
 - Why?
 - Kwa nini?
- How often did this happen?
- Je, ni mara ngapi?
- Was this in certain situations?
- Je, ilitokea katika mazingira gani?
- Was this ever for exchange of goods or fish?
- Je, ilifanyika kwa kubadilishana na vitu au samaki?
 - If so, why?
 - Kama ni ndiyo
- Did you use protection?
- Ulitumia kinga?
- Do you think you are at risk of contracting HIV?
- Je, unafikiri uko katika hatari ya kupata maambukizi ya Virusi Vya UKIMWI?

On return home

Unaporudi nyumbani

- How did being away influence her relationship with her spouse?
- Je kutokuwepo kwako nyumbani huwa kunsaidia vipi uhusiano wako na mwezi wako?
- Did this cause any difficulties?
- Je, hali hii huwa inaleta matatizo yoyote?
 - If so, what happened?
 - Kama ni ndiyo, nini huwa kinatokea?
- How does your partner/spouse feel about you being away?
- Mpenzi wako au mume wako huwa anajisikiaje unapokuwa haupo?

For those that don't leave the ward

Kwa wale ambao hawaondoki katani

- Why don't you leave the ward to buy/sell dagaa?
- Kwa nini huwa huondoki katani kwenda kununua ssdagaa au kuuza dagaa
- In the past, did you ever leave the ward to buy/sell daga?
- Kipindi cha nyuma ulishawahi kuondoka katani kwenda kununua/kuuza dagaa sehemu zingine?
 - If you did, why don't you do that anymore?
 - Kama ulifanya, kwa nini siku hizi huendi?
- Would you like to leave the ward to conduct your business?
- Je, ungependa kwenda kufanya biashara yako nje ya kata?
- What are the benefits of not leaving the ward?
- Je, kuna faida za kutoondoka katani?

Sexual behaviour (non-mobile)

Tabia za mahusiano/mapenzi (kwa wale ambao hawaondoki)

- Did you have sex people other than your spouse over the last year?
- Ulishawahi kuwa na mahusiano na watu wengine ambao sio mume wako mwaka uliopita?
 - If so, who with?
 - Kama ni ndiyo, na nani?
 - Why?
 - Kwa nini?
- How often did this happen?
- Ilifanya mara ngapi?
- Was this in certain situations?
- Ilianyika katika mazingira gani?
- Was this ever for exchange of goods or fish?
- Ilikuwa ni kwa kubadilishana na vitu au samaki?
 - If so, why?
 - Kama ni ndiyo, kwa nini?
- Did you use protection?
- Ulitumia kinga?

- Do you think you are at risk of contracting HIV?
- Je, unafikiri kwa kufanya hivyo uko kwenye hatari ya kupata maambukizi ya Virusi Vya UKIMWI?

Does your business ever lead to any difficulties in your relationship with your spouse/partner?

Je, biashara yako inapelekea kuwa na matatizo na mwenzi wako/mpenzi?

Appendix H: In-depth Interviews Phase 3 researcher guide: Maize Traders – English final version

IDI Researchers Guide Maize Traders

Demographic information

- Age
- Marital status/children/other household members/dependents
- Social position?
- Wealth – assets owned, capital, income
- How does your household survive economically?
- Where are you from in Kisesa?
- How long have you been a Maize Trader? (Probe – how did you become a Maize Trader?)

The Maize Trading business

Thinking about the last 2 months

- How have you conducted your business?
 - Where do you get your capital from?
 - How much maize did you buy and sell? (estimate, or on average)
- Who did you buy from/ who did you sell to?
- How has the last 2 months compared to the last year?
 - Does business change over the seasons?
 - What factors are influencing business now?

For those that leave the ward

Moving

Why did you leave the ward to conduct your business? (probe – is this different for buying and selling)

- Where did you go to buy/sell maize?
- How did you make the decision to go there/hear about opportunities?
- How did you travel to the place(s) you went to?
- How do the places you go to compare to Kisesa?

Patterns of movement

Over the last 2 months

- How often did you go to the places you mentioned above?
- Do you always go there, or do you go to different places sometimes?
 - If so, why?
- How long did you stay away?

What he does when he is there

- How did you conduct your business while away?
- What were the difficulties that you faced while away?
- Were your trips successful? Why (or why not)?
- Where did you stay? Who did you stay with?
- How do the last 2 months compare to previous months?

Sexual behaviour

- What did you do in your spare time?
- Did you have relationships with people other than your spouse over the last year?
- Did you have sex while away?
 - If so, who with?
 - Why?
- How often did this happen?
- Was this in certain situations?
- Was this ever for exchange of goods or maize?
 - If so, why?
- Did you use protection?
- Do you think you are at risk of contracting HIV?

On return home

- How did being away influence your relationship with her spouse?
- Did this cause any difficulties?
 - If so, what happened?
- How does your partner/spouse feel about you being away?

Appendix I: In-depth Interviews Phase 3 researcher guide:

Maize Traders – Swahili final version

Mwongozo wa mahojiano na mfanyabiashara wa mahindi – mwanume.

Taarifa za mtu binafsi

- umri
- Umeolewa/watoto/watu wengine katikfamilia(ndugu)/wanaokutegemea
- Nafasi yako katika jamii?
- Utajiri-mali unazomiliki, mtaji,kipato
- Kaya yako inajimudu vipi kiuchumi?
- Unatokea sehemu gani ya Kisesa?
- Ni muda gani sasa umekuwa ukifanyabiashara hii ya mahindi? (dadisi-ni namna gani alianza kuuza mahindi?)

Biashara ya mahindi

Fikiri kuhusu miezi miwili iliyopita

- Huwa unafanyaje biashara yako?
 - Ulipata wapi mtaji?
 - Huwa unanunua mahindi kiasi gani na unauza kiasi gani? (kadiria, au wasitani)
- Huwa unanunua kutoka kwa nani? Na huwa unawauzia wakina nani?
- Vipi kuhusu biashara yako miezi miwili iliyopita ukilinganisha na mwaka uliopita?
 - Je, biashara inabadilika kulingana na msimu?
 - Ni mambo gani yanayochangia biashara yako kwa sasa?
- Je, huwa unaondoka katani kwa ajili ya kufanya biashara yako? (kama ni hapana-nenda uk.3)

Kwa wale wanaoondoka katani

Mizunguko

Kwa nini huwa unaoondoka katani kwa ajili ya kufanya biashara yako? (dadisi –je, hii ni unapouza mahindi na kununua).

