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**Prof. Dr. Regina Birner**

**The Role of Informal Institutions in Agricultural Development: Case  
Studies from Kenya, Pakistan and Malawi**

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**Noora-Lisa Aberman**

born in Southampton, New York, USA

1976

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**Examination Committee:**

Supervisor and Reviewer:	Prof. Dr. Regina Birner
Examiner:	Prof. Dr. Insa Theesefeld
Examiner:	Prof. Dr. Thomas Berger
Head of the examination committee:	Prof. Dr. Andrea Knierim

# Contents

<b>Acknowledgements</b> .....	<b>iv</b>
<b>Executive Summary</b> .....	<b>v</b>
<b>Zusammenfassung</b> .....	<b>vii</b>
<b>List of Acronyms</b> .....	<b>ix</b>
<b>1 Introduction</b> .....	<b>1</b>
1.1 Institutions and Agricultural Development .....	1
1.2 Objectives .....	2
1.3 Literature Review.....	3
1.3.1 Institutions and “New Institutional Economics” .....	3
1.3.2 Institutional Sub-fields of interest .....	8
1.3.3 Methodological Approaches.....	11
1.3.4 Net-Map: Review of Empirical Applications.....	15
1.4 Organization of the Thesis.....	19
1.5 References .....	21
<b>2 Gendered perceptions of power and decision making in rural Kenya..</b>	<b>28</b>
2.1 Introduction.....	29
2.2 Review of Theoretical and Empirical Literature .....	30
2.3 Methodology.....	34
2.3.1 Data collection and sampling.....	34
2.3.2 Analysis .....	36
2.4 Empirically-based Conceptions of Power.....	36
2.4.1 Power as Influence: “Power Over” .....	37
2.4.2 Zero-sum power and household development .....	39
2.4.3 Domination and leadership: two sides of the same coin .....	39
2.4.4 Gendered differences in power as influence.....	40
2.4.5 Power through Unity and Consultative Decision making: “it’s a different world” .....	40
2.4.6 Hard work, taking care of the family and setting an example.....	41
2.4.7 Shifting gender norms: circumventing and coping with male dominance .....	42
2.5 Discussion.....	44
2.6 References .....	46
<b>3 Gender-inclusive governance of “self-help” groups in rural Kenya.....</b>	<b>49</b>
3.1 Introduction.....	50
3.2 Review of Evidence on Gender and Group Governance.....	51
3.3 Analytical Framework .....	54
3.4 Economic, Social and Political Context .....	56
3.5 Methodology.....	57
3.5.1 Data collection and sampling.....	58
3.5.2 Analysis .....	59
3.5.3 Reflexivity, Validity and Ethics.....	59

3.6	Results: Assessing the Gender-Inclusivity of Group Governance .....	60
	3.6.1 Group Governance .....	60
	3.6.2 Group Strength.....	66
	3.6.3 Group-member Endowments .....	66
3.7	Discussion.....	69
3.8	References .....	72
<b>4</b>	<b>Progress of Constitutional Change and Irrigation Management Transfer in Pakistan: Insights from a Net-Mapping Exercise .....</b>	<b>77</b>
4.1	Introduction.....	78
4.2	Background .....	78
	4.2.1 Water Governance and Processes of Reform.....	78
	4.2.2 Progress of IMT Reform .....	80
4.3	Net-Map Exercise.....	82
4.4	Net-Map Results .....	84
	4.4.1 National Net-Map results .....	84
	4.4.2 Punjab Net-Map results.....	87
4.5	Discussion - Signals of Reform in the Net-Map Exercise, and Implications .....	90
	4.5.1 IMT, Formal Authority and Informal Influence .....	90
	4.5.2 IMT and Financing .....	91
	4.5.3 Constitutional Amendment and Devolution of Responsibilities.....	93
4.6	Limitations, Conclusions, and Next Steps.....	94
4.7	References .....	96
4.8	Appendix 1. Complete actor lists .....	99
4.9	Appendix 2. Network analysis tables and figures .....	101
<b>5</b>	<b>Governance Challenges of Agricultural Export Promotion: The Case of Soybean in Malawi .....</b>	<b>102</b>
5.1	Introduction.....	103
	5.1.1 Institutions and the business environment in Sub-Saharan Africa .....	104
	5.1.2 Competitiveness of Malawi's soybean sector.....	107
5.2	Methodology.....	109
	5.2.1 Analytical Framework .....	109
	5.2.2 Methods.....	111
	5.2.3 Data collection and sampling.....	112
	5.2.4 Analysis .....	113
5.3	Regulatory framework governing soybean exports.....	114
	5.3.1 Discretionary power and consistency of enforcement.....	117
5.4	Policy and governance environment.....	120
5.5	Actor power and policy positions .....	121
5.6	Navigating the institutional set-up: actor responses.....	124
	5.6.1 Soybean export bans .....	125

