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Between policy and practice – a qualitative study on
smallholder commercialization in Chepareria and
Kongelai, West Pokot (Kenya)



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Abstract

In Kenya, the commercialization of smallholder agriculture has become an integral part of the national strategy to address the problems of economic and food poverty. Despite extensive governmental efforts to promote the transition of smallholders from subsistence-based to commercially-oriented livelihoods, a broad based transformation of the sector has not yet materialized. The thesis is based on an empirical case study in the semi-arid areas of Chepareria and Kongelai (West Pokot County, Kenya). Between September and October 2014, semi-structured interviews, focus group discussions and participant observations were conducted in order to understand why smallholders in the research area have poorly responded to governmental efforts to commercialize agriculture. In addition, the thesis explores the role of the community in relation to dynamics on the smallholder's level. Based on the analysis of the qualitative data, it is argued that governments have been unable to create an enabling environment for smallholders to commercialize. The persistence of extensive and often rain-fed production systems makes smallholder's livelihoods highly vulnerable to climate shocks in the semi-arid environment. In addition, it is argued that low dynamics towards commercial agriculture are also linked to a lack of willingness of change on a smallholder's level. At present, many smallholders in the research area seem to perceive market-oriented production as a risk rather than an opportunity. Addressing these challenges is imperative in order to bring about lasting change.

Key words: West Pokot, semi-arid, commercialization, smallholder, livelihood

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Abbreviations and Acronyms

ASALs	Arid and Semi-arid Lands
ASDS	Agricultural Sector Development Strategy
DOI	Diffusion of Innovation
FGM	Female Genital Mutilation
FGD	Focus Group Discussion
FG	Focus Group
IDP	Innovation-Decision Process
KI	Key Informant
NALEP	National Agriculture, Livestock and Extension Programme
NGO	Non-Governmental Organisation
NHE	New Household Economics
PO	Participant Observation
RS	Respondent
SAP	Structural Adjustment Program
SLF	Sustainable Livelihood Framework
SRA	Strategy for Revitalising Agriculture
THVC	Traditional High-Value Crops

1 Introduction

The launch of the Strategy for Revitalising Agriculture (SRA) in 2004 constituted the beginning of a new era of agricultural policies in Kenya. The SRA entailed nothing less than the plan to transform agriculture from a primarily subsistence-based into a commercially-oriented sector (Woolverton and Neven 2014:5). In the meantime, successive development frameworks such as Kenya's Vision 2030 and the linked Agricultural Sector Development Strategy (ASDS) have consolidated agricultural commercialization as one of the country's top priority goals.

The promotion of commercializing agriculture by Kenyan governments on both national and regional levels is consistent with incumbent notions in public discourses. Considering that the majority of the poor in Kenya resides in rural areas with many being smallholders (Mwabu and Thorbecke 2004:21), scholars have long emphasized the need to link small-scale farmers to markets and to transform semi-subsistence livelihoods into commercial ones in order to attain food security and to reduce poverty (World Bank 2013:32, Cuellar et al. 2006:11).

In academia, however, the attitude of some governments and development agencies to treat smallholder commercialization¹ as a virtual panacea for agricultural-based societies in the developing world is increasingly taken as evidence for the remaining dominance of neo-liberal, capitalist, and market-based principles in development practice (Poole et al. 2013:156). In addition, some scholars have raised concerns over the integration of smallholders into markets and the potential of commercial agricultural production as a pathway out of poverty and food insecurity (Harris and Orr 2014:92f). This is accompanied by the establishment of alternative development paradigms such as food sovereignty which contest the idea that linking smallholders to markets alone can lead to overall food security and poverty reduction (Naranjo 2010:25).

In spite of the academic critique, the idea of a smallholder commercialization as an avenue to improved well-being and agricultural growth has remained a firm conviction among practitioners and governments worldwide. In accordance with

¹ The term smallholder commercialization will be used synonymously agricultural with commercialization throughout this thesis.

this, a focus on smallholders is also an integral part of governmental strategies in Kenya (NESC 2007:13).

However, one decade after the launch of the SRA more than two thirds of the rural population have remained poor, with significant regional differences (World Bank 2013:vi). The highest poverty rates can be found in the arid and semi-arid lands (ASALs) (MAFAB 2013:27), which suggests the assumption that past and present initiatives to address poverty and food insecurity have been of particularly little merit in these areas.

1.1 Research problem and relevance

Despite various understandings, agricultural commercialization builds upon the idea that smallholders engaged in agricultural production operate as small enterprises on the basis of principles such as risk-taking, market-orientation, and profit-maximization (Mahaliyanaarachchi and Bandara 2006:13).

On paper, households are therefore supposed to approach agricultural production along the lines of entrepreneurial thinking and industrial modes. At a first glance, this theory seems conflicting with the realities in many developing countries where agricultural activities often fulfill multiple functions such as the provision of food for home consumption and the generation of income (Obia 2003:363). In practice, the economic rationales behind the concept of commercialization might therefore encounter multidimensional realities in which economic purposes coexist alongside with others.

In Kenya, the majority of rural households have remained small-scale farmers that operate on a semi-subsistence basis (Cuellar et al. 2006:11). This suggests that most smallholders in the country have poorly responded to public efforts to commercialize agriculture. The discrepancy between public policy and contemporary reality gives rise to a number of questions such as why have public policies and interventions not yet translated into a substantial transformation of agriculture towards commercial production. Alternatively, one could ask why the majority of smallholders have remained in subsistence-oriented livelihoods.

Nowadays, there is a general agreement among scholars that answers to respective questions are highly contextualized due to diverse geographic and social contexts

(Woolverton and Neven 2014:26). In development studies, for instance, it has become increasingly popular to blame a lack of knowledge about local contexts as a key cause for the low effectiveness of past agricultural policies in the developing world (Poole et al. 2013:163).

In light of this, the thesis is based on a case study in the divisions of Chepareria and Kongelai in northwestern Kenya. The two regions are part of West Pokot County in which empirical evidence suggests that governmental efforts to commercialize the agricultural sector have been of particular little effect (WPC 2013:12, Nangulu 2009:xiii). The county therefore constitutes a suitable case to study the gap between public policy and local reality. It should be mentioned, that the study is part of a larger research initiative (Triple L) that will be further presented below (see chapter 3.3.2).

This research endeavor is highly relevant for several reasons. In light of the long-term character of current development frameworks in Kenya, it is likely that the promotion of a smallholder commercialization will constitute the reality for the upcoming planning periods. A better understanding of why smallholders in the research area have poorly responded to public policies might therefore be of high practical interest for a range of stakeholders such as local populations, non-governmental organizations (NGOs), public authorities, and researchers.

Second, West Pokot (including Chepareria and Kongelai) represents a semi-arid environment (Nangulu 2009:xii). Considering that ASALs, as explained above, are a reservoir of poverty, research on the various challenges in these areas becomes increasingly important. In addition, roughly 84% of Kenya's total land mass is arid or semi-arid (MAFAB 2013:165). The relevance of the study might therefore reach beyond the borders of the research area.

Third, the study is embedded into a number of broader debates such as those about structural transformation and rural livelihoods. It therefore contributes to contemporary development discourses and might be of interest for a number of academic disciplines including the social sciences in general and development studies in particular.

1.2 Existing research gaps

Extensive research has been conducted to understand what facilitates, impedes, and motivates smallholders to participate in or stay out of markets. While the literature on agricultural commercialization covers a wide spectrum, some aspects seem to be underrepresented in previous research.

Nowadays, a broad range of disciplines contributes to the research on agricultural commercialization. In spite of this, some scholars emphasize a historical domination of research from economists and natural scientists, while claiming an underrepresentation of the social sciences in many studies (e.g. Poole et al. 2013:156, Feldmann and Biggs 2012:145). In addition, Poole et al. (2013) identify a methodological bias towards meta-level approaches at the expense of micro-level perspectives (2013:156). This statement is in line with the lack of contextualized and local research expressed by some scholars (see chapter 1.1).

On a thematic note, the literature suggests a research focus on the technical and material spheres of agricultural commercialization, while non-material dimensions such as attitudes and mindsets have received less attention in the past (de Haan and Zoomer 2005:33). In this context, Shelley Feldman and Stephen Biggs (2012) talk of an "agricultural expertise that remains wedded to the privileging of technical expertise" (2012:155). The statement suggests an imbalanced distribution of scientific knowledge in agricultural research to the disadvantage of non-technical aspects such as the spheres of minds. This argument will be further strengthened in conjunction with the discussion of livelihoods perspectives (see chapter 2.2).

Finally, a review on the research in the ASALs of Kenya indicated a dominance of studies that focus on commercial processes within the contexts of specific commodities (e.g. Kahi et al. 2006). By contrast, more actor-oriented research that investigates how smallholders treat and perceive commercial agriculture under arid and semi-arid conditions seems to be rare. This impression holds also true for West Pokot where research on agricultural commercialization on the smallholder level has been absent to date.

1.3 Objectives and research questions

On a general level, the study is intended to contribute to the research on agricultural commercialization in the ASALs of Kenya and to fill the virtual vacuum of respective research in West Pokot. In this context, it is proposed to take up some of the thematic, disciplinary, and methodological aspects that tend to have received little attention in previous research (see chapter 1.2). Given its pioneer character, the study is further supposed to lay the groundwork for and to identify areas of interest for prospective research in the study area.

This thesis focuses on the transition process from subsistence-based to commercially-oriented livelihoods. The major purpose is to understand and analyze why most smallholders in the research area have not yet gone through this transition, despite extensive public and private interventions. While the study is not intended to evaluate or assess whether or not a transition is beneficial for smallholders, the objective is to find explanations why the gap between public goals and realities on the smallholder's level still exists. This is closely linked to some of the characteristics, potentials, and challenges of commercial processes in Chepareria and Kongelai.

A second focal point refers to the link between the household and the community. Nowadays, it is widely acknowledged that households are no isolated units but are rather embedded in communities with respective values, cultures, and objectives (Poole et al. 2013:159, Bah et al. 2006:59). It is therefore intended to analyze how community level aspects influence dynamics on the household level.

The previous considerations are manifested in the three research questions below:

1. What are characteristics, potentials, and challenges related to commercial processes in agriculture in the research area?
2. In what way do dynamics, values and attitudes on the community level shape commercial behaviors on the household level?
3. Why have smallholders in Chepareria and Kongelai poorly responded to governmental policies and efforts to commercialize agriculture?

1.4 Thesis outline

On the basis of the introductory chapter the rest of the thesis is structured as followed. Chapter 2 presents the theoretical framework. At the outset, it will be illustrated why the household level is suitable to study the research questions. This is followed by a section of major understandings of agricultural commercialization and key concepts of the study (2.1). Subsequently, the sections 2.2 – 2.4 present three concepts that have been used in research and practice to investigate and to explain dynamics, behaviors, and decision making processes on the household level. These include the livelihoods perspective, the New Household Economics (NHE), and the Diffusion of Innovation (DOI) theory. Chapter 2 is completed with a concluding section on the major lessons from the theoretical concepts for the present thesis (2.5).

Chapter 3 refers to the research context of the study. The first part is dedicated to a brief review of major empirical findings related to smallholder commercialization (3.1). This is followed by a presentation of the Kenyan background (3.2). The final section introduces the study area including the geographical context and subsections on public policies, interventions, and strategies (3.3.1). The last paragraph provides general information about VI Agroforestry and Triple L as well as the connection between the NGO and the research initiative (3.3.2).

Chapter 4 encompasses the methodological and methodical foundations of the study. These include the explanation of the ontological and epistemological commitments, the applied data collection and sampling methods, as well as the data analysis approach. Besides, the chapter comprises sections on ethical and moral aspects as well as the methodological limitations and data reliability of the study.

Finally, chapter 5 constitutes the empirical and analytical part of the thesis. On the basis of an integrated approach the main results of the study will be presented, analyzed, and discussed. The thesis is then completed with a short summary of the main findings and some concluding remarks.

2 Theoretical framework

The introductory chapter has illustrated that agricultural commercialization is a multidimensional phenomenon that involves a number of actors. The literature, however, suggests that dynamics in small-scale dominated sectors such as in Kenya can be understood as the accumulated product of individual farm- and non-farm decisions made by producing households such as smallholders (Arnold 1997:65, Timmer 1988:19). Following this logic, whether or not to commercialize becomes a decision that is ultimately made on the household level.

The emergence of household level perspectives in agricultural research was part of a gradual shift from structure-focused to more actor-oriented policy and research approaches during the 1990s (Sakdapolrak 2014:19). Disappointing experiences with top-down policy approaches resulted in claims for the incorporation of smallholders into policy-making processes (Barrett 2008:301, WDR 2007:246). In addition, scholars called “for more effective methods to support people and communities in ways that are more meaningful to their daily lives and needs” (Appendini 2001:24).

In research, a number of theories and models have emerged that aim to explain and analyze household level dynamics, behaviors, and decisions. Instead of being designed upon one concrete theory or model, the study combines a variety of theories as a lens to study the research questions.