- Huwa unaenda kununua mahindi wapi/ na wapi huwa unaenda kuuza?
- Ulifikiaje uamuzi wa kwenda huko au ulisikia kuwa kuna biashara nzuri?
 - Je, kuna shughuli zingine huwa unafanya?
- Je, huwa (safirije)unaendaje kwenye sehemu ambazo huwa unaenda?
- Je, unaweza kulinganishaje hizo sehemu na Kisesa?

Jinsi unavyofanya mizunguko

Miezi miwili iliyopita

- Huwa unaenda mara ngapi kwenye sehemu ulizotaja hapo juu?
- Huwa unaenda huko mara kwa mara, au huwa unaenda maeneo mengine wakati mwingine?

- Kama ni ndiyo, kwa nini?
- Huwa unakaa huko kwa muda gani?
- Huwa unalala huko?
 - Kama ni ndiyo kwa nini?
 - Ni mara ngapi?

Huwa unafanya nini ukiwa huko?

- Je, huwa unafanyaje biashara zako ukiwa kule?
- Je, unakumbana na matatizo gani unapokuwa kule?
- Je, safari zako zinamanufaa? Kwa nini au (kwa nini hapana)
- Wapi huwa unakaa? Na huwa unakaa na nani?
- Mwezi huu unatofauti gani ukilinganisha na uliopita?

Tabia za mahusiano/mapenzi (kwa wale wanaooodoka)

- Huwa unafanya nini wakati a muda wa ziada
- Je, ulishawahi kuwa kwenye mahusiano na mtu yeyote ambaye sio mume wako mwaka uliopita?
- Je, ulifanya mapenzi wakati ukiwa nje ya kata?
 - Kama ni ndiyo, na nani?
 - Kwa nini?
- Je, ni mara ngapi?
- Je, ilitokea katika mazingira gani?
- Je, ilifanyika kwa kubadilishana na vitu au mahindi?
 - Kama ni ndiyo, kwa nini?
- Ulitumia kinga?
- Je, unafikiri uko katika hatari ya kupata maambukizi ya Virusi Vya UKIMWI?

Unaporudi nyumbani

- Je kutokuwepo kwako nyumbani huwa kunasaidia vipi uhusiano wako na mwezi wako?
- Je, hali hii huwa inaleta matatizo yoyote?
 - Kama ni ndiyo, nini huwa kinatokea?
- Mpenzi wako au mume wako huwa anajisikiaje unapokuwa haupo?

Appendix J: In-depth Interviews Phase 3 researcher guide: Dagaa sellers (male) – Swahili final version

Taarifa za mtu binafsi

- umri
- Umeolewa/watoto/watu wengine katik familia(ndugu)/wanaokutegemea
- Nafasi yako katika jamii?
- Utajiri-mali unazomiliki, mtaji, kipato
- Kaya yako inajimudu vipi kiuchumi?
- Unatokea sehemu gani ya Kisesa?
- Ni muda gani sasa umekuwa ukifanyabiashara hii ya dagaa? (dadisi-ni namna gani alianza kuuza dagaa?)

Biashara ya dagaa

Fikiri kuhusu miezi miwili iliyopita

- Huwa unafanyaje biashara yako?
 - Ulipata wapi mtaji?
 - Huwa unanunua dagaa kiasi gani na unauza kiasi gani? (kadiria, au wasitani)
- Huwa unanunua kutoka kwa nani? Na huwa unawauzia wakina nani?
- Vipi kuhusu biashara yako miezi miwili iliyopita ukilinganisha na mwaka uliopita?
 - Je, biashara inabadilika kulingana na msimu?
 - Ni mambo gani yanayochangia biashara yako kwa sasa?
- Je, huwa unaondoka katani kwa ajili ya kufanya biashara yako? (kama ni hapana-nenda uk.3)

Kwa wale wanaoondoka katani

Mizunguko

Kwa nini huwa unaoondoka katani kwa ajili ya kufanya biashara yako? (dadisi –je, hii ni unapouza dagaa na kununua).

- Huwa unaenda kununua dagaa wapi/ na wapi huwa unaenda kuuza?
- Ulifikiaje uamuzi wa kwenda huko au ulsikia kuwa kuna biashara nzuri?
 - Je, kuna shughuli zingine huwa unafanya?
- Je, huwa (safiriye) unaendaje kwenye sehemu ambazo huwa unaenda?
- Je, unaweza kulinganishaje hizo sehemu na Kisesa?

Jinsi unavyofanya mizunguko

Miezi miwili iliyopita

- Huwa unaenda mara ngapi kwenye sehemu ulizotaja hapo juu?
- Huwa unaenda huko mara kwa mara, au huwa unaenda maeneo mengine wakati mwingine?
 - Kama ni ndiyo, kwa nini?

- Huwa unakaa huko kwa muda gani?
- Huwa unalala huko?
 - Kama ni ndiyo kwa nini?
 - Ni mara ngapi?

Huwa unafanya nini ukiwa huko?

- Je, huwa unafanyaje biashara zako ukiwa kule?
- Je, unakumbana na matatizo gani unapokuwa kule?
- Je, safari zako zinamanufaa? Kwa nini au (kwa nini hapana)
- Wapi huwa unakaa? Na huwa unakaa na nani?
- Mwezi huu unatofauti gani ukilinganisha na uliopita?

Tabia za mahusiano/mapenzi (kwa wale wanaooodoka)

- Huwa unafanya nini wakati a muda wa ziada
- Je, ulishawahi kuwa kwenye mahusiano na mtu yeyote ambaye sio mume wako mwaka uliopita?
- Je, ulifanya mapenzi wakati ukiwa nje ya kata?
 - Kama ni ndiyo, na nani?
 - Kwa nini?
- Je, ni mara ngapi?
- Je, ilitokea katika mazingira gani?
- Je, ilifanyika kwa kubadilishana na vitu au samaki?
 - Kama ni ndiyo, kwa nini?
- Ulitumia kinga?
- Je, unafikiri uko katika hatari ya kupata maambukizi ya Virusi Vya UKIMWI?

Unaporudi nyumbani

- Je kutokuwepo kwako nyumbani huwa kunsaidia vipi uhusiano wako na mwezi wako?
- Je, hali hii huwa inaleta matatizo yoyote?
 - Kama ni ndiyo, nini huwa kinatokea?
- Mpenzi wako au mume wako huwa anajisikiaje unapokuwa haupo?