5.7	Contrasting with other export sectors .....	126
5.8	Discussion and policy implications .....	128
5.9	References .....	130
5.10	Appendix 1—Net-Map actor abbreviations, attributes, and centrality scores .....	133
<b>6</b>	<b>Discussion and Conclusions .....</b>	<b>134</b>
6.1	Summary of Study Conclusions and Lessons .....	134
6.2	Cross-Study Lessons.....	136
6.2.1	Understanding and Harnessing Shifting Norms .....	136
6.2.2	Socio-centric policymaking .....	137
6.3	Methodological insights and limitations .....	137
6.4	Prospects for further research.....	139
6.5	References .....	141

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## Executive Summary

Why have so many countries lagged behind in terms of agricultural development, structural transformation and poverty alleviation? This thesis is based on the proposition that a lack of attention to institutions and governance is partly responsible for the limited success in meeting food security and development goals in many developing countries, in spite of significant investments in agricultural development. In particular, the interplay between formal and informal institutions has not been thoroughly explored, in part because this interplay is not well captured in the quantitative analytical approaches that dominate the literature on agricultural development. Informal and non-market institutions play an important role especially in early phases of agricultural development. Therefore, a better understanding of informal institutions and their interaction with formal institutions is expected to provide valuable insights on how to facilitate agricultural development more effectively and to better use its potential to promote food security, and poverty reduction.

Institutions can be defined as the socially constructed formal and informal rules that constrain human behaviour and provide the framework of incentives that shapes economic, social and political life. In the literature on agricultural development, institutional analysis typically builds on the theory of neoclassical economics and draws on its analytical tools, but it appears useful to explore theoretical approaches developed in other branches of the social sciences and to apply their methodological approaches to analyse the role of institutions in agricultural development. Qualitative methods are particularly promising to provide new insights into the role of institutions in agricultural development, in particular with regard to informal institutions.

The main objective of this thesis is the development and application of novel methodological approaches to analysing the interplay of informal and formal institutions in agricultural development. The thesis is based on four case studies conducted in three developing countries: Malawi, Pakistan and Kenya. The case studies deal with three selected themes of institutional development in agriculture, where the interplay of formal and informal institutions is particularly important. Two themes relate to specific sub-sectors of agriculture: institutions for managing irrigation systems and institutions that facilitate agricultural exports. The third theme is cross-cutting and addresses the question how gender equity can be promoted in institutions that matter for agricultural development. Considering that institutions are nested, the case studies cover different levels, including the household, farmer group, local government and national government level. Together the case studies provide insights on how institutional analysis—with an emphasis on social institutions, informal rules, perceptions, and norms— affect agricultural development initiatives.

The case studies make use of methodological approaches that are relatively novel in the field of agricultural development studies and thus serve to broaden the toolkit of methods for institutional analysis. These methods include two versions of a participatory mapping tool called Net-Map and Process Net-Map. As a third approach, qualitative interviews with the inclusion of tactile power mapping exercises have been applied. As the case studies cover different levels, the data collection methods have been applied with a wide range of participants that had highly diverse social and educational backgrounds, ranging from national-level policy actors to farmers residing in remote areas. Epistemologically, these methods support a social constructionist research approach, wherein the informal and socially constructed aspects of agricultural policy and governance can be assessed.