2.1 Understandings and key concepts

The way agricultural commercialization is studied largely depends on how it is understood. In this context, the literature is rich of conceptualizations that can roughly be divided into static and dynamic ones. Examples for the former include a number of ratios such as the proportional use of commercial inputs (von Braun 1995:188) and the share of marketed output on the total production (Govere et al. 1999:5). There is a general agreement that the latter has remained among the most popular methods for defining and measuring agricultural commercialization in practice (Mahaliyanaarachchi and Bandara 2006:14).

Despite the analytical suitability, the sole consideration of marketed proportions has clear limitations. While it provides information about the degree to which a household is engaged in output markets, the criterion hides the underlying determinants of an individual or household to participate in or stay out of markets (Zhou et al. 2013:2601, Jaleta et al. 2009:23). Thus, it does not sufficiently recognize the motives behind specific marketing behaviors.

Alternative definitions refer to the intentions behind agricultural production. Accordingly, one can, for instance, talk of a commercialized household if production decisions are made with respect to markets and are based on the rationales of profit-maximization (Pingali and Rosegrant 1995: 171). Although paying attention to the objectives of agricultural production, these definitions do not overcome the principal limitations of one-dimensional conceptualizations to grasp multi-dimensional phenomena.

An alternative to rather static definitions – although longitudinal examinations of static variables could also provide insights into processes – are dynamic perspectives. Jaleta et al. (2009), for instance, define smallholder commercialization as a “part of an agricultural transformation process in which individual farms shift from a highly subsistence-oriented production towards more specialized production targeting markets” (2009:7). Similarly, Andrea Woolverton and David Neven (2014) refer to the concept “as a seasonal farm management process rather than a single decision taken at one point in time” (2014:3).

Within the parameters of this thesis, agricultural commercialization is defined as the transition of smallholders from subsistence-based to commercially-oriented livelihoods on the basis of changing farm and non-farm decisions and practices. This understanding links the debate on smallholder commercialization with discourses on livelihoods as well as household level decision making. Both aspects will be discussed in subsequent chapters.

Before, however, a key concept of the thesis needs to be discussed that refers to the one of ‘entrepreneur’. In the introductory chapter the term was used to describe a way of thinking and acting that follows the unfettered rationales of capitalism. In fact, some scholars have tried to transfer this concept to agricultural contexts claiming that an agricultural entrepreneur is someone that seeks for

profit-maximization while constantly transforming production systems (e.g. Kahan 2013:4).

With regard to developing contexts and especially the group of smallholders, however, the literature suggests that agricultural entrepreneurs are “different from the fully-fledged capitalists people often have in mind” (Oya 2007:457). Alternatively, Carlos Oya (2007) provides a less radical conceptualization that seems suitable for the present thesis. Accordingly, small-scale producers “may be considered rural entrepreneurs insofar as they negotiate spaces of accumulation and access to resources in ways that put them in a privileged position to increase the productivity and profitability of the various activities they perform” (2007:460).

2.2 The livelihoods perspective

The theory on livelihoods is rich, so that this chapter only highlights some of the study-relevant aspects. As part of the described shift towards actor-oriented concepts in agricultural research, the livelihoods perspective emerged as a reaction to the ineffectiveness of structural policies to reduce poverty and to reach local populations (de Haan and Zoomer 2005:29).

As a central aspect of livelihoods perspectives, social units such as individuals, communities, and households are considered the active agents of their own development (Ulrich et al. 2012:242). The central interest of livelihoods research is therefore to analyze how people, communities, and especially households make their living (Scoones 2009:172, Johnston 1993:229). A prominent definition of livelihoods was provided by Robert Chambers and Gordon R. Conway (1992) who framed a livelihood as “the capabilities, assets (including both material and social resources), and activities for a means of living” (1992:6).

A central concept that emerged from Chambers’ and Conway’s conceptualization of livelihoods is the Sustainable Livelihood Framework (SLF). The SLF intends to offer an understanding of the various factors and influences that affect livelihoods and how these are related to each other (Scoones 2009:177, fig. 1).

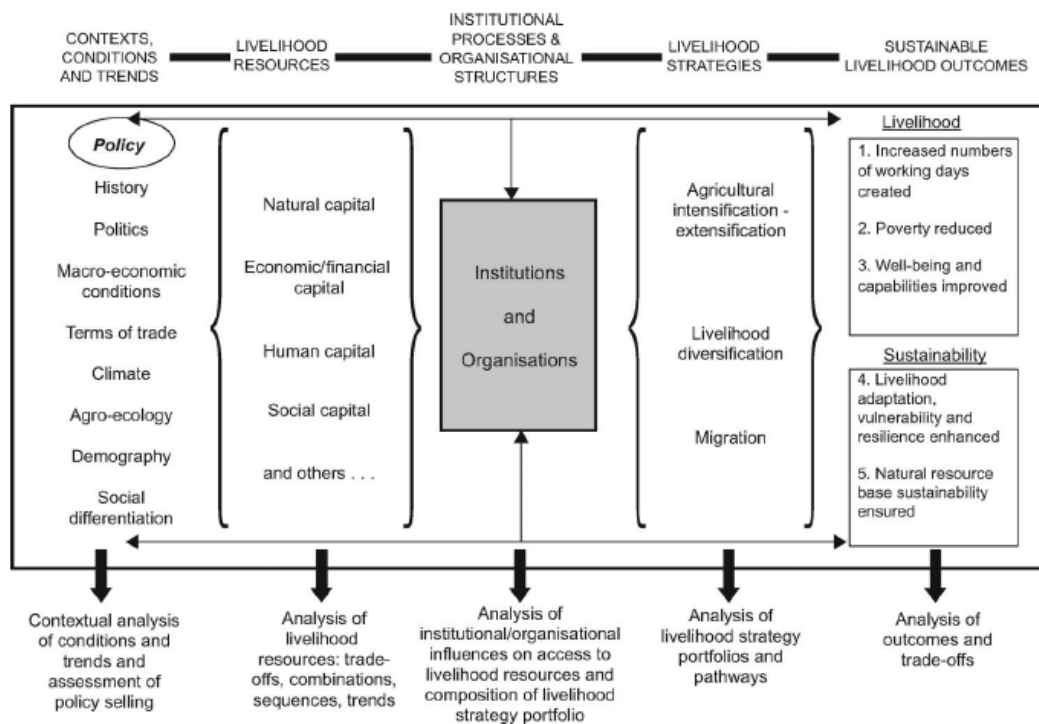


Figure 1: Sustainable livelihoods framework by Scoones (2009:177)

A major purpose of the SLF is the identification of livelihood constraints and opportunities experienced by poor people in the developing world (IFAD 2015:n.s.). In development practice, the SLF has widely been used as a tool to inform policy-making (ibid.).

Advocates of the SLF, respectively, livelihoods perspectives often emphasize the expanded analytical opportunities for research. Accordingly, research through the lens of livelihoods can provide nuanced insights into household behaviors and decisions including how households respond to specific events and structural conditions (Sakdapolrak 2014:84). Departing from inside perspectives, livelihoods research is able to study how behaviors and choices on the household level are affected by both internal and external factors. Thus, livelihoods perspectives are able to consider community level aspects and their influence on household level action. A central strength of livelihoods research is their ability to recognize contextualities, and thus, to study diversity within and across social entities (de Haan and Zoomer 2005:28).

Critical voices, however, claim an overemphasis on economic and material spheres in livelihoods research associated with a focus on the role of technical

aspects such as assets and capacities (Scoones 2009:177). At the same time, personal factors such as perceptions, attitudes, and values have often largely been neglected (Poole et al. 2013:159). Apparently, the study of assets and capacities might enable conclusions on the technical capabilities of households to adopt a specific livelihood. However, it fails to explain why some households do not create livelihoods according to their technical potential (de Haan and Zoomer 2005:44).

A second layer of critique refers to the weak recognition of livelihoods perspectives to the embeddedness of households into structural, institutional, and social contexts. Accordingly, Patrick Sakdapolrak (2014) argues that a “main criticisms of the application of the livelihoods approach is its negligence of the broader social and economic structures and power relations that influence individuals and households in their struggle to make a living” (2014:23).

In recent times, the incorporation of sociological theories into livelihoods concepts such as Bourdieu’s *theory of practice* constituted an attempt to overcome some of the mentioned limitations of livelihoods research (Sakdapolrak 2014:19). There is widespread agreement that the incorporation of Bourdieusian thinking is useful to integrate attitudinal and structural aspects into livelihoods analyses (ibid.).

Critical voices, however, are concerned that respective livelihoods research loses its original function as an advisor of policy making (Sakdapolrak 2014:26). The argument is that Bourdieu’s theory perceives the roots of poverty and livelihood constraints to be situated in the fundamental structures of societies which are difficult to be tackled by policies (ibid.).

2.3 Collective household models and the New Household Economics (NHE)

An alternative approach to study dynamics on the household level is associated with the New Household Economics (NHE). Similar to livelihoods perspectives, the NHE are interested in aspects of intra-household resource management and their link to specific household strategies (de Haan and Zoomer 2005:29).

Another central purpose of the NHE is the investigation of intra-household decision making processes. In this context, the NHE depart from the idea that such processes can be expressed and simulated in the form of mathematic functions along the lines of microeconomic household models. Technically, household decisions and behaviors are treated as endogenous output variables of maximized utility functions that comprise a set of exogenous variables such as assets, capacities, and constraints (Mattila-Wiro 1999:4).

In agricultural research, the modeling of decision making processes was initially used to analyze the implications of policies on the farm behavior of households (Pica-Ciamarra et al. 2015:61, Taylor and Adelman 2003:43). Meanwhile, agricultural household models have become a common explanatory tool for a wider spectrum of decisions including those related to production, marketing, and consumption.

The NHE comprise a number of different model types that principally differ in their conceptualization of intra-household decision making. With regard to the parameters of this thesis, the chapter is confined to the discussion of unitary and collective models. The former are usually associated with the work from Gary Becker and Jacob Mincer in the 1960s who are often considered the pioneers of the NHE (Grossbard 2010:2). In unitary models, household behavior is modeled on the basis of a single utility or welfare function that aggregates the preferences and resources of all members of a household (Chiappori et al. 1993:4, Ellis 1988:n.s.). The underlying assumption is that households are single, homogenous units in which decisions are centrally made by the head of the household (Mattila-Wira 1999:1). Meanwhile, unitary approaches have been widely criticized for their neglect of differences across household members in terms of resources, preferences, and power-relations (Mattila-Wira 1999:3; Chiappori et al. 1993:29).

Not least due to their low levels of differentiation, unitary models of the household seem a less suitable analytical tool to study aspects of intra-household decision making in this thesis.

By contrast, collective models explicitly recognize the individuality of household members (Chiappori et al. 1993:6). Among alternative types, bargaining models have gained popularity in which decisions emerge as a product of explicit or implicit negotiations between different household members (Grossbard 2010:2). The literature distinguishes between cooperative and non-cooperative forms. Cooperative bargaining models assume that two or more individuals participate in decision making processes on the basis of individual preferences and resources (Mattila-Wira 1999:22). A central assumption of such models concerns imbalanced bargaining powers across the cooperators in the wake of unequal distributions of resources among individuals (*ibid.*).

Non-cooperative approaches depart from the idea that individuals within a household operate in separated spheres in which they take decisions in the absence of direct interactions with each other (Chiappori et al. 1993:7). An often used example refers to gender-specific spheres with women and men operating in distinct domains on the basis of separated budget's (Mattila-Wira 1999:26). Additionally, some scholars claim that non-cooperative models are especially suitable for household realities in some African contexts (*ibid.*).

A general critique on household models, including the presented ones, concerns an oversimplification of reality (Mattila-Wira 1999:28). Scholars argue that a central weakness of household models is their insufficient consideration of actual events and contextual peculiarities (*ibid.*). Moreover, feminist economists criticize that the assumption of nuclear households with a dominating male head are not conform to the realities in many parts of the world (*ibid.*). In this context, some scholars point at the potential threat that household models (including agricultural household models) create an artificial world that might have adverse effects on policy making when being taken as genuine (Mattila-Wira 1999:28).

2.4 Diffusion of Innovation (DOI)

In development practice, a popular approach to analyze dynamics within social systems is linked to the Diffusion of Innovation (DOI) theory. The DOI concept is a broad and complex body of theory that can only selectively be discussed in this chapter.

An innovation is here defined as “an idea, practice, or object that is perceived as new by an individual or other unit of adoption” (Rogers 2003:11). Thus, a policy promoting agricultural commercialization could potentially be understood as a set of innovative ideas and practices. Reversely, the take up of commercial livelihoods itself can be interpreted as the adoption of an innovation.

The DOI theory suggests that the adoption of a new idea or practice by a social unit depends on multiple, interlinked dimensions including the innovation itself, the communication channels, the social system, and time (Rogers 2003:11, fig.2). Similar to livelihoods perspectives, household behavior (here: adoption) is not seen as a sole function of technical potential and capacity.