Kwa wale ambao hawaondoki katani

- Kwa nini huwa huondoki katani kwenda kununua dagaa au kuuza dagaa
- Kipindi cha nyuma ulishawahi kuondoka katani kwenda kununua/kuuza dagaa sehemu zingine?
 - Kama ulifanya, kwa nini siku hizi huendi?
- Je, ungependa kwenda kufanya biashara yako nje ya kata?
- Je, kuna faida za kutoondoka katani?

Tabia za mahusiano/mapenzi (kwa wale ambao hawaondoki)

- Ulishawahi kuwa na mahusiano na watu wengine ambao sio mume wako mwaka uliopita?
 - Kama ni ndiyo, na nani?
 - Kwa nini?
- Ilifanya mara ngapi?
- Ilifanyika katika mazingira gani?

- Ilikuwa ni kwa kubadilishana na vitu au samaki?
 - Kama ni ndiyo, kwa nini?
- Ulitumia kinga?
- Je, unafikiri kwa kufanya hivyo uko kwenye hatari ya kupata maambukizi ya Virusi Vya UKIMWI?

Je, biashara yako inapelekea kuwa na matatizo na mwenzi wako/mpenzi?

Appendix K: In-depth Interviews Phase 3 researcher guide: Tomato sellers (female) – Swahili final version

Mwongozo wa mahojiano na mfanyabiashara wa nyanya -mwanamke

Taarifa za mtu binafsi/historia ya maisha

- Uliza kuhusu historia yake ya maisha, mahali aliposomea shule, kazi yako ya nyuma n.k
- umri
- Umeolewa/watoto/watu wengine katik familia (ndugu)/wanaokutegemea
- Nafasi yako katika jamii?
- Utajiri-mali unazomiliki, mtaji, kipato
- Mwaka jana ulikuwaje kwa kaya yako?
- Kaya yako inajimudu vipi kiuchumi?
- Unatokea sehemu gani ya Kisesa?
- Ni muda gani sasa umekuwa ukifanyabiashara hii ya nyanya? (dadisi-ni namna gani alianza kuuza nyanya?)

Biashara ya nyanya

Fikiri kuhusu miezi miwili iliyopita

- Huwa unafanyaje biashara yako?
 - Ulipata wapi mtaji?
 - Huwa unanunua nyanya kiasi gani na unauza kiasi gani? (kadiria, au wasitani)
- Huwa unanunua kutoka kwa nani? Na huwa unawauzia wakina nani?
- Vipi kuhusu biashara yako miezi miwili iliyopita ukilinganisha na mwaka uliopita?
 - Je, biashara inabadilika kulingana na msimu?
- Ni mambo gani yanayochangia biashara yako kwa sasa?
- Huwa unafanya shughuli gani zingine za kukuingizia kipato tofauti na biashara ya nyanya?
 - Huwa kuna wakati unakosa mtaji unaohitaji/au kuna nyakati huwa unashindwa kununua dagaa?
 - Na je huwa unafanya nini inapotokea hivyo?
- Je, huwa unaondoka katani kwa ajili ya kufanya biashara yako? (kama ni hapana-nenda uk.3)

Kwa wale wanaoondoka katani

Mizunguko

Kwa nini huwa unaoondoka katani kwa ajili ya kufanya biashara yako? (dadisi –je, hii ni unapouza nyanya na kununua).

- Huwa unaenda kununua nyanya wapi/ na wapi huwa unaenda kuuza?
- Ulifikiaje uamuzi wa kwenda huko au ulisikia kuwa kuna biashara nzuri?
 - Je, kuna shughuli zingine huwa unafanya?
- Je, huwa (safirije) unaendaje kwenye sehemu ambazo huwa unaenda?
- Je, unaweza kulinganishaje hizo sehemu na Kisesa?

Jinsi unavyofanya mizunguko

Miezi miwili iliyopita

- Huwa unaenda mara ngapi kwenye sehemu ulizotaja hapo juu?
- Huwa unaenda huko mara kwa mara, au huwa unaenda maeneo mengine wakati mwingine?
 - Kama ni ndiyo, kwa nini?
- Huwa unakaa huko kwa muda gani?
- Huwa unalala huko?
 - Kama ni ndiyo kwa nini?
 - Ni mara ngapi?

Huwa unafanya nini ukiwa huko?

- Je, huwa unafanyaje biashara zako ukiwa kule?
- Je, unakumbana na matatizo gani unapokuwa kule?
- Je, safari zako zinamanufaa? Kwa nini au (kwa nini hapana)
- Wapi huwa unakaa? Na huwa unakaa na nani?
- Mwezi huu unatofauti gani ukilinganisha na uliopita?

Tabia za mahusiano/mapenzi (kwa wale wanaooodoka)

- Huwa unafanya nini wakati a muda wa ziada
- Je, ulishawahi kuwa kwenye mahusiano na mtu yeyote ambaye sio mume wako mwaka uliopita?
- Je, ulifanya mapenzi wakati ukiwa nje ya kata?
 - Kama ni ndiyo, na nani?
 - Kwa nini?
- Je, ni mara ngapi?
- Je, ilitokea katika mazingira gani?
- Je, ilifanyika kwa kubadilishana na vitu au nyanya?
 - Kama ni ndiyo, kwa nini?
- Ulitumia kinga?
- Je, unafikiri uko katika hatari ya kupata maambukizi ya Virusi Vya UKIMWI?

Unaporudi nyumbani

- Je kutokuwepo kwako nyumbani huwa kunsaidia vipi uhusiano wako na mwezi wako?
- Je, hali hii huwa inaleta matatizo yoyote?
 - Kama ni ndiyo, nini huwa kinatokea?
- Mpenzi wako au mume wako huwa anajisikiaje unapokuwa haupo?

Kwa wale ambao hawaondoki katani

- Kwa nini huwa huondoki katani kwenda kununua nyanya au kuuza nyanya
- Kipindi cha nyuma ulishawahi kuondoka katani kwenda kununua/kuuza nyanya sehemu zingine?
 - Kama ulifanya, kwa nini siku hizi huendi?
- Je, ungependa kwenda kufanya biashara yako nje ya kata?

- Je, kuna faida za kutoondoka katani?

Tabia za mahusiano/mapenzi (kwa wale ambao hawaondoki)

- Ulishawahi kuwa na mahusiano na watu wengine ambao sio mume wako mwaka uliopita?
 - Kama ni ndiyo, na nani?
 - Kwa nini?
- Ilifanya mara ngapi?
- Ilianyika katika mazingira gani?
- Ilikuwa ni kwa kubadilishana na vitu au nyanya?
 - Kama ni ndiyo, kwa nini?
- Ulitumia kinga?
- Je, unafikiri kwa kufanya hivyo uko kwenye hatari ya kupata maambukizi ya Virusi Vya UKIMWI?