This first study, “Gendered perceptions of power and decision making in rural Kenya,” utilizes focus group discussions and tactile Power Mapping to understand socially constructed views of gender, power, and household decision-making. Development programs are commonly concerned with altering social

norms related to this issue based on an understanding of their embeddedness—the extent to which they negatively affect economic and social outcomes. A better understanding of the social norms and beliefs makes it possible to identify strategies to change them. The analysis shows that men and women are constantly negotiating for power in the household, within the bounds of their gendered limitations. A zero-sum conceptualization of power may undermine common development approaches to empowerment.

The second study, entitled “Gender-inclusive governance of ‘self-help’ groups in rural Kenya,” examines governance structures in community self-help groups and the extent to which they can promote inclusive participation of women in group decision-making. This study also utilizes focus group discussions and tactile Power Mapping as data collection tools. The study shows that group-member endowments influence the group’s understanding of gender issues and political processes, and that the pro-gender intentions behind governance structures are more important than the structures themselves.

In the third study, entitled “Progress of constitutional change and irrigation management transfer in Pakistan: insights from a net-map exercise,” the Net-Map tool is applied to examine the effects on federal and provincial water governance structures after a *de jure* shift in a constitutional amendment for devolution of governmental power to provincial level. The findings indicate the potential for a successful shift of decision-making on irrigation that was made possible due the constitutional change. However, weaker perceptions of the role of *irrigation management transfer* (IMT) in water governance were found than would be expected considering the long history of this approach. The results provide evidence that additional effort is necessary to complete the shift towards a decentralized IMT model.

The fourth study with the title “Governance Challenges of Agricultural Export Promotion: The Case of Soybean in Malawi” uses the Process Net-Map tool to examine the institutional problems involved in developing functioning export markets, focusing both on the institutional environment and the “rules of the game”. The study also analyses the role of social norms that contribute to governance challenges of export promotion. The results show that there is a high level of discretion and variability in the enforcement of the rules. Exporters need to rely on clientelism to fulfil the requirements in a timely manner. The study indicates that these governance challenges stifle the growth of the export sector.

Taken together, the case studies show that in a developing country context, the informal rules (described as “rules-in-play”), which are based on social norms, often play a more significant role in guiding the behaviour of economic actors than the formal rules and regulations of the state. Thus, the consideration of social norms is critical when devising policy reform strategies, devolution processes, and addressing corruption. The studies identified the following factors, which should be considered when undertaking policy development or policy reform: a) the capacity of the government to enforce rules and laws; b) social norms that determine the extent to which rules-are followed; and c) the impact of additional rules that aim to promote compliance on transaction costs. The case studies also provide insights on the role of that informal institutions play with regard to gender, power and community groups. The findings indicate that gender norms are slowly changing even in the remote area of Kenya where the case studies were conducted, which is confirmed by other empirical work. The findings indicate that such change is very slow due to internal societal pressures against it. However, a better understanding of when and how informal institutions are changing provides entry points for action. The studies indicate that there is a potential for community groups to serve as a parallel institution to that of the home, governed by constitutions and by-laws, that do enable women to push the boundaries of community gender norms, although both are embedded in the same community. And although gendered participation in groups is mixed, there are drivers that can be supported to flourish by development partners and government.

## Zusammenfassung

Die vorliegende Arbeit befasst sich mit der Rolle informeller Institutionen in der landwirtschaftlichen Entwicklung. Sie beruht auf der Prämisse, dass die mangelnde Beachtung von Institutionen und Governance-Problemen dazu beigetragen hat, dass viele Entwicklungsländer ihre Ziele im Bereich der landwirtschaftlichen Entwicklung und Ernährungssicherung nur unzureichend verwirklicht haben, obwohl erhebliche Investitionen in diesen Bereich geflossen sind. Insbesondere ist es das Zusammenwirken von formalen und informellen Institutionen, das wenig Beachtung gefunden hat, zumal es in den quantitativen Forschungsansätzen, die die agrarökonomische Literatur zur landwirtschaftlichen Entwicklung prägen, nicht vollständig berücksichtigt werden kann.