Instead, the DOI concept points to the critical role of communication channels (fig. 2). The spread of an innovation comprises the exchange of information between a knowledge-holder (communicator) and a potential adaptor (Rogers 1983:17). While potential adaptors in the study context are smallholders, a communicator could be an NGO, extensions officer, community leader, or neighbor. At this point, a critical aspect refers to the relationship between the communicator and potential adaptor (Rogers 2003:300). Principally, both actors could be similar in certain attributes such as mindsets, social background, and language (homophilous) or quite different (heterophilous). According to the DOI theory, communication between homophilous individuals is more likely to lead to attitudinal and behavioral change than the one between heterophilous ones (Rogers 1983:18f).

On a related note, the DOI concept highlights the importance of social systems (fig. 2). A social system is defined as “a set of interrelated units that are engaged in joint problem solving to accomplish a common goal” (Rogers 1983:22). A system could therefore be a village or community, while smallholders constitute a

unit within the system. While abstracting from other aspects, a common feature of social systems are structures (e.g. norms, informal institutions, social hierarchies) that largely shape human behavior within the system (ibid.:22). As this underlines the fact that households are embedded into social structures, it further illustrates the importance of community level aspects for the thesis.

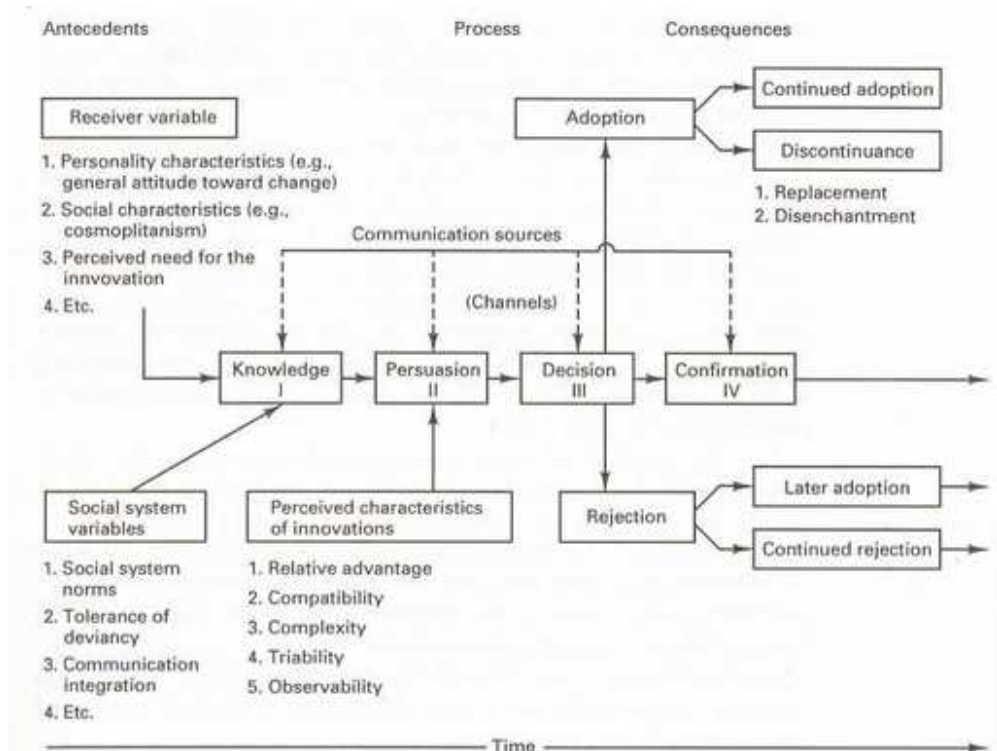


Figure 2: Diffusion of Innovation framework (Rogers 1995:n.s.)

Apart from communication channels and social systems, a central dimension of the DOI theory is time (fig. 2). Accordingly, the adoption of an idea or practice is not a single-moment decision but rather encompasses several stages. In this context, Rogers defines five phases of what is called the innovation-decision process (IDP). These include: (1) knowledge, (2) persuasion, (3) decision, (4) implementation, and (5) confirmation (1983:20). During the IDP, a social unit (1) obtains knowledge about an innovation, (2) creates an attitude towards it, (3) decides to adopt or to reject the innovation, (4) puts it into use, and (5) confirms or reverses the decision (ibid.). With regard to the study, the IDP illustrates the inter-

play of mental (1, 2, 3, 5) and technical aspects (4) already mentioned in the course of livelihoods perspectives.

On a related note, the DOI theory assumes that the time aspect is relative in the sense that some social units are faster in adopting an innovation than others (Rogers 2003:22). The term innovativeness is used to distinguish between different adaptor categories including innovators, early adopters, early majority, late majority and laggards (ibid.). An implicit claim made here is that the diffusion of an innovation is an incremental process that is lead by some social units while others follow. In relation to the study, the model seems especially suitable given the heterogeneity within the group of smallholders (Bah et al. 2006:59).

A final component of the DOI theory that is perceived relevant for the study concerns the innovation itself (fig. 2). In this regard, the theory presents five characteristics that are assumed to affect the adoption rates across household contexts. These include: Relative advantage, complexity, compatibility, trialability, and observability (Surry and Brennan 1998:12f).

The five categories can be translated into questions that can serve as a checklist for the analysis.

- Is the innovation perceived an advantage on the part of potential adopters?
- Is the level of complexity suitable for the technical capacities of social units in a specific area?
- Is the innovation compatible with the actual practices, values, norms, and beliefs in a social system?
- Can an innovation be tried on a small-scale before its full adoption?
- Can the results of the adoption of an innovation be observed?

2.5 Summary and lessons

Some lessons can be drawn from the previous considerations. First, an entrepreneur in the smallholder context of Kenya is in most cases not conforming to a profit-maximizing individual or household. Nonetheless, entrepreneurs are smallholders that seek for and take possibilities to improve the productivity and profitability of their production systems.

Second, livelihoods perspectives are a suitable analytical tool to study the research questions if being accurately conceptualized. The mentioned critique has shown that a meaningful conceptualization must consider both technical and mental dimensions of livelihoods, as well as their embeddedness into environmental, institutional, and social structures. In light of this, a livelihood is here understood as the way households construct their livings in the interplay of technical capacities, personal factors, and structural conditions including the characteristics as well as the means and motives leading to them (derived from de Haan and Zoomer 2005:32). Consequently, the study needs to take into account technical, personal, and structural aspects and their relation to each other.

The theory on unitary and collective household models provides some insights into intra-household decision making. It became apparent that the mechanisms behind the evolution of decisions strikingly depend on the structure of a household. Understanding the behavior of smallholders therefore requires knowledge on the decision making agents as well as the way different household members cooperate or do not cooperate with each other. In this context, collective models emphasize the importance of unequal power-relations between household members.

Finally, the DOI theory provides some lessons on the diffusion of innovations and information. It indicates that innovations are not confined to technological spheres but also include ideas, practices, and lifestyles such as commercial livelihoods. In this context, the theory suggests that understanding why an innovation (such as commercial agriculture) is adopted or not requires knowledge on the innovation itself, the communication channels through which information on an innovation reach potential adaptors, and the social system in which an innovation is supposed



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to be implemented. Besides, the DOI theory emphasizes the role of innovators as catalysts for the spread of an innovation.

3 Research Context

The previous chapters have set the theoretical foundations of this thesis. Apart from theory, aspects of smallholder commercialization are embedded into a vast body of existing research. Without claiming completeness, the following paragraphs will present some of the insights from empirical evidence that are relevant for the thesis.

3.1 Smallholder commercialization – empirical lessons

The classic narrative on smallholder commercialization founds upon the principle motive of smallholders to reach higher levels of income and well-being (Woolverton and Neven 2014:97). In order to achieve this objective, smallholders are assumed to turn to specialized and intensified production systems (Pingali and Rosegrant 1995:174). According to the underlying scenario, enhanced productivity levels in the wake of a specialization and intensification of production schemes translate into higher incomes that, in turn, can be used to improve a household's well-being (Jaleta et al. 2009:10-12).

Meanwhile, the traditional narrative has been contested by empirical evidence at several fronts. Instead of an abrupt transformation, the transition to commercial livelihoods often follows an incremental, multi-staged pattern with households going through semi-commercial interstages (Jaleta et al. 2009:1; Pingali and Rosegrant 1995:172). In fact, many small-scale producers in the developing world, including Kenya, begin with the disposal of some marketable surplus of staples (Gebre-ab 2006:2). Besides, a majority remains in staple crops sections even at latter stages (Woolverton and Neven 2014:3). Against a common belief, smallholder commercialization is therefore not necessarily connected to the production of high-value cash-crops and the transformation of production systems. This is largely in line with Oya's understanding of a rural entrepreneur (see chapter 2.1).

3.1.1 Production constraints and gender

As indicated, the ability to commercialize principally requires some kind of marketable surplus (Barrett 2008:313). However, many smallholders in the developing world face difficulties to achieve sufficient productivity levels that enable a surplus production (Mwabu and Thorbecke 2004:37f).

Low levels of productivity are the combined result of various aspects. In many African contexts, these include high costs of productive inputs, limited access to extensions and credit services, as well as low-technologized and rainfall-dependent farm systems (Luke et al. 2011:62). Additional aspects are unfavorable natural conditions associated with unfertile and highly degraded soils (Oyejide 2010:44), low levels of education and health (MAFAB 2013:35) as well as counterproductive cultural habits (Radeny et al. 2012:1590).

Empirical evidence suggests that low productivity levels are also linked to discriminative gender structures. In many African contexts, including Kenya, women are traditionally responsible for staple crop production, while often facing obstacles to access productive assets (Andersson-Djurfeldt et al. 2013:33). According to World Bank estimates, this fact reduces the productivity of women at an average rate of 22% (WDR 2007:18). Considering that many smallholders commercialize in staples crops sections, discriminative gender structures to the disadvantage of women might therefore directly affect the marketable surplus, and thus, the potential of a household to commercialize.

3.1.2 Marketing constraints, in-kind transfers, and seasonality

Low production levels are also a product of discouraging market structures. Despite the increasing demand for staple crops at regional and local levels (Diao and Hazell 2004:4), scholars often draw a gloomy picture of market structures in the developing world. The areas of chief concern include small sizes of domestic markets, high institutional and price risks associated with significant seasonal variations, and aggravated market access due to high transaction costs (Fischer and Qaim 2012:1255; Ellis 2005:3f). In addition, smallholders often face limited bargaining power coupled with low farm-gate prices that are considered disincentives to commercialize (Holmén 2005:89).

Empirical evidence suggests that many smallholders tend to trade at village and farm levels as opposed to conventional market centers (Chamberlin and Jayne 2013:251). Another alternative in large parts of Kenya are in-kind transactions (Andersson-Djurfeldt and Wambugu 2011:448). Even if often not accepted as an ordinary form of commercialization, in-kind bartering and transfers play a central role in many rural livelihoods and are expected to influence the commercial behaviors of smallholders (Andersson-Djurfeldt 2012:16).

Additionally, small-scale producers are often subject to various forms of seasonality. In this context, insights from Kenya suggest that commercial activities among smallholders are in many cases linked to seasonal peaks of expenditure and occur as a result of acute cash needs (Kosura-Olouch and Karugia 2005:188).

3.1.3 Collective action

Collective action among smallholders (e.g. joint input purchase, collective marketing) emerged as a promising strategy to overcome some of the abovementioned production and marketing constraints (Markelova and Mandavi 2010:623). Cooperatives have particularly proven effective with regard to market access, for instance, due to reduced transaction costs per capita or enhanced negotiating power in input and output markets (Fischer and Qaim 2012:1255). As improved market access can be expected to enhance the potential of smallholders to commercialize, research from Kenya has shown that the effectiveness of collective action strikingly differs across products, social groups, and contexts (ibid.).

3.2 The Kenyan background

Kenya is located in the East African region and home for more than 40 million people. Despite diverse natural conditions, about 84% of the country's total landscape is situated in agro-ecological zones that belong to the ASALs (see chapter 1.1). While only 20% of the population resides in areas with arid and semi-arid environments, roughly 80% live in the remaining 16% with medium to high agricultural potential (Okoba et al. 2011:168).

Agriculture has remained the backbone of Kenya's society. Agricultural production accounts for 24% of the Gross Domestic Product (GDP) and 65% of total exports (MDP 2013:51). Moreover, the sector remains the largest provider of formal employment associated with a share of about two thirds on the total national employment (ibid.).

As said before, the structure of the agricultural sector in Kenya is primarily small-scale (see chapter 1.1). In fact, the majority of agricultural producers are smallholders which in the Kenyan context comprise households with less than 10ha (Cuellar 2006:10). Besides, the bulk of total agricultural production (80% by 2009) originates from small-scale production (IFAD 2013:1)

3.2.1 Agricultural policies and major shifts between 1963-2004

Public efforts to develop and to commercialize small-scale production have a long history in Kenya. Early strategies after the country's independence in 1963 centered on substantial governmental interventions in different realms of production and marketing (Nyangito and Okello 1998:5). The leading public goals during this period were economic growth and food self-sufficiency (MAFAB 2013:39). This resulted in a parallel promotion of staple crop production, primarily maize, as well as cash crops cultivation including tea and coffee with a particular focus on smallholders (Nyangito and Okello 1998:5).