Je, biashara yako inapelekea kuwa na matatizo na mwenzi wako/mpenzi?

Appendix L: In-depth Interviews Phase 3 researcher guide: Tomato sellers (female) – English final version

IDI Researchers Guide Tomato Sellers Female

Personal background, life history

- Find out about upbringing, schooling, previous work etc

Demographic information

- Age
- Marital status/children/other household members/dependents
- Social position?
- Wealth – assets owned, capital, income
- How does her household survive economically?
- How has the last year been for her family?
- Where is she from in Kisesa?
- How long have you been a tomato seller?
- What other economic activities do you do over the year?

The tomato selling chain

Thinking about the last 2 months

- How have you conducted your business?
 - Where do you get your capital from?
 - How many tomatoes did you buy and sell? (estimate, or on average)
 - Where do you buy and sell?
- Who did you buy from/ who did you sell to?
- How has the last 2 months compared to the last year?
 - Does business change over the seasons?
 - What factors are influencing business now?
- Do you do any other economic activities over the year?
- Do you ever find it difficult to get the capital you need or are there times that you can't afford to buy tomatoes?
 - If so, what do you do?
- Did you leave the ward to conduct your business? (No – skip to page 3)

For those that leave the ward

Moving

Why did you leave the ward to conduct your business? (probe – is this different for buying and selling)

- Where did you go to buy/sell tomatoes?
- How did you make the decision to go there/hear about opportunities?

- What other options were available to you?
- How did you travel to the place(s) you went to?
- How do the places you go to compare to Kisesa?

Patterns of movement

Over the last 2 months

- How often did you go to the places you mentioned above?
- Do you always go there, or do you go to different places sometimes?
 - If so, why?
- How long did you stay away?
- Did you stay overnight?
 - If so, why?
 - How often?

What she does when she is there

- How did you conduct your business while away?
- What were the difficulties that you faced while away?
- Were your trips successful? Why (or why not)?
- Where did you stay? Who did you stay with?
- How was this month different to previous months?

Sexual behaviour (mobile)

- What did you do in your spare time?
- Did you have relationships with people other than your spouse over the last year?
- Did you have sex while away?
 - If so, who with?
 - Why?
- How often did this happen?
- Was this in certain situations?
- Was this ever for exchange of goods or fish?
 - If so, why?
- Did you use protection?
- Do you think you are at risk of contracting HIV?

On return home

- How did being away influence her relationship with her spouse?
- Did this cause any difficulties?
 - If so, what happened?
- How does your partner/spouse feel about you being away?

For those that don't leave the ward

- Why don't you leave the ward to buy/sell tomatoes?
- In the past, did you ever leave the ward to buy/sell tomatoes?
 - If you did, why don't you do that anymore?
- Would you like to leave the ward to conduct your business?

Sexual behaviour (non-mobile)

- Did you have sex people other than your spouse over the last year?
 - If so, who with?
 - Why?
- How often did this happen?
- Was this in certain situations?
- Was this ever for exchange of goods or tomatoes?
 - If so, why?
- Did you use protection?
- Do you think you are at risk of contracting HIV?

Does your business ever lead to any difficulties in your relationship with your spouse/partner?

Appendix M: In-depth Interviews Phase 3 researcher guide: Tomato middlemen – Swahili final version

Mwongozo wa mahoiano na mfanyabiashara wa nyanya –mwanamume

Muulize kuhusu historia ya maisha yake

- Muulize alikulia wapi, alisoma wapi, alishawahi kufanya kazi wapi n.k
- Uliza kuhusu historia yake ya maisha, mahali aliposomea shule, kazi yako ya nyuma n.k
- umri
- Umeolewa/watoto/watu wengine katik familia(ndugu)/wanaokutegemea
- Nafasi yako katika jamii?
- Utajiri-mali unazomiliki, mtaji, kipato
- Mwaka jana ulikuwaje kwa kaya yako?
- Kaya yako inajimudu vipi kiuchumi?
- Vipii kuhusu mwaka jana ulikuwaje kwenye familia yako?
- Unatokea sehemu gani ya Kisesa?
- Ni muda gani sasa umekuwa ukifanyabiashara hii ya nyanya? (dadisi-ni namna gani alianza kuuza nyanya?)

Biashara ya nyanya

Fikiri kuhusu miezi miwili iliyopita

- Huwa unafanyaje biashara yako?
 - Ulipata wapi mtaji?
- Huwa unanunua nyanya kiasi gani na unauza kiasi gani? (kadiria, au wasitani)
 - Huwa unanunua wapi na kuuza wapi?
- Huwa unanunua kutoka kwa nani? Na huwa unawauzia wakina nani?
- Vipii kuhusu biashara yako miezi miwili iliyopita ukilinganisha na mwaka uliopita?
 - Je, biashara inabadilika kulingana na msimu?
- Ni mambo gani yanayochangia biashara yako kwa sasa?
- Huwa unafanya shughuli gani zingine za kukuingizia kipato tofauti na biashara ya nyanya?
 - Huwa kuna wakati unakosa mtaji unaohitaji/au kuna nyakati huwa unashindwa kununua nyanya?
 - Na je huwa unafanya nini inapotokea hivyo?
- Je, huwa unaondoka katani kwa ajili ya kufanya biashara yako? (kama ni hapana-nenda uk.3)

Kwa wale wanaoondoka katani

Mizunguko

Kwa nini huwa unaoondoka katani kwa ajili ya kufanya biashara yako? (dadisi –je, hii ni unapouza nyanya na kununua).

- Huwa unaenda kununua nyanya wapi/ na wapi huwa unaenda kuuza?
- Ulifikiaje uamuzi wa kwenda huko au ulisikia kuwa kuna biashara nzuri?
 - Je, kuna shughuli zingine huwa unafanya?
- Je, huwa (safirije) unaendaje kwenye sehemu ambazo huwa unaenda?
- Je, unaweza kulinganishaje hizo sehemu na Kisesa?