Institutionen können als sozial konstruierte formale und informelle Regeln definiert werden, die das menschliche Verhalten steuern und den Rahmen für die Anreize bieten, die das ökonomische, soziale und politische Leben prägen. In der Literatur zur landwirtschaftlichen Entwicklung werden Institutionen überwiegend auf der Basis der Neuen Institutionenökonomie analysiert, die auf der neoklassischen Wirtschaftstheorie beruht und deren analytische Instrumente nutzt. Es erscheint jedoch sinnvoll, auch theoretische Ansätze und analytische Methoden zu verwenden, die in anderen Bereichen der Sozialwissenschaften entwickelt wurden. Qualitative Methoden erscheinen besonders aussichtsreich, um neue Erkenntnisse zur Rolle von Institutionen in der landwirtschaftlichen Entwicklung zu gewinnen, insbesondere im Hinblick auf informelle Institutionen.

Vor diesem Hintergrund verfolgt die vorliegende Arbeit das Ziel, neue methodische Ansätze zu entwickeln und anzuwenden, mit denen das Zusammenwirken von formalen und informellen Institutionen in der landwirtschaftlichen Entwicklung untersucht werden kann. Die Arbeit basiert auf vier Fallstudien, die in drei Entwicklungsländern durchgeführt wurden: Malawi, Pakistan und Kenia. Die Fallstudien befassen sich mit drei Themen der institutionellen Entwicklung im Bereich der Landwirtschaft. Zwei von diesen Themen behandeln spezielle Institutionen im Bereich der landwirtschaftlichen Produktion und Vermarktung: (a) Institutionen für das Management von Bewässerungssystemen und (b) Institutionen für den Export landwirtschaftlicher Güter. Das dritte Thema (c) ist übergreifend angelegt und geht der Frage nach, wie die Gleichstellung der Geschlechter innerhalb von Institutionen vorangebracht werden kann, die für die landwirtschaftliche Entwicklung relevant sind. Da Institutionen auf verschiedenen Ebenen ineinandergreifen, decken die Fallstudien auch verschiedene Ebenen ab: die Ebene des Haushalts und die Ebene der Gruppe innerhalb einer Dorfgemeinschaft sowie die lokale und die nationale Regierungsebene. Insgesamt vermitteln die Fallstudien Erkenntnisse darüber, wie die Institutionen, insbesondere sozialen Institutionen, informelle Regeln, Wahrnehmungen und Normen, landwirtschaftliche Entwicklungsprogramme beeinflussen.

In den Fallstudien werden methodische Ansätze angewandt, die für Studien zur landwirtschaftlichen Entwicklung bislang wenig eingesetzt wurden. Mit diesen soll das Spektrum der institutionellen Analysemethoden im Bereich der landwirtschaftlichen Entwicklung erweitert werden. Zu den angewandten Methoden zählen neben Fokusgruppendifkussionen und Experten-Interviews zwei Versionen einer partizipativen Mapping-Methode, die als „Net-Map“ und als „Process Net-Map“ bezeichnet werden. Als weitere qualitative Methode wurde das „Power Mapping“ angewandt. Da die Fallstudien verschiedene Ebenen umfassen, wurden diese Erhebungsmethoden bei Zielgruppen angewandt, die sich sehr stark im Hinblick auf ihren sozialen Hintergrund und ihren Ausbildungsstand unterscheiden. Somit konnte ein breites Anwendungsfeld der eingesetzten Methoden getestet werden. Epistemologisch wurde in der vorliegenden Arbeit ein sozialkonstruktivistischer Ansatz verwendet.

Die erste Fallstudie trägt den Titel „Geschlechtsspezifische Wahrnehmungen von Macht und Entscheidungsverhalten im ländlichen Kenia.“ In dieser Studie wurden Fokusgruppendifkussionen und „Power Mapping“ eingesetzt, um sozial konstruierte Ansichten über Geschlechterrollen, Macht und Entscheidungen innerhalb des Haushalts zu untersuchen. Die Analyse zeigte, dass innerhalb des Haushalts kontinuierliche Aushandlungsprozesse zwischen Männern und Frauen stattfinden, die sich jedoch innerhalb von geschlechtsspezifischen Grenzen bewegen. Die Studie weist darauf hin, dass Entwicklungsprogramme die Verteilung von Macht und Entscheidungsbefugnissen innerhalb des Haushalts und auf Dorfebene nicht als „Nullsummenspiel“ konzeptualisieren sollten, wenn sie erfolgreich die Stärkung benachteiligter Gruppen („Empowerment“) erreichen wollen.