Concrete interventions included the public provision of agricultural inputs and land for small-scale producers, the purchase of agricultural produce through marketing-boards, and the elimination of social barriers to cash crops production (Binswanger and Elgin 1998:316, Staatz and Eicher 1998:26). This resulted in a

relative boost of smallholder contribution to cash crops production from 4% to 49% between 1965 and 1985 (Staatz and Eicher 1998:26).

Without having been anti-agriculture per se, the introduction of Structural Adjustment Programs (SAP's) in the mid-1980s was accompanied by a reduction of direct governmental interventions into agricultural sectors and development (Nyangito and Okello 1998:5). As opposed to state-led developments, SAP's promoted the privatization and liberalization of economic sectors (including agriculture) which was associated with a decline of public expenditures on agriculture (Rono 2002:88). Based on the idea to integrate smallholders into privatized and liberalized markets, the reduction of public intervention also affected areas that had previously been key to small-scale commercial production such as the removal of fertilizer subsidies coupled with increased prices for inputs (Ellis 2005:5). Empirical evidence suggests that this resulted in a rapid decline of agricultural growth, especially during the 1990s, indicating a negative effect of SAP's on commercial production at smallholder level (Rono 2002:88f).

3.2.2 A new era of agricultural policies in Kenya

Empirical evidence suggests that the era of liberalization was accompanied by increased poverty levels both relative and absolute (Brooks 2012:24, Rono 2002:87). The continuance of high rates of poverty and food insecurity initiated a process of realignment of public strategies that culminated in the introduction of the Strategy for Revitalizing Agriculture (SRA) in 2004 (MAFAB 2013:40). As outlined at the outset of the paper, the SRA triggered a new era of agricultural policies based on the objective to create wealth, employment, and food security through the transformation of smallholder agriculture from subsistence to an innovative, commercially-oriented, and modern agricultural sector (ibid.).

One pillar of the new strategy has been the development and intensification of agricultural production in the ASALs of Kenya (MAFAB 2013:45). The focus is linked to the abovementioned fact that ASALs are a reservoir of poverty with significantly higher shares compared to other parts of the country (World Bank 2013:vi). A central instrument to developing agriculture in the ASALs has been irrigation projects in order to overcome the unfavorable natural conditions in arid-

and semi-arid environments (MAFAB 2013:145). This has been complemented by the promotion of Traditional High Value Crops (THVC) which refer to crops that are drought-resistant and adaptive to the harsh weather conditions in ASALs (ibid.). Examples for THVC's in Kenya are hybrid forms of maize, beans, sorghums, millets, and cassava (ibid.). It should be noted that here the term high value is understood in a multidimensional way and refers to a high value in economic, cultural, and nutritional terms. In essence, the national strategy to commercializing agriculture in the ASALs of Kenya has been based upon a combination of means that assist to either overcome or adapt to the natural environment.

In conjunction with the new constitution in Kenya in 2010, the implementation of national strategies on the regional level has largely become a mandate of county governments (Nyanjom 2011:10f). In this context, West Pokot represents one of the 47 counties that were established in the course of the implementation of the new constitution.

3.3. The study area

West Pokot County is situated in the northwest of Kenya and home for more than 600.000 people (WPC 2013:6, fig.3). Environmentally, the area is characterized by high variations in terms of topography, climate, and agro-ecological conditions (Mukoya et al. 2004:3). This is especially valid for Chepareria due to high altitude differences, while Kongelai is largely embedded in a valley landscape with less heterogeneous conditions.

Both divisions are mainly situated in low and medium altitudes, which in the context of West Pokot encompass elevations between 900-2100m above the sea level (WPC 2013:3). The average levels of precipitation range between 600mm per annum in the lowlands and 1600mm per annum in the highlands (WPC 2013:3). Rainfall patterns are characterized by two rainy seasons from March-May and August-November, while the period between December and February constitutes the major dry season (NDMA 2014:1; Kibiiy and Rao 2003:234). However, high deviations from annual and monthly means make rainfalls an erratic and unpredictable variable in the county (Nangulu 2009:xii).

The major parts of West Pokot – including most of Chepareria and Kongelai – are semi-arid associated with weak soils and generally low agricultural potentials (Nangulu 2009:xii). In fact, only 10% of the land – mostly in the more humid highlands – is of high to medium potential for farming (Ochieng and Karneback 2014:5).



Figure 3: Administrative Map of Kenya (WPC 2013:2)

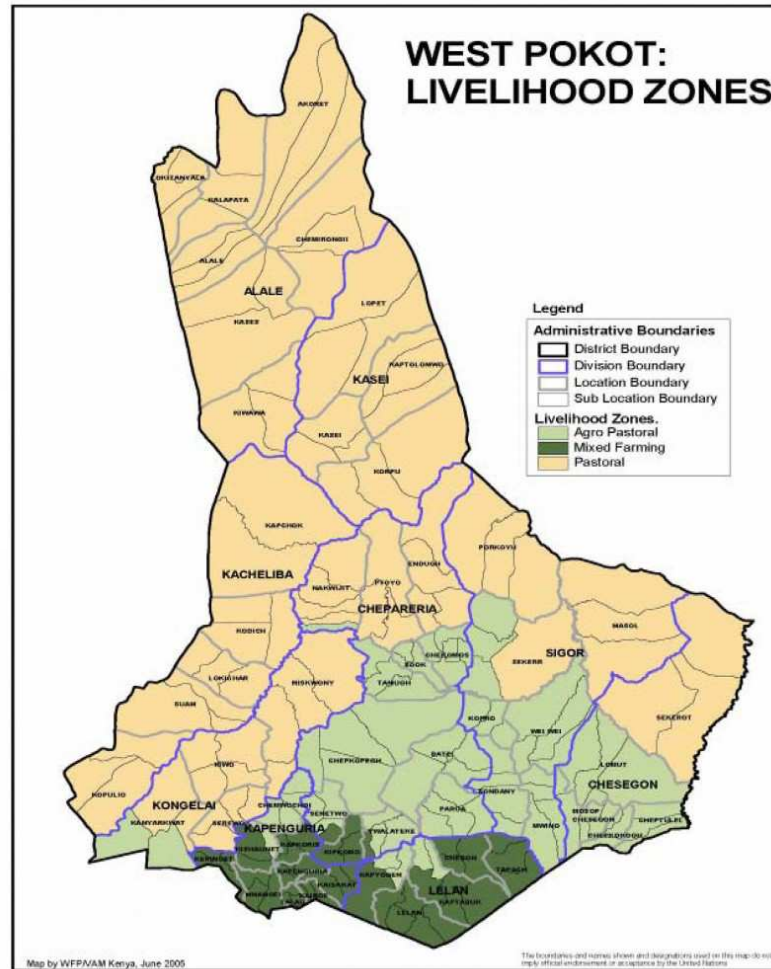


Figure 4: Livelihood Zones in West Pokot in 2005 (WFP 2005:n.s.)

As a response to the harsh environment, people in the county have traditionally been nomadic pastoralists characterized by livestock breeding and steady migration (MLDFC 2013:1). Up to the present, livestock has remained the most important provider of income and employment, while also fulfilling central social and cultural roles as a currency for bribes, gifts, and fines (MLDFC 2013:1). Major income-generating species are cattle, goats, and sheep (WPC 2013:15).

In recent decades, the majority of households in the study area have settled down and have shifted to different forms of mixed farming and agro-pastoralism (fig. 4). This has led to the establishment of three main livelihood zones that are either dominated by pastoralism, agro-pastoralism, or mixed farming (fig.4). Figure 5 indicates that the population is equally spread among the three zones with a slightly higher share in the agro-pastoralist region.

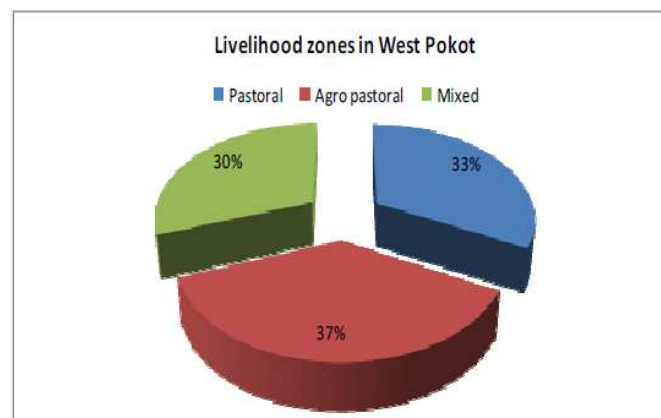


Figure 5: Proportion of population by livelihood zones in West Pokot (MALF:2013:3)

The gradual livelihoods transformation away from sheer pastoralism has been accompanied by the establishment of crop production in the research area, mainly small-scale (Nangulu 2009:viii). The main staple in West Pokot is maize, which is often intercropped with beans or finger millet (WPC 2013:12). Other cultivated crops include potatoes, onions, sweet potatoes, mangoes, and bananas (ibid.:14). At present, 2.4% of the county's total land mass is cultivated of which roughly 20% is dedicated to cash crops such as coffee (ibid.:160). Besides, farming systems mainly rely on natural rainfalls (rainfed) and are characterized by low levels of technologization (WPC 2013:32).

3.3.1 Public policies, strategies, and interventions

A major challenge in West Pokot are high levels of economic and food poverty with more than two thirds of the total population being considered poor in both dimensions respectively (WPC 2013:32). In light of this, the elimination of economic and food poverty has become one of the county's top priority goals (ibid.:60). In accord with the national agenda, a central driver to achieve this objective is seen in a commercially-oriented agricultural sector (ibid.:78).

In the current medium development plan (2013-2017) the government of West Pokot formulates three major goals that are linked to the intensification and commercialization of agricultural production. These include (WPC 2013:34f):

- increase of food security by 50 percent by 2017
- increase the income from livestock farmers by 50 percent by 2017
- doubling of income from crop production in the medium and long-term

The governmental plan is therefore based on both livestock and crops sections. This two-pronged approach is consistent with concepts on the national level that incorporate crops, livestock, and fishery sectors (NESC 2007:13).

Governmental strategies to encourage smallholders to commercialize have largely geared towards productivity increases in both crops and livestock production. Public interventions in the past included the establishment of large-scale irrigation projects, the provision of credit to enable smallholders to buy high-yielding seeds and other farm inputs, as well as the promotion of THCV's and drought tolerant animals such as goats (WPC 2013:91; Nangulu 2009:xii).

Additionally, interventions to promote agricultural commercialization (to increase productivity) comprise a set of capacity building measures. The key instrument are various forms of extension services such as field agents, training centers for both livestock and crops, as well as demonstration farms (WPC 2013:79, 82, 83). Particular emphasize of governmental efforts is also dedicated to cooperative development. The promotion of group formation, especially for collective marketing constitutes a key strategy to link smallholders to markets (WPC 2013:13)

3.3.2 VI Agroforestry and Triple L

Livelihoods dynamics in Chepareria and Kongelai were closely linked to the work from VI Agroforestry. In 1987, the Swedish NGO started to run extensions on agroforestry and enclosures in the study area (Triple L 2013:2). The work from VI Agroforestry assisted to the rehabilitation of dry land for crop production and pastures, and thus, created conditions for the shift towards agro-pastoralist livelihoods in the region. About a decade ago, the NGO retreated from West Pokot in



the course of a geographic reorientation towards other areas in Kenya and adjacent countries (ibid.).

Triple L is an international research cooperation of Swedish and Kenyan institutions and researchers. It was constituted in January 2013 during an international workshop in the VI Agroforestry country office in Kitale, Kenya (Triple L 2013:5). The close link between Triple L and VI Agroforestry is rooted in a personal connection of one of the initiators of the research initiative to the NGO. Thematically, Triple L builds upon the work from VI Agroforestry in West Pokot by aiming to analyze and understand the diverse changes associated with the increased vegetation and enclosures in Chepareria and Kongelai between 1987 and 2014 (Triple L 2013:4). In this context, student projects are a central component of the project design of Triple L (ibid.)

4 Methodology

The major purpose of the study is to understand and analyze why households in West Pokot have poorly responded to public efforts to commercialize the agricultural sector. The ontological and epistemological foundations of the study are closely linked to some of the features of constructivism. Accordingly, what is referred to as contexts, realities, and structures are considered subjective interpretations of the surrounding on the basis of distinct experiences, knowledge, and personal characteristics (Sayer 2000:2). Thus, smallholders are expected to operate in highly subjective realities that represent interpretations, respectively, constructs of their socio-economic, natural, and institutional environment. It was therefore assumed that studying the research questions requires “to understand smallholder farmers’ perceptions of particularity and locality” (Poole et al. 2013:157).