Jinsi unavyofanya mizunguko

Miezi miwili iliyopita

- Huwa unaenda mara ngapi kwenye sehemu ulizotaja hapo juu?
- Huwa unaenda huko mara kwa mara, au huwa unaenda maeneo mengine wakati mwingine?
 - Kama ni ndiyo, kwa nini?
- Huwa unakaa huko kwa muda gani?
- Huwa unalala huko?
 - Kama ni ndiyo kwa nini?
 - Ni mara ngapi?

Huwa unafanya nini ukiwa huko?

- Je, huwa unafanyaje biashara zako ukiwa kule?
- Je, unakumbana na matatizo gani unapokuwa kule?
- Je, safari zako zinamanufaa? Kwa nini au (kwa nini hapana)
- Wapi huwa unakaa? Na huwa unakaa na nani?
- Mwezi huu unatofauti gani ukilinganisha na uliopita?

Tabia za mahusiano/mapenzi (kwa wale wanaooodoka)

- Huwa unafanya nini wakati a muda wa ziada
- Hapo nyuma tulisikia kuwa wakati mwingine wafanyabiahara wa nyanya huwa wanafanya mapenzi na wauza nyanya kwa kubandilishana na nyanya-ulishawahi kusikia juu ya hili? Je, hali kama hii huwa inatokea hapa Kisesa?
- Hali kama hii ilishawahi kukutokea?
- Je, ulishawahi kuwa kwenye mahusiano na mtu yeyote ambaye sio mume wako mwaka uliopita?
- Je, ulifanya mapenzi wakati ukiwa nje ya kata?
 - Kama ni ndiyo, na nani?
 - Kwa nini?
- Je, ni mara ngapi?
- Je, ilitokea katika mazingira gani?
- Je, ilifanyika kwa kubadilishana na vitu au nyanya?
 - Kama ni ndiyo, kwa nini?
- Ulitumia kinga?
- Je, unafikiri uko katika hatari ya kupata maambukizi ya Virusi Vya UKIMWI?

Unaporudi nyumbani

- Je kutokuwepo kwako nyumbani huwa kunsaidia vipi uhusiano wako na mwezi wako?
- Je, hali hii huwa inaleta matatizo yoyote?

- Kama ni ndiyo, nini huwa kinatokea?
- Mpenzi wako au mume wako huwa anajisikiaje unapokuwa haupo?

Kwa wale ambao hawaondoki katani

- Kwa nini huwa huondoki katani kwenda kununua nyanya au kuuza nyanya
- Kipindi cha nyuma ulishawahi kuondoka katani kwenda kununua/kuuza nyanya sehemu zingine?
 - Kama ulifanya, kwa nini siku hizi huendi?
- Je, ungependa kwenda kufanya biashara yako nje ya kata?
- Je, kuna faida za kutoondoka katani?

Tabia za mahusiano/mapenzi (kwa wale ambao hawaondoki)

- Hapo nyuma tulisikia kuwa wakati mwingine wafanyabiashara wa nyanya huwa wanafanya mapenzi na wauza nyanya kwa kubandilishana na nyanya-ulishawahi kusikia juu ya hili? Je, hali kama hii huwa inatokea hapa Kisesa?
- Hali kama hii ilishawahi kukutokea?

- Ulishawahi kuwa na mahusiano na watu wengine ambao sio mume wako mwaka uliopita?
 - Kama ni ndiyo, na nani?
 - Kwa nini?
- Ilifanya mara ngapi?
- Ilianyika katika mazingira gani?
- Ilikuwa ni kwa kubadilishana na vitu au nyanya?
 - Kama ni ndiyo, kwa nini?
- Ulitumia kinga?
- Je, unafikiri kwa kufanya hivyo uko kwenye hatari ya kupata maambukizi ya Virusi Vya UKIMWI?

Je, biashara yako inapelekea kuwa na matatizo na mwenzi wako/mpenzi?

Appendix N: In-depth Interviews Phase 3 researcher guide: Tomato middlemen – English final version

IDI Researchers Guide Tomato Sellers Male

Personal background, life history

- Find out about upbringing, schooling, previous work etc

Demographic information

- Age
- Marital status/children/other household members/dependents
- Social position?
- Wealth – assets owned, capital, income
- How does her household survive economically?
- How has the last year been for his family?
- Where is she from in Kisesa?
- How long have you been a tomato seller?
- What other economic activities do you do over the year?

The tomato selling chain

Thinking about the last 2 months

- How have you conducted your business?
 - Where do you get your capital from?
- How many tomatoes did you buy and sell? (estimate, or on average)
 - Where do you buy and sell?
- Who did you buy from/ who did you sell to?
- How has the last 2 months compared to the last year?
 - Does business change over the seasons?
 - What factors are influencing business now?
- Do you do any other economic activities over the year?
- Do you ever find it difficult to get the capital you need or are there times that you can't afford to buy tomatoes?
 - If so, what do you do?
- Did you leave the ward to conduct your business? (No – skip to page 3)

For those that leave the ward

Moving

Why did you leave the ward to conduct your business? (probe – is this different for buying and selling)

- Where did you go to buy/sell tomatoes?
- How did you make the decision to go there/hear about opportunities?

- What other options were available to you?
- How did you travel to the place(s) you went to?
- How do the places you go to compare to Kisesa?

Patterns of movement

Over the last 2 months

- How often did you go to the places you mentioned above?
- Do you always go there, or do you go to different places sometimes?
 - If so, why?
- How long did you stay away?
- Did you stay overnight?
 - If so, why?
 - How often?

What she does when she is there

- How did you conduct your business while away?
- What were the difficulties that you faced while away?
- Were your trips successful? Why (or why not)?
- Where did you stay? Who did you stay with?
- How was this month different to previous months?

Sexual behaviour (mobile)

- What did you do in your spare time?
- We have heard previously that sometimes tomato middlemen have sex with tomato sellers in exchange for tomatoes – have you heard this? Does it happen here in Kisesa?
- Has this ever happened to you?
- Did you have relationships with people other than your spouse over the last year?
- Did you have sex while away?
 - If so, who with?
 - Why?
- How often did this happen?
- Was this in certain situations?
- Was this ever for exchange of goods or fish?
 - If so, why?
- Did you use protection?
- Do you think you are at risk of contracting HIV?

On return home

- How did being away influence her relationship with her spouse?
- Did this cause any difficulties?
 - If so, what happened?
- How does your partner/spouse feel about you being away?

For those that don't leave the ward

- Why don't you leave the ward to buy/sell tomatoes?
- In the past, did you ever leave the ward to buy/sell tomatoes?
 - If you did, why don't you do that anymore?

- Would you like to leave the ward to conduct your business?