Die zweite Studie befasst sich mit der Governance von Selbsthilfegruppen im ländlichen Kenia, wobei insbesondere die Einbindung von Frauen in die Governance-Strukturen solcher Gruppen beleuchtet wird. Auch diese Studie wurde auf der Basis von Fokusgruppendifkussionen und Power Mapping erstellt. Die Studie zeigte, dass Selbsthilfegruppen, dazu beitragen können, Gender-Normen zu verändern, weil sie eine parallele Institution zur Familie darstellen, in denen neue Governance-Strukturen aufgebaut und praktiziert werden können.

Die dritte Studie befasst sich mit der Dezentralisierung des Bewässerungsmanagements in Pakistan. Für diese Studie wurde die Net-Map Methode angewandt, um die Auswirkungen einer Verfassungsänderung auf die Institutionen des Bewässerungsmanagements auf föderaler und auf Provinz-Ebene zu untersuchen. Die Ergebnisse zeigen, dass die Verfassungsänderung tatsächlich zu einer Verlagerung der Entscheidungskompetenz im Bewässerungsmanagement geführt hat. Dennoch war bei vielen Akteuren das Verständnis des Transfers von Entscheidungsbefugnissen auf die lokale Ebene (Irrigation Management Transfer) nicht sehr stark ausgeprägt. Die Studie kam daher zu dem Schluss, dass zusätzliche Anstrengungen erforderlich sind, um dieses Konzept vollständig umzusetzen.

Die vierte Studie widmet sich den Governance Problemen von Programmen, die den Export landwirtschaftlicher Produkte fördern, wobei der Export von Sojabohnen aus Malawi als Fallbeispiel analysiert wird. Für diese Studie wurde das Process Net-Map Tool eingesetzt. Die Studie zeigt, dass soziale Normen erheblich zu den Governance Problemen der Exportförderung beitragen, insbesondere, da es einen großen Spielraum in der Interpretation der bestehenden staatlichen Export-Regelungen gibt. Exporteure müssen oft klientelistische Beziehungen zu der für den Export zuständigen Verwaltung unterhalten, um die rechtlichen Anforderungen zeitgemäß umsetzen zu können. Die Studie legt den Schluss nahe, dass Governance Probleme ein wesentlicher Grund sind, dass Länder ihr Exportpotential für landwirtschaftliche Produkte nur unzureichend nutzen.

Insgesamt zeigen die vier Fallstudien, dass informelle Regeln, die auf sozialen Normen beruhen, oft eine wesentlich wichtigere Rolle für das ökonomische Verhalten von Akteuren spielen als staatliche Regelungen. Daher ist die Beachtung sozialer Normen für die Entwicklung von Strategien für die Reform agrarpolitischer Maßnahmen in Entwicklungsländern von besonderer Bedeutung. Die Studien weisen darauf hin, dass bei der Planung einer Politik-Reform folgende Faktoren beachtet werden sollten: a) Die Kapazität einer Regierung, Regeln und Normen tatsächlich umzusetzen; b) die sozialen Normen, die bestimmen, inwieweit staatliche Regelungen eingehalten werden; c) die Transaktionskosten, die durch zusätzlichen Regeln verursacht werden, die darauf abzielen, regelkonformes Verhalten zu erreichen. Die Fallstudien liefern auch Ergebnisse zur Frage, wie informelle Institutionen solche Programme beeinflussen, die auf eine Änderung der Geschlechterrollen in ländlichen Regionen hinwirken. Die Studien weisen darauf hin, dass sich geschlechtsspezifische Normen in Kenia langsam wandeln, was auch durch andere empirische Studien belegt wird. Jedoch vollzieht sich dieser Wandel deswegen sehr langsam, weil es einen erheblichen gesellschaftlichen Druck gegen diesen Wandel gibt. Daher ist es wichtig, geeignete Ansatzpunkte zu finden, um Wandlungsprozesse gezielt zu fördern und Rückschläge („backlash“) zu vermeiden. Aus der Studie lässt sich folgern, dass Selbsthilfegruppen, die ihren eigenen Governance-Strukturen unterliegen, einen solchen Ansatzpunkt darstellen.