In view of this, a qualitative approach was deployed due to the ability of qualitative research to study a phenomenon from the perspectives of the research subjects (Bryman 1988:61). In contrast to quantitative research, qualitative methods are suitable to study human behavior through the lens of perceptions and experiences, while being able to grasp contextual particularities (Stake 2010:15). Thus, a qualitative design was perceived the most suitable approach to explore the actualities of smallholder’s livelihoods in the study area.

Besides, a case study design was considered an accurate methodological complement for a number of reasons. First, case studies are tailored to the strengths of qualitative research to study a social phenomenon in a particular context (Stake 2010:15). Second, a geographically limited study area was assumed to enable a more in-depth analysis of the research problem. Third, a case study takes account of the highly contextual nature of agricultural developments. Moreover, it is in line with the previously outlined rising call for micro-level approaches in development studies (see chapter 1.1).

In the literature, a central concern bears on the transferability of case study findings (Bryman 1988:87). In this context, the study is considered to represent a typical case in relation to semi-arid environments and pastoralist traditions. While

transferability of the results is not principally claimed, some of the findings might provide lessons for areas with resembling characteristics.

4.1 Research methods

Before referring to the methods used, a few general notes are made at the outset. The fieldwork for this study was carried out in conjunction with an internship at VI Agroforestry in Kitale (Kenya), and thus, conducted in close cooperation with the NGO. Although not explicitly being involved in the study, VI Agroforestry provided enabling resources such as a skilled driver and interpreter as well as contact persons in the study area. In addition, the expertise from the staff was tapped to consolidate the methodical and sampling choices made in this study as well as to prepare and to conduct the data collection.

The study is mainly informed by primary data from fieldwork in the areas of Chepareria and Kongelai. As indicated, the two-subdivisions constitute the research area of Triple L. The data were collected between September and October 2014 on the basis of three different methods, namely Participant Observations (PO), semi-structured interviews, and Focus Group Discussions (FGDs). The mixed approach was expected to generate positive synergetic effects, while being able to draw on the specific strengths of each method.

Fieldwork was perceived a learning process, so that the collection of data followed a sequential model which will be described in the following.

4.1.1 Participant Observation (PO)

As part of an exploratory phase, participant observations served as an entry point to the study area. A main intention was to obtain basic insights into the agricultural structures and processes in Chepareria and Kongelai. Besides, participant observations were used to explore how issues related to agricultural commercialization are present in daily life and debates. On paper, observations provide important information for the interpretation of findings from other methods, and thus, enhance the quality of research (De Walt and De Walt 2011:110).

Following a semi-structured approach, the observations were primarily conducted in strategic locations such as markets and farms. Exploratory interviews were used

to achieve information on issues that concern the livelihoods of smallholders. This resulted in a better understanding of the research problem and led to some preliminary conclusions. The interviews and observations also unfolded some core topics for the interviews and group discussions. Finally, the informal conversations were useful to identify groups which were perceived relevant informants for the semi-structured interviews.

4.1.2 Semi-structured Interviews

As participant observations continued, semi-structured interviews were introduced to the fieldwork. Interviews were conducted with smallholders as well as key informants (see chapter 4.2.1). The interview method was chosen due to its suitability to unfold the relationships between the variables of social phenomena (Crano and Brewer 2002:231). Thus, interviews were conducted to obtain in-depth insights into the livelihoods of smallholders. Besides, the method was also intended to get a better understanding how smallholders operate between the poles of technical, mental, and structural aspects.

In this context, a semi-structured interview design was perceived an appropriate compromise. The principal open-nature of semi-structured interviews left scope for participants to explain and to elaborate on their perceptions, experiences, and behaviors. Simultaneously, the usage of an interview guide was a useful tool to keep certain control over the discussed topics.

In anticipation to the chapter on the study's limitations, a major challenge in conjunction with the interviews was related to language barriers. To overcome this problem, some of the interviews were conducted in Swahili with the use of an interpreter. Unless informants were not fluent in English, Swahili as the medium of communication was preferred. This choice was made to avoid distorted responses in the wake of language constraints. As an exclusion of non-English speaking households was not perceived an option, moderate data distortions in the course of the translating process were accepted instead.

4.1.3 Focus Group Discussions (FGDs)

The introduction of FGDs constituted the final stage of the data collection. The method was perceived an accurate supplement, as it is able to capture a large number of perspectives and perceptions simultaneously. Moreover, FGDs create an environment in which differences among participants and the contradictions within and across their responses can be studied (Bryman 1988:50).

The major purpose of the application of FGDs was to confirm and to back up the findings from the semi-structured interviews. In addition, group discussions were intended to close remaining gaps of understanding left by the previous methods.

4.2 Data set and Sampling

The data set consists of 14 semi-structured interviews with smallholders, 2 key informant interviews, 6 FGDs as well as participant observations. The selection of participants for the interviews and group discussions was based on a purposive model. A purposive approach was chosen in order to be able to keep full control over the selection of participants. This was tied to the perception that the criteria applied for the selection of participants are not suitable for probability samplings. In addition, a lack of household-level information in West Pokot (e.g. census data, village lists) constituted a poor environment for probability samplings that are based on random selections (e.g. random, stratified).

4.2.1 Sampling for the semi-structured interviews

On the basis of the literature and participant observations a set of preliminary criteria was developed that defined relevant groups for the interviews. In a second step, the criteria were discussed with staff from VI Agroforestry and researchers from Triple L. This resulted in a revised set of characteristics.

As a result, the following criteria were applied in order to get a wide spectrum of perspectives into the study:

- households that are engaged in agricultural production on a small scale (>10ha)
- households that produce crops for more than 5 harvest seasons

- households that have settled more than 5 years ago
- households that represent different types in terms of gender and age (household-head)
- household that represent different actors within a community
- households with different levels of commercialization
- households from different sub-locations
- households that have never participated in one of the VI Agroforestry initiatives or previous Triple L studies

Participants were identified and selected on the basis of exploratory interviews during the initial phase of the fieldwork. With the usage of a driver and interpreter from VI Agroforestry who was familiar with the study area, people were contacted at strategic locations such as markets or at their farms. In addition, suggestions from a contact person that had worked for Triple L before were also considered. People who fitted into the above list of criteria were informed about the study, its purposes and asked for their principal willingness to participate. By this means, a preliminary list of roughly 40 households was collected.

Subsequently, households were personally selected from the above list upon the intention to get a variation of characteristics. The selection of participants through a contact person (or the application of a snowball system) was rejected in order to avoid a sampling bias coupled with respective experiences from students that have conducted studies within Triple L in the past.

Overall, seven semi-structured interviews were conducted with smallholders in Chepareria and Kongelai respectively (table 1). The lengths of the interviews lasted between 60min and 80min and were carried out with the help of an interview guide (see appendix A). The number of interviews was determined with regard to the analytical capacity and the principle of information saturation. Thus, the number of interviews was perceived to provide sufficient information to answer the research questions without leading to a situation of too much data information (often referred to as information overload).

Table 1: List of respondents for the semi-structured interviews

Interview date	Respondent	Region	Sex	Age	Level of commercialization
11.09.14	RS1	Chepareria	M	52	medium
11.09.14	RS2	Chepareria	F	30	low
11.09.14	RS3	Chepareria	M	49	low
22.09.14	RS4	Chepareria	F	35	low
22.09.14	RS5	Chepareria	M	48	medium
22.09.14	RS6	Chepareria	M	42	low
22.09.14	RS7	Chepareria	M	52	low
17.09.14	RS8	Kongelai	M	28	low
17.09.14	RS9	Kongelai	F	32	low
17.09.14	RS10	Kongelai	M	47	medium
05.10.14	RS11	Kongelai	F	60	low
05.10.14	RS12	Kongelai	M	33	low
05.10.14	RS13	Kongelai	M	35	medium
05.10.14	RS14	Kongelai	M	42	low
	Key Informant	Position	Sex	Age	
10.09.14	KI 1	Extension Officer West Pokot	M	55	
08.10.14	KI 2	Farm Business Expert VI Agroforestry	M	44	

* Level of commercialization: low (under 25% of total produce sold), medium (25%-50% of total produce sold)

Apart from smallholder households, two expert interviews were conducted with an extension officer from the Ministry of Agriculture in West Pokot as well as a farm-business expert from VI Agroforestry. Both experts are engaged in extension services and have worked with smallholders in the study area before. Their expertise was thus perceived an additional value to understand smallholder realities in Chepareria and Kongelai.

4.2.2 Sampling for the focus group discussions (FGDs)

In contrast to the semi-structured interviews, the participants for the FGDs were selected with the use of a contact person that was employed by VI Agroforestry and has been used in the same function in previous Triple L studies (e.g. Wernersson 2013). The decision to use a contact person was made with regard to the high organizational costs of FGDs by virtue of the comparably large number of participants.

The composition of the groups was intended to enable discussions that are not distorted by social restraints due to gender, age, or social status. For this purpose, the FGDs were supposed to be separated by gender and age. A major challenge faced here regarded the reconciliation of the personal schedules of the proposed participants for the youth groups. As some intended participants stayed absent gender specific discussion groups could not be realized as that would have led to unsuitable group sizes for a vital discussion. Although gender separated groups might have brought other relevant aspects to the fore, mixed youth groups were also perceived a reasonable composition.

The study comprises a total of six FGDs with equal shares in each sub-division (see appendix B). Thus, each set consisted of one male group, one women group, and one mixed youth group. The length of the FGDs ranged between 70min and 90min. Moreover, each group involved 5-8 participants as this number has proven appropriate in previous studies within Triple L (e.g. Ochieng and Karmebäck 2014). Due to the purpose of filling remaining gaps of understanding, a modified interview guide was developed and applied (see appendix C).

4.3 Data Analysis

To analyze the data, all semi-structured interviews and FGDs were audio-taped and transcribed, while the loose notes from observations and exploratory interviews were converted into daily protocols that supplemented the ordinary transcripts.

In a first step, coding was used to classify the information from the interviews, group discussions, and participant observations into thematic categories. At this stage, the categories were only determined by the primary data without considering theoretical concepts or research questions. By this means, coding was a useful technique to structure the different data fragments and to identify core themes and issues that were raised by the informants (Stake 2010:151).

Once established, the categories were grouped in accordance with the research questions. This ensured the link of the analysis to the purpose of the study. Afterwards, the sub-categories in each dimension were analyzed in-depth. At this point, the theoretical concepts were used as a means to discover relevant information.

4.4 Ethical and moral considerations

Research in the social sciences implicitly involves a number of ethical and moral aspects. As the study touches some of the private spheres of the participants, a top priority was the protection of anonymity, dignity, and self-determination. Accordingly, the paper does not entail any information that could hint at the identity of the informants. Their involvement in the study should not result in a personal disadvantage. Moreover, the participation was voluntary with households, respectively, respondents having been able to withdraw from the study at any point of time.

Ensuring a voluntary involvement also included that no monetary or other apparent forms of incentives to participate were provided. In this context, respecting the principles of voluntary participation became especially challenging in the course of participant observation which is tied to the nature of the method.

Besides, the interviews were conducted in environments that were familiar to the informants in order to create comfortable conditions. Prior to the interviews and group discussions all actors involved were informed about the background and objectives of the study, the procedures of interviews (or group discussions) including the usage of a recorder as well as their own role in the process. It was ensured that the respondents were fully informed before the interviews started.

In addition, all participants received feedback over the major findings during second time visits as well as in the form of a one-page summary. The feedback sessions were also a forum for the clarification of remaining questions and uncertainties.

4.5 Methodological limitations and data reliability

This chapter does not entail a complete list of the limitations of the study, but is rather confined to the major ones perceived. A first set of limitations refers to the data sample and geographical reach. As a result of limited financial resources and time constraints the study does not cover all sub-locations of Chepareria and Kongelai. In addition, the nature of the sample is selective in the sense that it is confined to a limited number of smallholders and key informants.

This might pose limitations in terms of the transferability of findings across sub-locations and even within the group of smallholders. The analyzed data set is largely confined to the participant's responses which, in turn, are subject to personal selections, perspectives, and exaggerations. The collected data are therefore tied to the individuals in the sample. Thus, alternative methodological approaches and samples might potentially identify relevant aspects that have not been discovered within the parameters of this study (and vice versa).

An attempt to overcome these limitations was the selection of participants that were supposed to represent typical households as opposed to extreme or particular cases. With respect to future research, an alternative could be the incorporation of a larger number and spectrum of key informants. The geographical limitations could be counteracted with extension officers from different sub-locations as they dispose of profound knowledge on the actualities of smallholders in a particular area. On a related note, it became apparent that interviews with additional key informant groups such as church representatives would constitute a valuable, methodological modification.

A related aspect is data reliability. In this context, the study identifies a number of potential biases. Naturally, the study focus, methodological approach, and data interpretation are determined by the subjectivities of the researcher (Norris 1997:173). What is presented as findings is not only a subjective interpretation of the data, but also involves potential mistakes and misinterpretations made by the researcher at all stages of the study. Regular communication with staff from VI Agroforestry about findings and methodological choices constituted an attempt to reduce the researcher bias.