Sexual behaviour (non-mobile)

- We have heard previously that sometimes tomato middlemen have sex with tomato sellers in exchange for tomatoes – have you heard this? Does it happen here in Kisesa?
- Has this ever happened to you?
- Did you have sex people other than your spouse over the last year?
 - If so, who with?
 - Why?
- How often did this happen?
- Was this in certain situations?
- Was this ever for exchange of goods or tomatoes?
 - If so, why?
- Did you use protection?
- Do you think you are at risk of contracting HIV?

Does your business ever lead to any difficulties in your relationship with your spouse/partner?

Appendix O: Focus Group Phase 4 researcher guide – English and Swahili final version

People arrive

Welcome participants as they arrive! Greet, welcome, thanks

Note – Researchers to decide when it is appropriate to give refreshments to participants.

You can greet them in Sukuma, but please inform them that we will need to do the focus group in Swahili, as this subject is difficult to discuss in Sukuma

Once everyone has arrived, ask people to take a seat

Once people are sat down,

Thank and welcome them again

Introduce yourself

Ask them to introduce themselves again

Introduce the project

- We are studying the relationship between population mobility and HIV. However, during our research it has become clear that we need to understand more about relationships here in Kisesa.
- Tunatafiti juu ya uhusiano uliopo kati uhamaji na maambukizi ya UKIMWI. Ingawa, wakati wa utafiti imebainika kuwa tunahitaji kuelewa zaidi juu ya mahusiano hapa Kisesa.

Tell the participants the aim of the focus group

The Focus group as a number of objectives:

Majadiliano yatakuwa na malengo yafuatayo:

- To understand more about relationships in Kisesa
- Kuelewa zaidi kuhusu suala la mahusiano hapa Kisesa.
- Understand more about the term malikauli
- Kuelewa zaidi kuhusu neon mali kauli

- Understand more about the practice of men giving women money/clothes/gifts after having sex with them
- Kuelewa zaidi kuhusu kitendo cha wanaume kuwapa wanawake pesa/nguo/zaidi baada ya kufanya nao mapenzi.
- Clarify some other terms that we have heard
- Fafanua mambo mengine ambayo tuliyasikia.

Note – if participants ask how the research will benefit the community, explain:

- *Understanding more about the links between migration and mobility will enable us to target prevention programmes to mobile populations who are most at risk of HIV*
- *We will also begin to understand the role that the local context plays in influencing sexual behaviour, which may help us to design more innovative prevention programmes that address context, rather than just sexual behaviour*
- *However, we accept that some of the work that we will do here may not have immediate direct benefits – we are grateful for their participation*

Tell them why they have been selected

You have been selected to represent the people of Kisesa/Bukandwe ward

Mmechaguliwa kuwawakilisha wakazi wa kata ya Kisesa/Bukandwe.

Explain the focus group rules

- When a participant is speaking, please listen to him/her
- When a participant is speaking, please respect his/her views
- Please do not mention people's names in the discussion

Explain tape recorder, ask them permission, and explain why we want to record them

Switch on tape recorder

Read consent form out loud and ask them to give consent

Ask them to sign the consent form

Ask if there any questions

Researcher notes

If participants do not consent:

- Researchers will also explore, in a sensitive way, reasons for non-consent, and will re-emphasise that discussions will be confidential within NIMR, and that no quotes from the Focus Groups will be used without their permission.
- Discuss the purpose of the Focus Group – this focus group does not aim to collect personal/sensitive information, just to understand some of the reasons why people move out of Kisesa
- tell the group that anyone who does not want to participate can leave at any time

Then ask them to pick a name that they will use for the focus group (to protect their identity), and a name that is not a human name

Note – the reasons for asking them to choose other names are:

- To protect their identity
- To ensure that everything they say is confidential
- To make them feel comfortable to say what they think
 - This is especially necessary when personal and sensitive questions are being asked

Focus Group

Introduction

utangulizi

Part 1 - Relationships in general

Sehemu ya 1- mahusiano kwa ujumla

- Why do people get married?
- Kwa nini watu huoana?
- How do people decide who to get married to?
- Ni kwa namna gani watu huamua nani wa kumuoia?
- What does a woman look for in a man?
- Ni mambo gani mwanamke huyaangalia kwa mwanaume?
 - Which are most important?
 - Ni mambo yapi ni ya muhimu zaidi
- What does a man look for in a woman?

- Ni mambo yapi mwanaume huyaangalia kwa mwanamke?
 - Which are most important?
 - Ni mambo yapi ni ya muhimu zaidi?
- What do men expect of a woman once they are married?
- Wanaume huwa wanategemea nini kutoka kwa mwanamke pindi wanapooa?
- What does a woman expect of a man once they are married?
- Wanawake huwa wanategemea nini kutoka kwa mwanamume pindi wanapooa?
- What do women think about marital fidelity?
- Wanawake hufikiri nini juu ya uaminifu katika ndoa?
- What do men think about marital fidelity?
- Wanaume hufikiri nini juu ya uaminifu katika ndoa?
- Why do women marry older men?
- Kwanini wanawake huolewa na wanaume wazee?

Do men ever marry older women?

- Je wanaume pia huwa wanaoa wanawake wazee?
 - If so, why?
 - Kama ndiyo kwa nini?

Part 2 - Relationships and exchange

Sehemu ya 2- mahusiano na ubadilishanaji

- What do you understand by the word ‘mali kauli’?
- Unaelewa nini juu ya neon ‘mali kauli’?
- How is this linked to sexual relationships?
- Hii ina uhusiano gani na masuala ya kimapenzi?

Note – explore intention and different circumstances in which this happens.

Note – explore whether this happens in business or to consumers –which is more common?

- What is the history behind mali kauli?
- Mali kauli ilianzaje na lini?
 - Has it always been linked with sex and exchange?
 - Imekuwa ikihusishwa na mapenzi na ubadilishanaji?

Note to researchers – probe and clarify answers to this question – I need to be able to understand this fully

Angalizo kwa watafiti- dadisi na elezea majibu ya swali hili- nataka kuwa na uwezo wa kuelewa hili zaidi

Do women in Kisesa expect to be given money/something else if they have sex with someone who is not their husband or if they are not married?

Je wanawake hapa Kisesa wanategemea kupewa pesa/au kitu chochote kama watafanya mapenzi na yeyote ambaye si mume wake au hawajaoana?