## List of Acronyms

AES	Agricultural Extension Services
AWB	Area Water Boards
CBNRM	Community-Based Natural Resource Management
FO	Farmer Organizations
MoWP	Federal Ministry of Water and Power
FGD	focus group discussion
IRSA	Indus River System Authority
IWT	Indus Water Treaty
IAD	Institutional Analysis and Development
IWMI	International Water Management Institute
IPCC	Inter-provincial Coordination Committee
IMT	Irrigation Management Transfer
KP	Khal Panchayat
KPK	Khyber Pakhtunkhwa
MAF	million acre feet
MINFA	Ministry of Food and Agriculture
MFSR	Ministry of Food Security and Research
MoP&D	Ministry of Planning & Development
NIE	New Institutional Economics
OFWM	On-Farm Water Management
PARC	Pakistan Agricultural Research Council
PIM	participatory irrigation management
PAD	Provincial Agriculture Department
PIDA	Provincial Irrigation and Drainage Authorities
PIAA	Provincial Irrigation Authority Act
PIAA	Provincial Irrigation Authority Act
PIDs	provincial irrigation departments
RPOs	rural producer organizations
RSP	Rural Support Programmes
SNA	social network analysis
WA	Water Accord
WAPDA	Water and Power Development Authority
WUA	Water User Associations

# 1 Introduction

Agriculture is the cornerstone of growth and poverty alleviation throughout much of the developing world. FAO's 2015 report on the State of Food and Agriculture summarizes the current situation, noting that 795 million people still suffer from hunger and almost one billion people still live in extreme poverty (2015). While many parts of the world have made progress, it is largely in sub-Saharan Africa and South Asia that problems of hunger and poverty persist. Pervasive global poverty and food insecurity must be addressed principally through the agricultural sector and its supporting institutions; as most of the world's poor depend on agriculture for their livelihoods, and growth in the agriculture sector is seen to be at least twice as effective in decreasing poverty than growth in other sectors (World Bank, 2008). Literature on agricultural transformation documents a process of increased productivity of the agriculture sector leading to surplus food and labour, thus laying the groundwork for a flourishing non-agricultural sector that provides higher-income employment and leads to increased growth and development (Dorward, Kydd, Poulton, & Bezemer, 2009; McMillan & Headey, 2014; Timmer, 1988). However, while some developing countries have succeeded in making this transition—from agriculture-based to industrialized—and decreasing poverty and food insecurity along with it, there are still many countries struggling at different points along the pathway out of an agriculture-based—often subsistence agriculture-based—economy (World Bank, 2008).

## 1.1 Institutions and Agricultural Development

Why have so many countries lagged behind in terms of agricultural development, structural transformation and poverty alleviation? Agriculture-based economies face a number of global challenges today including turbulent food and fuel prices, increasing climatic shocks and variability, and differential access to yield increasing inputs and technologies. While consensus among development actors has been shifting over the past few decades in terms of the appropriate balance of state-led versus market-led development approaches (for instance, state-led input subsidy programs have come in and out of fashion over the past two decades (Jayne & Rashid, 2013)), there has been a general trend toward the promotion of market-led development and decentralized governance (Dorward et al., 2009). In particular, the current model for promoting development involves interventions to increase smallholder farmer productivity such as improved technologies, investment in infrastructure, and promotion of well-functioning markets, such as those for inputs, outputs, and credit (Collier & Dercon, 2014; Kirsten, Dorward, Poulton, & Vink, 2009). Applying a gender lens to agricultural transformation, agriculture is the primary activity for 79% of women in developing countries (Doss, 2014). However, many of those women face gender-specific constraints that reduce their productivity and limit their contributions to agricultural production and economic growth, therefore increasing smallholder farmer productivity also involves addressing gender disparities such as control of assets and household bargaining power (FAO, 2011; Quisumbing & Pandolfelli, 2009).