Second, the connection of the researcher to VI Agroforestry might have had a distortive impact on the participant's responses. It became apparent that the NGO still holds high esteem within the populations of Chepareria and Kongelai. In order to overcome the potential threat of biased responses, the study excluded households that either have worked with VI Agroforestry or participated in one of the studies of Triple L before (see chapter 4.2.1). Second, a potential bias related to the FGDs concerns the effects of group dynamics. In this context, it was outlined that the compositions of the focus groups was made with regard to the avoidance of social restraints among the individuals in terms of gender, age, and social status (see chapter 4.2.2).

Besides, an additional measure to strengthen the data reliability was the application of different methods along the lines of triangulation. The underlying idea was that findings generated by one of the methods can be validated by checking them against findings generated by another one (Deacon et al. 1998:48). Following the same logic, secondary data were used to consolidate the findings. However, the access to secondary data was a limitation in itself. Especially quantitative data on the household level were rare. This posed a challenge to back up the qualitative findings with quantitative information.

4 Results, analysis, and discussion

This chapter presents the main findings from the empirical data. While terms such as ‘perceived’ and ‘considered’ previously referred to the author’s position, they will from now on describe the perspectives of the respondents.

5.1 The household level – livelihood’s components, constraints, and drivers

The interviews and group discussions suggest that commercial activities have become an integral component of many smallholder livelihoods in West Pokot. Nonetheless, agricultural production is still mainly used for home consumption (RS10, RS2). Despite inter-household differences, the majority of smallholders tend to produce commodities that are multifunctional in the sense of being usable for both subsistence and commercial purposes (e.g. RS3, RS6, R11, RS12).

Although a generalization is difficult, the majority of smallholders have remained semi-subsistence producers that combine commercial and subsistence interests. These practices contradict the classical theory that connects market-oriented livelihoods to the ultimate purpose of profit-maximization (Pingali and Rosegrant 1995:171). At the same time, they are consistent with empirical evidence from previous research (see chapter 3.1.1).

It became further apparent that the causes for the persistence of semi-subsistence livelihoods are multidimensional. This is underlined by the following interview extract:

“The (1) **harsh conditions** in this area are the main problem. What would be needed is an irrigation system, the (2) **education of people** in issues of farming, the setup of demonstration centers in the area, which would (3) **transform the minds** of many people” (RS7)

The example links to the theoretical concepts as it comprises the three dimensions that were brought up in conjunction with livelihoods perspectives namely (1) the structural, (2) the technical, and (3) the personal one. Furthermore it suggests a complex mosaic of variables that shape smallholder livelihoods in West Pokot. In view of this, the rest of the chapter is divided into thematic sections that will implicitly address all three dimensions.

5.1.1 Production and environmental constraints

It became apparent that the predominance of semi-subsistence livelihoods is partly rooted in production constraints related to the semi-arid environment. Principally, alternating humid and dry periods define natural production cycles in the study area (see chapter 3.3). In light of the erratic nature of rainfalls, however, respondents expressed difficulties to plan in agricultural production including the setup of farmland and pastures (RS7). Uncertainties in terms of water availability impede the calculation of water dependent variables such as input effectiveness and output volumes (RS7, RS10). This, in turn, complicates the design of farm business plans as a basis of commercially-oriented strategies.

Additionally, water scarcity emerged as one of the central production-related constraints (e.g. RS1, RS3, RS4, RS7, RS10, RS11, RS13). In spite of large-scale irrigation programs in the past, it seems as if respective initiatives have not reached large parts of West Pokot including most sub-locations in Chepareria and Kongelai. This corresponds to governmental documents revealing that the area under irrigation in the county is generally low and most of the existing irrigation canals destroyed by gullies (WPC 2013:42).

As a consequence, production systems are mostly rainfed and usually low-technologized (see chapter 3.3). The majority of smallholders are therefore exposed to natural rainfall patterns and variations making them vulnerable to the semi-arid conditions. As a response to the erratic environment, many smallholders in Chepareria and Kongelai approach agricultural production along the lines of *trial and error* (RS6, RS8, RS10). The respondents argued that these approaches are associated with highly fluctuating output levels that do not always provide a marketable surplus needed to commercialize (RS2, RS4, RS8, RS14). Besides, *trial and error* approaches testify to production decisions that are usually not made as part of an integral, market-oriented strategy.

5.1.2 Marketing and seasonality

A second aspect that emerged in conjunction with the interviews and group discussions refers to the nature of marketing decisions. It became apparent that commercial activities are largely confined to the occasional selling of livestock

and crops (RS7, RS2). In this context, some respondents argued that the selling of agricultural produce is mostly intended to cover emerging cash needs and domestic food deficits (RS1, RS4, RS5, RS7, RS10, RS13).

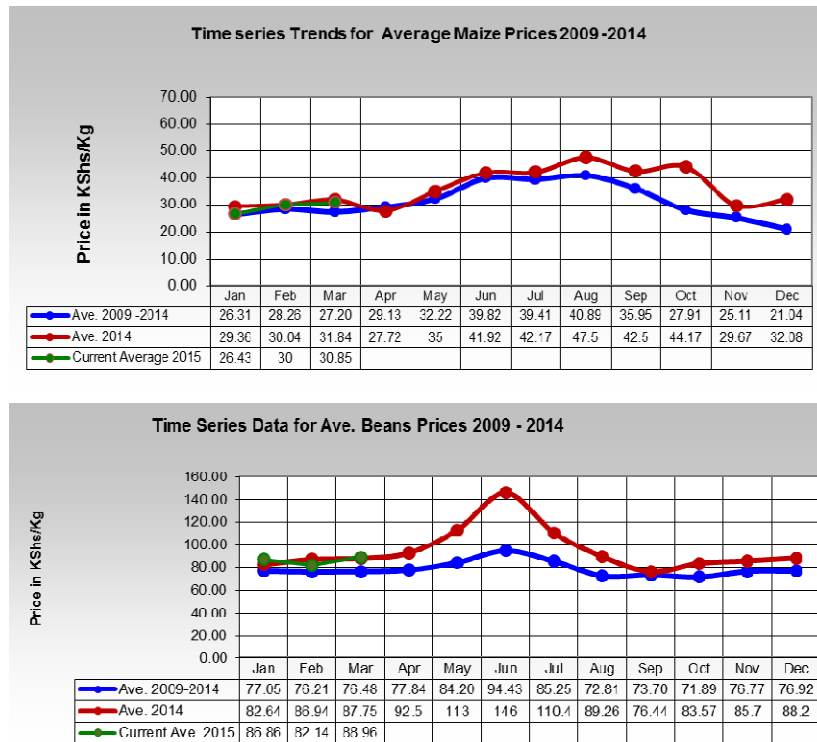


Figure 6: Average maize and beans sales at household prices in West Pokot 2009-2014 (NDMA 2015:9f)

Among other expenses (e.g. medical costs, cultural ceremonies), school fees emerged as the dominant factor the respondents to seek for income (RS1, RS2). In West Pokot, the bulk of school fees are due in January which coincides with the immediate post-harvest season². In this context, figure 6 suggests that the average monthly prices for maize and beans – the two major staples in West Pokot – tend to reach their lows towards the end of the year. Thus, high cash needs appear to coincide with low market prices. As explained above, the literature claims that pressing cash needs push many smallholders in Kenya into markets when prices are low (Kosura-Olouch and Karugia 2005:188).

² In Kenya, school fees need to be paid at the secondary school level. The school year is usually divided into three terms (January-April, Mai-August, and September-November). According to the national guidelines, school fees are spread into the three terms at a ratio of 50:30:20 (MEST 2015:5)

However, the implications of seasonal expenditure peaks can be assumed to differ across households according to their economic status. Yet, high poverty rates in West Pokot (see chapter 3.3.1) suggest that many smallholders are not able to counteract the effects of seasonality. Although some are able to sell livestock instead of crops, the timing and volume of sales is largely determined by seasonal expenditure peaks. Marketing decisions then become a reaction to specific shortages rather than the result of an integrated market-oriented strategy. This pattern is in line with the findings from other research in Kenya (Woolverton and Neven 2014:21).

5.1.3 Financial aspects and credit constraints

As indicated, the majority of the population in West Pokot is poor (see chapter 3.3.1). In this context, most respondents argued that low economic levels are a main impediment for smallholders to invest in farming and livestock production, to mitigate the dependency on natural conditions, and to take the risks in crop farming (RS 2, RS10). At this point, the interviews and group discussions indicated that the nature of financial constraints involves a significant seasonal component. Accordingly, the beginning of the planting season coincides with the end of a financially debilitating dry season (RS11). Thus, the need for cash to purchase farm inputs is high when economic levels are generally low.

The ability to overcome financial shortages at the beginning of the planting season is perceived to be linked to the possession of livestock. The general consensus is that "you must be able to do livestock business, so that you get money to invest in farming" (RS11). Following this logic, livestock keepers define the group that is less likely to be subject to financial constraints. This assumption is consistent with findings from alternative studies which claim that livestock belongs to the assets that separate the rural better-off from the rural poor (Niehof 2004:326).

By contrast, those who are not able to generate income through livestock might lack the economic capacity to purchase the assets needed for the setup of intensive production schemes. This assumption is supported by the outlined predominance of low-technologized production systems coupled with a low usage of yield-enhancing inputs (see chapter 3.3). Extensive production systems can be assumed

to contribute to the chronically low productivity levels in West Pokot (WPC 2013:xiii). Thus, financial constraints can be expected to have an adverse effect on agricultural production levels, and thus, further curb the potential of smallholders to commercialize.

A common instrument to bridge financial shortages are loans. The literature suggests a lack of access to formal credits to be a root cause for financial constraints among smallholders of the developing world (Grimm and Lesorogol 2012:69). This corresponds to a general consensus among public authorities and the respondents that inadequate credit facilities constitute a major challenge for smallholders to commercialize (WPC 2013:52).

However, it became apparent that challenges to access formal loans are not a one-sided problem of supply. In this context, the responses unfolded an aversion towards conventional service providers and products (RS3, RS9). Respondents argued that the fear of losing household assets if a formal loan cannot be repaid keeps many households away from demanding these services (RS3). Thus, enabling smallholders to commercialize might require credit services and products that are both accessible for and adjusted to their concerns.

5.1.4 Production knowledge and entrepreneurial skills

The theoretical framework has shown that livelihoods are designed within a frame of technical potentials and capacities (see chapter 2.2 and 2.4). The DOI theory, for instance, suggests that the adoption of a new practice or idea, among other factors, also depends on whether its complexity is compatible with the technical capacities of a potential adaptor (see chapter 2.4). In this context, the study identifies two key areas, namely production knowledge and entrepreneurial skills.

As indicated, low levels of production skills were identified as a constraint for smallholders to transcend to commercial livelihoods. Although some respondents claimed to have the knowledge needed to commercialize, the majority expressed a lack of farm- and livestock-specific competences (RS7, RS8, RS13). The perceived gaps include insufficient knowledge about suitable crop varieties and livestock breeds, the proper application of inputs (e.g. fertilizer, medicine, pesticides),

the control of livestock diseases, and accurate farm techniques (RS3, RS4, RS5, RS6, RS8, RS9, and RS12).

The literature suggests that low levels of technical knowledge impede smallholders to make sound on-farm decisions that translate into higher levels of productivity (Cuellar et al. 2006:10). The claimed link between production skills and productivity levels can be illustrated on the basis of two examples from the interviews. One respondent argued that the defining variable for an effective application of inputs in rain-fed farm systems is timing (RS5). Accordingly, the choice of less optimal moments can be expected to adversely affect production outcomes, and thus, the marketable volume.

A second example concerns fencing. With regard to the agro-pastoralist environment, the fencing of the farm was perceived a key condition for successful farming (RS5). In this context, some respondents reported from production losses in the wake of feeding damages due to a lack of knowledge on fencing (RS3, RS12, RS13). Both examples illustrate how lacks of technical knowledge can affect production outcomes, the marketable surplus, and thus the potential of smallholders to commercialize.

With regard to low levels of production-related knowledge, the interviewed extension officer expressed a concern in relation to the design of past development programs in Chepareria and Kongelai. Accordingly, these approaches were mostly non-empowering associated with a weak transfer of capacity-building knowledge and the leadership of development to smallholders (KI1). It can be assumed that this constitutes a root cause for generally poor production skills as well as adversely affected the sustainability of past initiatives. This assumption is supported by previous studies in West Pokot. Nangulu (2009), for instance, blames technocratic, non-participatory approaches as a key explanation for the moderate success of past irrigation programs in West Pokot (2009:194).

The common instrument to close knowledge deficits are extension services. In Kenya, the National Agriculture, Livestock and Extension Programme (NALEP) constitutes a national initiative to provide non-commercial farm trainings and extension services for smallholders (Cuellar et al. 2006:61). However, respondents reported from difficulties to reach public extension officers in the past (RS5,

RS8). A central explanation is an unfavorable ratio between extension agents and smallholders in West Pokot (WPC 2013:52).