- If so, why?
 - Kama ni hivyo kwanini?
- Which situations is this expected in?
- Ni katika mazingira gani, hali hii huwa inategemewa?
- Do women initiate these relationships?
- Je wanawake huanzisha uhusiano huu?
 - Do women initiate relationships specifically to get money?
 - Je wanawake huanzisha uhusiano wakitegemea kupewa pesa?
 - If so, when?
 - Kama ndivyo, ni wakati gani?
 - Why?
 - Kwa nini?
- How do they initiate these relationships?
- Ni kwa vipi huwa wanaanzisha uhusiano huu?
- Do men ever initiate these relationships?
- Je wanaume pia huanzisha uhusiano huu?
 - If so, how?
 - Kama ndivyo, ni kwa vipi?
- Where does this behaviour come from?
- Tabia hii huwa inatokea wapi?
 - Has it always been this way in Kisesa?
 - Je huwa inakuwa hivi hapa Kisesa?
 - Is this the same across Tanzania?
 - Je hali hii iko hivi pote Tanzania?
 - How has this situation changed in the last 10 or 20 years?
 - Hali hii imekuwa ikibadilikaje kwa miaka 10 au 20 iliyopita?
 - What was this situation like in the era of your parents?
 - Hali hii ilikuwaje kipindi cha wazazi wetu?
- How is it decided how much a man must give?
- Ni kwa namna gani huwa inaamliwa ni kiasi gani mwanamume atoe?
- Does this differ for longer term relationships or one-night stands?
- Je hali hii huwa inatofautiana kwa mahusiano ya muda mrefu au hata kwa mahusiano ya usiku mmoja tu?
- Does this differ between rural/urban areas?
- Je hali hii hutofautiana kati ya mjini na kijijini?
- Do all women expect money/goods in a relationship? Is this different for wealthy or poor women?

Je wanawake wote hutegemea pesa/vitu katika mahusiano? Je kuna tofauti kati ya wanawake matajiri na maskini?
- Are all men expected to give money?
- Je wanaume wote wanatarajia kutoa pesa?
- Do women ever give money to men for sex?

- Je wanawake huwa pia wanatoa pesa kwa wanaume kwa ajili ya mapenzi?
 - If so, when?
 - Kama ndivyo ni wakati gani?
 - Which women do this?
 - Ni wanawake wapi hufanya hivi?
 - Why?
 - Kwa nini?
- How would you define what a sex worker is in Kisesa?
- Hapa Kisesa mnaweza mkamwelezeaje malaya anayepuuza?
- What is the difference between a man paying a prostitute for sex, and a man paying a woman some money in exchange for sex?
- Kuna tofauti gani kati ya mwanamume anayemlipa Malaya kwa ajili ya kufanya mapenzi na Yule anayemlipa mwanamke pesa kwa ajili ya kufanya naye mapenzi?
- What do you understand by the word 'msimbe'?
- Mnaelewaje kuhusu neon 'msimbe'?

Appendix P: Debrief form for in-depth interviews

Note: (the boxes have been reduced to fit this into one page – in practice this was 3 pages long)

Name:
What were the main themes that the participant mentioned?
What did the participant say in relation to sexual behaviour?
How did the participant react to the questions on sexual behaviour?
Did the participant suffer any emotional distress during the interview?
How did the process in general work?
What was the respondents' body language like?
Other issues

Appendix Q: Complete list of ‘Reasons for moving’

Business	Dating a lover	Alcoholism
Work	To search for food	Laziness
Visiting Relatives	To go the hospital	Rape
Marriage conflict	To go to the weekly market	Friendship conflict
Adultery	Go to church	Debt
Security	Spread the word of god	To be treated by traditional healer
Theft	Masonry	Sports
Conjugal Sex	Driving	Temporary employment
Agriculture	Go for a walk	Sickness
Fornication	Life difficulties	Meetings
Fishing	Livestock concentration	Buy vegetables
Treatment Seeking	Change living environment	Go to the milling machine
Studies	Superstition	Attend a funeral
Marriage Separation	Children moved by parents	Quarrelling
Marriage	Shortage of areas for cultivation	Relative conflict
Nursing a Patient	Prostitution	To be accused of killing
To be enticed away	Banditry	Hunger
Drought	Fear of Witchcraft	Being crazy
Misfortune	Clan problems	Fear of HIV stigma
Go to mining areas	Attending a ceremony	Visiting national park
Drug abuse	Home cruelty	Roaming

Appendix R: Breakdown of reasons for moving by focus group (English and Swahili)

		Sub- Group 1		Sub - Group 2	
	Rank	Swahili	English	Swahili	English
FG1-MU	1	Udereva	Driving	Kazi	Employment
	2	Uvuvi	Fishing	Kilimo	Agriculture
	3	Biashara	Business	Uzinzi	Adultery
	4	Kuvunjika kwa ndoa	Marriage Separation	Biashara	Business
	5	Masomoni	Studies	Masomoni	Studies
	6	Matamasha ya injili	To listen to the gospel	Kitembelea hawara	Visiting a partner
FG2-FU	1	Biashara	Business	Kazi	Employment
	2	Kilimo	Agriculture	Biashara	Business
	3	Masomoni	Studies	Kilimo	Agriculture
	4	Umalaya	Prostitution	Mganga wa kienyeji	Attending a traditional healer
	5	Kueneza injili	To spread the gospel	Ujambazi	Banditry
	6	Kazi	Employment	Umalaya	Prostitution
FG3-MR	1	Biashara	Business	Kilimo	Agriculture
	2	Umasikini	Poverty	Biashara	Business
	3	Uzinzi	Adultery	Kazi	Employment
	4	Kwenda kwenye matibabu	Going for treatment	Kwenda kwenye matibabu	Going for treatment
	5	Migogoro katika ndoa	Marriage conflict	Migogoro katika ndoa	Marriage Conflict
	6	Kesi	Legal case	Kesi	Legal case
FG4-FR	1	Mafarakano ndani ya familia	Clan/family conflict	Washarati/Uzinzi	Fornication/Adultery
	2	Migogoro ya ndoa	Marriage Conflict	Elimu	Education
	3	Washarati	Fornication	Biashara	Business
	4	Ufinyu wa maeneo ya kulima	Lack of areas to farm	Kutafuta kazi	To look for work
	5	Kuogopa kurogwa	Fear of being bewitched	Migogoro ya ndoa	Marriage Conflict
	6	Biashara	Business	Kuolewa/kuoa	To get/be married

Appendix S: Final list of 6 most important reasons by focus group (English only)