When considering the overall failure to meet food security and development goals in developing countries, namely many of the Millennium Development Goals on poverty and hunger (United Nations, 2015), in spite of significant investments into agricultural development, a lack of attention being paid to institutional processes and constraints may be to blame (Kirsten et al., 2009). Williamson (2000) uses the example of Russia to describe how a lack of attention to institutional factors resulted in the failure of market-focused reforms during the transition out of communism. Dorward et al. (2009) provide a number of explanations for why common market-led development approaches have not been effective in much of sub-Saharan Africa and South Asia. These include: i) partial implementation, ii) weak institutions, iii) coordination failure, and ix) lack of political commitment to reforms (often entailing resistance of officials to withdraw from rent-seeking opportunities). Thus, an institutional perspective can help us develop a better understanding of how to facilitate the development of economic institutions that improve the efficiency of agricultural sectors of poor rural economies (Kirsten et al., 2009, p. 1094).

Though arguably not prominently in the mainstream of economics, the importance of institutions and governance to economic activity has been explored for many decades (Dequech, 2007; Hodgson, 2007). Furthermore, it has been gaining prominence and authority in recent years, particularly in some economic sub-disciplines. While neoclassical economics typically view institutions as static, renowned economic theorists such as Coase, Ostrom, North and Williamson (among others) have increasingly highlighted the importance of the analysis of institutions (Coase, 1998; North, 1991; Ostrom, Gardner, & Walker, 1994a; Ostrom, 1990; Williamson, 2000).

In development economics there has been increasing emphasis on institution. Dorward and Omamo (2009) argue that understanding institutional dynamics is fundamental to understanding and influencing processes of social and economic change in agricultural development. Institutional analysis is also prominent in economic research on property rights and natural resource management literature (Katon, Knox, & Meinzen-Dick, 2001; Ostrom et al., 1994a).

Institutional economics typically employs methods from Transaction Cost Economics, agency theory, or borrows from neoclassical economics. While the methodological approaches depart from and expand upon transitional neoclassical economics, as discussed below, it still leaves a gap in terms of analysing the social aspects of institutions that institutional theory attempts to explain. This thesis argues that new research approaches are required to fill this gap in understanding and to help address some of the above mentioned challenges to agricultural development related to the social embeddedness of economic institutions.

## 1.2 Objectives

The broad objective of this thesis is the development and application of novel methodological approaches to analysing the interplay of informal and formal institutions in agricultural development.

This is achieved by applying methodological approaches from other social sciences to the study of agricultural development in order to investigate various aspects of the embeddedness of institutions in social life and how social life drives or constrains institutions.

More specifically, the remainder of this chapter lays out an argument for the need for novel research approaches by highlighting the current understanding of institutions in agricultural development and the knowledge gaps related to institutional embeddedness. Next, it lays out an in depth rationale for the usefulness of these methods by reviewing their past applications, strengths, and weaknesses.

The subsequent chapters of the thesis describe four case studies wherein such novel approaches were applied in three developing countries: Malawi, Pakistan and Kenya. Exploring selected themes of institutional development in agriculture where the interplay of formal and informal institutions is particularly important, the case studies explore different institutional levels and subtopics within agricultural development. Together the case studies provide insights on how institutional analysis—with an emphasis on social institutions, informal rules, perceptions, and norms—affect agricultural development initiatives.

### 1.3 Literature Review

The literature summarized below provides an overview of institutions, as they have been defined and studied in economics and related fields, with an emphasis on understanding both formal and informal aspects of institutions. In particular, key frameworks for understanding and analysing institutions are described, and then sub-fields of institutional study are summarized that are particularly relevant for the content explored in the subsequent chapters of this thesis. Namely, these subfield are: Gender and decision-making in community institutions, perceptions and legitimacy of local governance reforms, and institutional capacity and trade facilitation.

#### 1.3.1 Institutions and “New Institutional Economics”

North defines institutions as “the humanly devised constraints that structure political, economic and social interaction. They consist of both informal constraints (sanctions, taboos, customs, traditions, and codes of conduct), and formal rules (constitutions, laws, property rights)” (1991, p. 97). Ostrom et al. and Hodgson both describe these constraining factors as rules and clarify that the rules that constitute institutions must be followed—they must be “rules in use”—or they have no impact on social life (2006; 1994a). Whether formal or informal, “ignored laws are not rules” (Hodgson, 2006, p. 6).