Moreover, one key informant interview unfolded that public extension services primarily address farm organizations as opposed to individual households (KI1). In this context, the study perceives a structural problem in conjunction with the focus on registered groups. The interviews revealed that not all smallholders are able to join formal cooperatives either because of a lack of eligibility or due to personal preferences (RS2, RS11). This corresponds to official statistics indicating that the majority of smallholders in West Pokot are not formally organized (WPC 2013:163). Under the current conditions, these households are likely to be largely excluded from direct governmental support which reduces their likelihood to reach knowledge-levels that enable them to take up commercially-oriented livelihoods.

This scenario seems especially valid for economically weak households, while commercial providers of extensions offer a wide range of services for economically sound smallholders. In view of this, it can be carefully concluded that the access to extension services to a great extent depends on the economic status and the membership in a registered farm organization.

The challenges to recourse to extension services are also manifested in a lack of entrepreneurial skills. As indicated, commercial livelihoods are usually linked to more strategic approaches that require capacities of strategic planning and analytical thinking (Woolverton and Neven 2014:n.s.). By contrast, however, the respondents complained to lack respective skills by virtue of poor mathematic skills, a lack of market information, and low analytical capacities (RS11, RS12). In addition, contemporary statistics reveal that more than half of the population in West Pokot is illiterate (WPC 2013:164f). This suggests that many smallholders lack the skills and information needed to set up integrated farm business plans that relate input and output variables and link production and marketing decisions. The general separation of production and marketing choices among smallholders testifies to this assumption (see chapter 5.1.1 and 5.1.2). With reference to the DOI theory, it could be argued that the technical requirements of commercial liveli-

hoods in agriculture are in many cases too complex in relation to the technical capacities of smallholders in Chepareria and Kongelai.

An aspect that relates to entrepreneurial potentials regards language skills. The vernacular in the study area is Pokot. The focus groups and participant observations revealed that insufficient knowledge of Swahili – Kenya’s national language along with English – constitutes a barrier for some households to operate outside of the Pokot speaking community. This is here assumed to adversely affect the potential of some smallholders to commercialize as Swahili is usually needed to operate in conventional markets, to interact with actors along the value chains of agricultural commodities, and to recourse to public information and services.

5.1.5 Intra-household decision making and gender

A major finding of the study concerns the connection of intra-household decision making and gender roles. The interviews and group discussions revealed that households in the study area are characterized by a clear gender division of tasks. As a legacy of the pastoralist history, men are traditionally responsible for the breeding and marketing of livestock, while women tend to be in charge of the cultivation and trading of crops (e.g. RS5, RS8; RS9).

It became apparent that a clear separation of responsibilities tends to be associated with low levels of cooperation, the development of section specific competences, and the creation of distinct attitudes and mindsets. This hints at a poor coordination of decisions made by men and women within the scope of their remits. Despite highly individual arrangements across households, decision making practices in the study area seem overlapping with some of the fundamentals of non-cooperative household models (see chapter 2.3).

At the same time, the focus groups suggested imbalanced power-relations to the disadvantage of women (as a central feature of cooperative household models). Unless women are the household heads men tend to have a larger voice in decision making processes. One could assume that this is linked to the remaining key role of livestock in contemporary livelihoods and socio-cultural habits. The observation of imbalanced power relations based on gender is supported by similar findings in other locations of Kenya (NCPD 2005:13).

In West Pokot, 38% of the households are female-headed (WPC 2013:161). According to the interviews and group discussions the comparably large proportion of female household heads can be traced back to a significant number of widows and divorced women as well as an increasing figure of men that work away from home (RS2, RS4, RS7, RS9). In spite of this, imbalanced power-relations based on gender seem to influence decisions within a majority of smallholder households in the study area. In this context, both aspects – uncoordinated systems of intra-household decision making as well as imbalanced decisional powers – are seen as an impediment for smallholders to commercialize. This claim is based on three arguments that will be discussed in the following.

First, the interviews and group discussions revealed that interlinked decisions of production and marketing are sometimes made by different individuals both male and female (RS1, RS11). Without a coordination of these decisions it might be difficult to conduct strategic planning as a basis for commercial livelihoods.

Second, it became apparent that specific decisions are not necessarily made by the household member with the highest competence. A prominent example is the occasional intervention of men into production and marketing decisions that concern issues of crop production (RS4, RS9). In this context, a lack of cooperation runs the risk that such decisions are made on an uninformed basis with potential adverse effects. Thus, the cooperation between men and women might facilitate the inclusion of a broader spectrum of competences from different household members.

Third, it has already been mentioned that women often lack access to productive assets such as inputs and land (Djurfeldt et al. 2011:7). As this factor is assumed to noticeably reduce the productivity of women (see chapter 3.1), the discriminatory structures can be expected to have a direct effect on the potential to commercialize in farming. While female-headed households seem to have larger difficulties to counteract discriminatory conditions, cooperative practices could be an opportunity for nuclear households to overcome the adverse implications of discriminatory structures.

On the basis of the previous considerations, it is here argued that low levels of cooperation between women and men in current decision making structures re-

duce the potential of households to commercialize. In this context, the problem of uncoordinated decision making practices as an impediment for smallholders to commercialize is in line with findings from other studies in Kenya (Woolverton and Neven 2014:21).

In anticipation of the next chapter, imbalanced decisional powers between men and women may lead to a disproportional inclusion of different preferences, attitudes, and mindsets into household decisions over the management of resources and livelihood strategies. Although generalizations are difficult, the focus groups indicated that women tend to have positive attitudes towards livelihood changes (FGb, FGe). Instead of aiming for income maximization, however, women are rather concerned with family-specific aspects such as nutritional, health, and educational statuses (RS2, RS4, RS13).

Then again, many men appear to face difficulties to deal with the changes tied to the shift to agro-pastoralist livelihoods (see chapter 3.3). While some have managed to create new identities and have opened up for changes, others struggle to cope with the end of pastoralism. Many of the latter find themselves in an identity crisis, hesitate to cede power, and struggle to find their new positions in an agro-pastoralist society (RS1, RS7, RS14). This is related to difficulties to think and act beyond livestock sections, to perceive the value of crop production, and to give up their patriarchic roles (RS7, RS12, RS13). Thus, it seems as if some males have not yet detached from traditional lifestyles and thinking. Considering the role of men as opinion leaders within many households, a principal aversion to livelihood changes might constitute another mosaic to explain the low adoption rate of commercial livelihoods in the study area.

5.1.6 Attitudes and mindsets

The theoretical framework has illustrated that attitudes and mindsets are an important determinant of human behavior (see chapter 2.2). In this context, the interviews and group discussions suggest a strong positive attitude towards the self-sufficiency on food (e.g. RS4, RS10). Although the respondents pointed to an upcoming recognition of the income potentials of agricultural production among smallholders in Chepareria and Kongelai (RS1, RS3), it became apparent that

livelihoods are usually designed upon the main objective of domestic food security. This implies a subordination of commercial interests, unless specific events such as pressing cash or food needs push smallholders into the marketing of agricultural produce (see chapter 5.1.2).

Following this logic, the majority of smallholders perceives the achievement of self-sufficiency on food as a precursor to the ability to turn to commercially-oriented livelihoods. Thus, the fact that more than two thirds of the population in West Pokot still suffers from food poverty (see chapter 3.3.1) might serve as a partial explanation why many smallholders have not yet commercialized. With regard to the theoretical framework, the low adoption rates could also be interpreted as an incompatibility of smallholder attitudes with the rationales of commercial livelihoods (see chapter 2.4).

The persistence of non-commercial attitudes raises the question why public efforts have not translated into profound mindset transformations? Although answers are highly individual, the study identifies some more general aspects.

One issue that emerged as important refers to the role of experiences. On paper, experiences are considered to have a great influence on the attitude towards a specific issue (Schuetz 1953:4, 10). In this context, respondents emphasized a widespread skepticism towards crop production in the wake of recurrent disappointments in farming in the past (RS3, RS7, RS10). The underlying process was illustrated by a respondent using the example of maize: “if you are planting maize every year and each year you are not successful; this can demoralize you.” (RS13). In view of this, a lack of confidence in farming can be assumed to keep many smallholders from taking the production and marketing risks that are associated with commercial farms. Despite differences across households, the idea of farming as a regular income source seems to have not yet reached the minds of many smallholders in Chepareria and Kongelai (RS8, RS10). Through the lens of the DOI theory, one could also conclude that many smallholders do not perceive an advantage in conjunction with the adoption of commercial livelihoods (see chapter 2.4).

On a more general scale, the former quotation suggests a principal link between negative experiences and increasing levels of demoralization. It became apparent

that demoralization is a widespread phenomenon in the study area that originates from disappointing experiences at a number of fronts. These include production losses, negative attempts to access supportive services (including those for extensions and credits), and discouraging marketing experiences (see chapter 5.3). Additionally, the previous chapter has indicated that many smallholders have poor confidence into their technical knowledge and skills. In some instances, this seems to have translated into self-perceptions of being excluded, disadvantaged, and powerless (RS5, RS8, RS9).

Low levels of self-confidence coupled with demoralized minds seem to constitute a barrier for many smallholders to actively struggle for livelihood changes. Along the same line of argumentation, one respondent framed the problem as the “people’s willingness to be action-oriented” (RS11). Consequently, a lack of motivation and confidence might contribute to the low adoption of commercial livelihoods in the study area.

Additionally, the interviews and group discussions unfolded a mentality which is here referred to as *observe and copy*. The respondents argued that an integral characteristic of mindsets in West Pokot is the will to see the outcomes of a certain effort before taking action (RS8, RS13). This description is consistent with the DOI theory which argues that the possibility to observe the outcomes of an innovation increases the likelihood of its adaption (see chapter 2.3).

In this context, some responses claimed a lack of role models in the region associated with a limited ability to observe the potential attractiveness of commercial livelihoods (RS3, RS8). At this point, another link can be made to the DOI theory. The theory defines different adaptor categories with some innovative pioneers are supposed to trigger the diffusion of an innovation within a social system (see chapter 2.3). Following this logic, the perceived lack of role models (innovators) might then hamper the spread of commercial livelihoods in Chepareria and Kongelai.

5.2 The community level – influence, actors, and alternatives

A central aspect in the theoretical framework refers to the embeddedness of households into structures (see chapter 2.2 and 2.4). On a related note, the literature emphasizes the impact of communities and villages³ on the behavior and actions of smallholders (see chapter 1.3).

Accordingly, the interviews and group discussions unfolded a defining role of the community. In general, a community was described as a sharing place of information, experiences, and attitudes (RS1, RS2, RS9, RS10, RS12, RS13). Despite differences across villages, it seems as if knowledge and opinions tend to be treated as common goods rather than private assets. Consequently, leading perspectives, values, and objectives within a specific community can be expected to influence the decisions and behaviors of smallholders.

With regard to the DOI theory, one could assume a strong role of intra-communal communication channels (see chapter 2.4). Accordingly, dynamics on neighboring farms emerged as a pivotal source of inspiration (RS2, RS3, RS10). It became apparent that this is due to the easy access as well as the structural, social, and cultural proximity of neighboring farms. This, in turn, again corresponds to the DOI theory which claims that effective communication is more likely to occur between individuals or households that share certain characteristics (see chapter 2.4).

The strong influence of dynamics on neighboring farms on the behavior of smallholders underlines the key function of role models (innovators) as initiators of the diffusion of innovations (see chapter 2.4). Exemplifying one respondent stated that “those ones who are able to risk and who do it will have a pioneer function for their neighbors” (RS5). Following this logic, role models are able to create awareness about a specific innovation such as commercial agricultural production within a community as well as to assist to the development of favorable attitudes. In this context, one respondent argued that “transformations start within households and communities” (RS4).

³ both terms are synonymously used within the parameters of this thesis

However, communities naturally share all forms of experiences, attitudes, and information. This also involves some of the mentioned aspects such as negative experiences in farming and traditional mindsets. In this context, it became apparent that a number of communities – especially those lacking alternative role models – have established common values and attitudes that are not conducive to livelihood changes. A missing tolerance within the community towards livelihood changes can be assumed to potentially restrain smallholders from striving for commercial livelihoods.

5.2.1 The role of the church

An actor that emerged as a key player in this regard is the church. The responses revealed that the church promotes farming among households and within communities, assists to the reintegration of marginalized groups back into communities, and abandons traditional mindsets (RS1, RS2, RS6, RS9). In addition, the church takes over governmental tasks such as the provision of agricultural inputs and some forms of extension services (RS7).

Wherever it is influential the church seems to operate as an active promoter of agricultural development and social change. Moreover, respondents argued that it assists to the abandon of cultural habits that adversely affect agricultural production or contradict commercial action such as female genital mutilation (FGM) and the sacrifice of livestock for cultural purposes (RS7, RS8). At this point, however, it became apparent that the influence of the church strikingly differs across communities and sub-locations. Not least because of this, the influence of communities can either be conducive or impeding to livelihood changes in general and the turn to commercial livelihoods in particular.