	FG1 - MU	FG2 – FU	FG3 – MR	FG4 – FR
1	Business	Agriculture	Business	Fornication
2	Studies	Business	To go for treatment	Marriage Conflict
3	Listen to the Gospel	Employment	Marriage Conflict	Business
4	Fishing	Studies	Legal Case	Education
5	Adultery	To spread the gospel	Agriculture	Clan/family conflict
6	Marriage separation	Prostitution	Banditry	Lack of areas to farm

Appendix T: Example focus group checklist

Section Aim	Information Required	Questions
Understand which people in Kisesa engage in maize trading	Gender Age Marital status Socio-economic status Background Why do people trade maize	Do men or women engage in maize trading?
		How old are maize traders?
		Are maize traders married?
		Are maize traders poor or wealthy?
		From which part of Kisesa do maize traders come from?
		Why do people trade maize?
		How do people decide to be a maize trader?
How do maize traders decide where to go?	Understand why maize traders travel, and where they go	Why do people travel to trade maize?
		Where do maize traders go?
		How do they decide to go there?
		How do they find out about opportunities to go there?
Understand the patterns of movement	Frequency/length of trips	How often do maize traders leave the ward?
		How long do they stay away?
		Who do they travel with?
		How do they get to where they are going?
		How many different places do maize traders go in a trip?
		How often do maize traders return to the same place?
Understand the experience while away	Understand what maize traders do while they are away and conditions of maize trading in the destination area	Where do maize traders stay/who do they stay with while away?
		What do maize traders do while they are away?
Understand Risk behaviours	Understanding if Maize traders engage on risky behaviours while away	What do maize traders do in their free time while away?
		Do maize traders have sex while they are away?
		If so, why?
		How often does this happen?
		Does this happen in certain situations?
		Who do they have sex with?
		Do maize traders use protection (or ask their partners to use protection)?
On their return		What do they do when they get back?
		Who do they sell maize to?
		What do they do with the money they earn?
		How does being away affect their relationships with their partner/spouse

Appendix U: Focus group and interview codes

Recording Code	Shortened code for use in thesis	Description
Pilot-M	P-M	Pilot focus group, men
Pilot-F	P-M	Pilot focus group, women
STR-1-FG1-MU	FG1-MU	First focus group, men urban
STR-1-FG2-FU	FG2-FU	Women, urban area
STR-1-FG3-MR	FG3-MR	Men rural area
STR-1-FG4-FR	FG4-FR	Women rural area
STR-2-FG2-DAGAAF	FG-DF	Focus group with female dagaa sellers
STR-2-FG1-FARM	FG-FARM	Focus group with farmers
STR-2-FG3-MAIZE	FG-MAIZE	Focus group with maize traders
STR-2-FG4-DAGAAM	FG-DM	Focus group with male dagaa sellers
STR-3-IDI-FM1	FM1	Interview with male farmer
STR-3-IDI-FM2	FM2	Interview with male farmer
STR-3-IDI-FM3	FM3	Interview with male farmer
STR-3-IDI-FM4	FM4	Interview with male farmer
STR-3-IDI-FM5	FM5	Interview with male farmer
STR-3-IDI-FMF1	FMF1	Interview with female farmer
STR-3-IDI-FMF2	FMF2	Interview with female farmer
STR-3-IDI-MTM1	MT1	Interview with male maize trader
STR-3-IDI-MTM2	MT2	Interview with male maize trader
STR-3-IDI-MTM3	MT3	Interview with male maize trader
STR-3-IDI-MTM4	MT4	Interview with male maize trader
STR-3-IDI-MTM5	MT5	Interview with male maize trader
STR-3-IDI-MTM6	MT6	Interview with male maize trader
STR-3-IDI-MTM7	MT7	Interview with male maize trader
STR-3-IDI-MTF1	MTF1	Interview with female maize trader
STR-3-IDI-MTF2	MTF2	Interview with female maize trader
STR-3-IDI-MTF3	MTF3	Interview with female maize trader
STR-3-IDI-DSM1	DSM1	Interview with male dagaa seller
STR-3-IDI-DSM2	DMS2	Interview with male dagaa seller
STR-3-IDI-DSM3	DSM3	Interview with male dagaa seller
STR-3-IDI-DSM4	DSM4	Interview with male dagaa seller
STR-3-IDI-DSM5	DSM5	Interview with male dagaa seller
STR-3-IDI-DSF1	DSF1	Interview with female dagaa seller
STR-3-IDI-DSF2	DSF2	Interview with female dagaa seller
STR-3-IDI-DSF3	DSF3	Interview with female dagaa seller
STR-3-IDI-DSF4	DSF4	Interview with female dagaa seller
STR-3-IDI-DSF5	DSF5	Interview with female dagaa seller
STR-3-IDI-TSF1	TSF1	Interview with female tomato seller
STR-3-IDI-TSF2	TSF2	Interview with female tomato seller
STR-3-IDI-TSF3	TSF3	Interview with female tomato seller

STR-3-IDI-TSF4	TSF4	Interview with female tomato seller
STR-3-IDI-TSM1	TSM1	Interview with male tomato middleman
STR-3-IDI-TSM2	TSM2	Interview with male tomato middleman
STR-3-IDI-CT1	CT1	Interview with male cattle trader
STR-3-IDI-CT2	CT2	Interview with male cattle trader
STR-4-FG1-M	FG - SNM	Focus group on relationships (men)
STR-4-FG2-F	FG-SNF	Focus group on relationships (women)
Other	VEO	Interview with VEO

Appendix V: Example consent form (in English)

Consent Form

We would like to invite you to participate in this group discussion together with other members of the community in Kisesa who are engaged maize trading.

During the focus group, we would like to take some notes to help us with our work. We would also like to tape record our discussion to help us with our research.

Everything that you say in the Focus Group will be confidential. When we say confidential, this is what we mean:

- Everything you say will only be listened to by researchers working on this project
- Any notes made during the focus group will only be read by researchers working on this project
- We will not keep records of your names
- We will not record your names on our tape recorder
- The name of you or your village will not appear in any reports that we write
- Any other details that may make it possible for you to be identified will also be removed

We would also like you to give us permission to use some of the things you say in our reports. You do not have to agree to this. Any quotes that we publish will also be confidential.

Your participation is entirely voluntary. We understand if you do not want to take part.

Do you agree to participate in this group discussion?

Yes ☐

No ☐

Do you agree to any quotes you make being published (confidentially)?

Yes ☐

No ☐

Signature

Date