It should be mentioned here, that the responses gave no hint at the role of churches in terms of gender equality and women empowerment. In the literature, this role is controversially discussed with some scholars claiming that churches in African contexts – while promoting social change and modernization within locations – often have a limited effect on patriarchal structures (see for instance Mate 2002:566). Although a concrete conclusion cannot be made for the study area, whether or not the church promotes women empowerment might be critical in

view of the potentially adverse effects of gender inequality on the potentials of smallholders to commercialize (see chapter 5.1.5).

5.2.2 Market centers as an alternative

It became apparent that the degree to which community aspects influence the behavior of smallholders also depends on the existence of alternative communication channels. An alternative that emerged during the interviews and group discussions are market centers. Respondents argued that market centers have become a melting pot for people from different regions, communities, and backgrounds such as traders, farmers, and service providers (RS5, RS6, RS9).

Beyond their function as trading sites for commodities, market centers also serve as a platform for the exchange of information, attitudes, and ideas. In fact, they provide opportunities for smallholders to obtain market information and to observe the income potentials of agricultural commodities. Moreover, market centers enable smallholders to interact with people outside of their own community.

“People from other regions brought in crops that formerly have not been produced in Chepareria and sold them on the market. People got inspired to produce some of the crops themselves, for example bananas” (RS2)

The interview extract suggests that market centers can also serve as an effective communication channel for new ideas and information, and thus, influence smallholder behavior.

An additional aspect refers to the role of communities as markets. As this is part of a wider discussion on markets and market structures, it will be part of the following chapter.

5.3 The market level –marketing conditions, non-conventional markets, commercial opportunities

One aspect that has mainly been left out in previous chapters concerns market-related aspects, which are emphasized as a main impediment to smallholder commercialization in the literature (see chapter 3.1.2). In light of this, the chapter will discuss some of the findings related to marketing conditions, alternative markets, and commercial opportunities in the research area.

5.3.1 Marketing conditions

During the interviews and group discussions the respondents expressed a principal dissatisfaction with contemporary marketing conditions. The perceived aspects of discontent included discouraging market prices (especially on staples crop markets), low levels of bargaining powers, as well as high transaction costs (RS1, RS2, RS11). Particularly smallholders with little volumes, who only periodically participate in output markets, seem to experience the outlined challenges.

In addition, many smallholders lack physical access to larger market centers (often with better prices) in the wake of large distances combined with high costs for transportation (RS2). In West Pokot, the transportation network is poorly developed, which can to some extent be linked to the broken topography of the region (Nangulu 2009:xii).

As a consequence, many smallholders depend on the trading with intermediate traders at the farm-gate (middlemen). These trades are in many cases characterized by imbalanced bargaining powers due to an unfavorable middlemen-farmer ratio, a lack of market information on the part of smallholders, and the already mentioned pressing need for cash (RS7, RS8, RS11).

It became apparent that recurrent experiences of discriminatory marketing conditions lead to a widespread mistrust, respectively, aversion among smallholders towards conventional markets. As this adds to the general feeling of being disadvantaged (see chapter 5.1.6), it curbs the incentives of many smallholders to participate in ordinary markets.

5.3.2 Non-conventional markets

In relation to the former conclusion, the interviews and group discussions revealed that many smallholders tend to trade through rather informal channels on the community level.

“Normally, if we have any surplus here we sell it straight to the neighbors. There is an immediate market here in the neighborhood because they want to consume. Thus, we do not even go further to the market centers.” (RS6)

The example suggests that a number of smallholders bypass ordinary markets in favor of intra-community trade. The tendency to sell marketable surplus on the village level has equally been observed in other parts of Kenya (see chapter 3.1.2). On the one hand, the approach could be interpreted as a strategy to escape from the discriminatory practices of middlemen. By contrast, however, intra-communal trade could also make sense from a pragmatic, cost-saving perspective, especially when the marketable surplus is small. As a side note, the mostly informal nature of commerce within communities gives rise to the assumption that commercial activities are likely to be underestimated in official statistics.

Another alternative to conventional markets are schools as a central purchaser of maize and beans. In addition, the respondents reported from the possibility to pay school fees in kind (RS1, RS5). Given that school fees are a central driver for many smallholders to commercialize (see chapter 5.1.2), the option to balance school fees in the form of maize or beans can be expected to affect the commercial activities of smallholders.

5.3.3 Commercial opportunities and potentials

In spite of diverse responses, commercial opportunities are mainly perceived in traditional livestock sectors such as goats and cattle as well as specific crop sections including maize, beans, and millet (e.g. RS3, RS4, RS12, RS14).

In light of the listing, commercial potentials tend to be perceived in areas that mostly fall into the category of traditional high value crops (see chapter 3.2.2) as well as drought-tolerant livestock species. Thus, resistance towards the harsh conditions in semi-arid environments seems to define those commodities with



commercial potential. This conclusion is basically in line with the position of national and county-level authorities that promote the production and breeding of drought-tolerant crops and species (see chapter 3.2.1 and 3.3.1).

Another conclusion that can be drawn from the above listing is that commercial potentials are primarily perceived within the current livelihoods and areas of activity. Instead of a transformation of production systems, commercial process might rather occur through an intensification and improvement of contemporary production schemes. As this potentially contradicts the principle of profit-maximization, it rather supports Oya's understanding of a rural entrepreneur (see chapter 2.1).

6 Summary and concluding remarks

The thesis departed from the generally weak effectivity of governmental efforts in Kenya to promote the commercialization of smallholder agriculture. Although vast scientific research has been conducted to understand how agricultural commercialization for smallholders can be achieved in the African (semi-)arid regions, many studies seem to underrepresent the social scientific aspects. Between September and October 2014, semi-structured interviews, focus group discussions and participant observations were conducted in Chepareria and Kongelai (West Pokot County) in order to understand and determine possible reasons why smallholders have poorly responded to governmental efforts to date.

As part of the main findings, it has been illustrated that agricultural production is mainly geared towards subsistence, while commercial activities mostly occur as a reaction to pressing cash needs and domestic food shortages rather than being part of a market-oriented strategy.

At present, agricultural production systems are mostly rainfall-dependent and low technologized which makes them vulnerable for the semi-arid climate. This is associated with low productivity levels, regular production losses and high fluctuations in production volumes.

Furthermore it has been shown that low dynamics towards commercial agriculture are also linked to a lack of willingness of change on a smallholder's level. Unfavorable attitudes and mindsets include a strong attitude towards food self-sufficiency, significant levels of demoralization in the wake of disappointments in agricultural production and marketing, and an aversion towards livelihood changes on the part of men as the opinion leaders in most households.

Finally, the analysis has shown the multifunctional role of the community as a sharing place of common attitudes, values, and objectives, a source of inspiration for smallholders, and as a market. It has been illustrated that the dynamics that shape communities can either facilitate or impede dynamics towards commercial livelihoods, often depending on the existence of a role model and the influence of the church. Intra-communal trade is a key component of commercial activities of smallholders in the study area.

A main argument made here is that difficulties in agricultural production are not primarily a problem of semi-arid conditions, but rather the vulnerability of smallholders to them. So far, public authorities and NGOs have not been able to strengthen the resilience of smallholders towards climate shocks by creating better access to irrigation schemes, as well as formal loans and extension services. Climate induced water scarcity coupled with insufficient knowledge and financial constraints seem to have been main drivers for the inability of smallholders to adapt. This suggests the assumption that the remaining vulnerability of smallholders to the semi-arid conditions is to some extent man-made.

A second argument made is that smallholder's livelihoods in Chepareria and Kongelai are in many cases based on decisions that are not independently made but rather been driven by the interplay of constraints and needs. The majority of smallholders seem to be subject to the synergetic effects of different seasonalities such as for production, consumption, and expenditure which often leave little scope for individual actions. Besides, it is argued that production-related constraints currently overrule other aspects as they prevent many smallholders from producing a regular marketable surplus.

One aspect that has not exhaustively been discussed in this thesis regards the weak integration of smallholders in ordinary markets. More specific research on the marketing structures in Chepareria and Kongelai may therefore be needed to better understand the complex challenges and mechanisms on the market level. This needs to include an investigation of the different market actors such as middlemen and local traders.

With regard to future developments it is here argued that a commercialization of smallholder agricultural structures in Chepareria and Kongelai requires the contribution of different actors. On the one hand it depends on the ability of public authorities to create an enabling environment for smallholders to commercialize, and on the other hand a personal willingness to change from a smallholder's perspective. On a general scale, this will need to address the production- and marketing-related constraints that have been outlined in this thesis.

Furthermore, the realization of a smallholder commercialization needs to be accompanied by a mindset transformation and the establishment of new attitudes



towards agricultural production. At the moment, many smallholders seem to perceive market-oriented production as a risk rather than an opportunity. With respect to the longer term effect, this needs to take the younger generations on board as prospective developments in agriculture will depend on the attitudes and actions of the upcoming generations. Education and research should be done on the perceptions, visions and concerns of the current youths in order to better understand related future challenges and to bring about sustainable change.

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Appendix A – Interview Guide farmer’s interviews

Name (respondent): _____

Date: _____

Sex/Age: _____

produce sold(%)? _____

Agriculture, livelihood, and gender

1. How would you describe your current livelihood/own household? How would you compare it to livelihoods in the division?
2. What are the agricultural activities you are engaged in and why?
3. What do you perceive as “successful farming/livestock breeding”?
4. What is the role of the different household members and how are decisions made for the household? What can you say about the role of women and men?
5. What inspires and influences your livelihood decisions?
6. What challenges do you perceive for your household?

Agriculture, production, and commercialization

7. What comes to your mind if you think about commercial agriculture?
8. Could you elaborate on the reasons to sell agriculture produce on markets?
9. What opportunities do you perceive to commercialize agriculture on your farm and in the division?
10. What comes to your mind if you think about challenges?
11. How do you select what you produce?
12. Can you describe marketing structures in the division?
13. In what way are households in the division linked to markets? Where can you sell your produce?
14. Where do you receive market information from?
15. What do you know about the public plans/policies in the division?
16. What do you know about the Ministry of Agriculture

Community and culture

1. How do you think about the community?
2. Who are the different actors in the community?
3. How would you describe your relationship to others in the community? How about others in the division?
4. Can you describe the role of the Pokot culture in the divisions?

Concluding question: What are your objectives for the next harvest season? What could impede/enable you to reach these goals?

Appendix B – List of participants in the Focus Groups

Focus Group A (male group)		
Region: Chepareria		
Date: 18.10.14		
Participant	Age	Sex
FGa1	65	M
FGa2	60	M
FGa3	60	M
FGa4	51	M
FGa5	65	M
Focus Group B (women group)		
Region: Chepareria		
Date: 18.10.14		
Participant	Age	Sex
FGb1	40	F
FGb2	65	F
FGb3	65	F
FGb4	40	F
FGb5	44	F
FGb6	54	F
Focus Group C (youth group)		
Region: Chepareria		
Date: 18.10.14		
Participant	Age	Sex
FGc1	22	M
FGc2	23	M
FGc3	19	M
FGc4	23	M
FGc5	22	F
FGc6	25	M
FGc7	24	F
FGc8	19	M

Focus Group D (male group) Region: Kongelai Date: 15.10.14		
Participant	Age	Sex
FGd1	60	M
FGd2	56	M
FGd3	35	M
FGd4	50	M
FGd5	44	M
FGd6	36	M
FGd7	60	M
FGd8	34	M
Focus Group E (women group) Region: Kongelai Date: 15.10.14		
Participant	Age	Sex
FGe1	29	F
FGe2	45	F
FGe3	48	F
FGe4	35	F
FGe5	60	F
FGe6	62	F
Focus Group F (youth group) Region: Kongelai Date: 15.10.14		
Participant	Age	Sex
FGf1	23	M
FGf2	22	M
FGf3	20	F
FGf4	20	M
FGf5	18	M
FGf6	20	M
FGf7	21	F

Appendix C – Interview guide focus groups

General questions:

1. What can you say about livelihoods in the division?
2. Can you describe agriculture in the division?
3. What do you think about commercial agriculture?
4. What do you know about current plans from the county government?
5. What motivates/discourages people to commercialize?
6. What enables/impedes people to commercialize?
7. Can you elaborate a bit on the community?
8. What do you think about marketing structures in the division?
9. What do you think about extension services in the division?
10. What potentials do you perceive for agriculture in the region?
11. What challenges do you perceive?

Specific questions:

Male groups

12. How do you think about farming?
13. What do you connect with the shift to agro-pastoralism?

Women groups

14. How would you describe the role of gender in households?
15. In what realms do you perceive potentials for commercial agriculture?
16. Which role do women play in these processes?

Youth groups

17. What are the major problems of the agricultural sector in the region?
18. What potentials does the region have?