Rules are embedded in social life through habituation of rule-following behaviour. For a habit to become a rule it must have an inherently normative content and be prevalent within a group. Habits

strengthen institutions, "providing them with enhanced durability, power, and normative authority" (Hodgson, 2006, p. 7).

Ostrom et al. (1994a) presents the Institutional Analysis and Development (IAD) approach, wherein institutions are made up of three key components. First, there are actors who have preferences, information-processing capabilities, selection criteria and resources. Second, there are action situations in which the actors participate. In an action situation participants have a position or role and must decide among a diverse set of actions in light of the information they possess about how actions are linked to potential outcomes, and the costs and benefits thereof. Third are the rules that determine what is required, permitted or prohibited in a given action arena, and the sanctions from not following the rules.

North applies the concept of path dependence to institutions, explaining that the histories of economic institutions in different contexts "reflect the differing opportunity sets of the actors in each case" (1991, p. 110). Furthermore, according to Hodgson, "by structuring, constraining, and enabling individual behaviours, institutions have the power to shape the capacities and behaviour of agents in fundamental ways: they have a capacity to change aspirations instead of merely enabling or constraining them" (2006, p. 7).

These theorists fall broadly into the category of New Institutional Economics (NIE), one branch of institutional economics. NIE departed from some neoclassical economic assumptions. Williamson describes the key shift away from neoclassical economics taken by NIE as consideration of the firm as a governance structure rather than a "black box" with a production function. Of particular significance, NIE does not assume that transaction costs are zero, but rather considers that for most complex transactions, contracts are incomplete and therefore economic actors attempt to economize *transaction costs* (Tadelis & Williamson, 2012; Williamson, 2000).

Referred to as the transaction-cost economics branch of NIE, in this framework economic actors are presumed to invest *transaction costs* to mitigate *transaction risk* (or the risk of failure of a transaction), however they are not able to completely eliminate transaction risk. Dorward et al. summarize a number of common transaction costs and risks: transaction costs involve (1) the establishment and enforcement of exclusive property rights and/or (2) the definition and enforcement of the attributes of the good or service being exchanged (2009, pp. 1097–1098). Transaction risks are the losses sustained because of failure to (1) enforce exclusive property rights, (2) enforce required attributes, (3) complete the transaction, or (4) protect transaction benefits from 3rd party predation.

The authors go on to explain that these problems—specifically 2-4—take place when there are institutional or informational challenges such as those related to: information of goods, services and/or parties involved in a transaction, enforcement of agreements, and protecting property rights. Dorward et al. (2009) characterize these problems respectively as failures of commitment, opportunism, and rent

seeking. Furthermore, when it comes to smallholder farmers', transaction costs are also increased by the small scale of their transactions, dysfunctional service delivery, and limited farmer voice.

Williamson (2000) lays out a framework (Figure 1) of four different levels of institutional analysis. While NIE has been principally concerned with analysing the second and third levels, all are of interest to the field. Level one is the social embeddedness level. Embeddedness refers to the degree to which economic activity is constrained by non-economic institutions. This is the level where norms, mores, traditions are located. This level is usually considered static by institutional economists, largely because institutions change very slowly at this level.

Williamson (2000) notes that there is not a good enough understanding of these institutions, in spite of the lasting effect they have on social life. Similarly Douglass North says, "What is it about informal constraints that gives them such a pervasive influence upon the long-run character of economies?" (1991, p. 111). There are different kinds of embeddedness (social, cultural, structural and political) that should be distinguished and better theoretically specified. In particular, a better understanding of the mechanisms through which informal institutions arise and are maintained would inform initiatives to promote change at this level.

Level two is the institutional environment, described as the "rules of the game" (Kirsten et al., 2009; Williamson, 2000). These are the formal rules such as constitutions, laws, and property rights. This category is more or less constant (does not change in the short-run) except in the case of a major social or political upheaval that creates a window of opportunity for broad reform of the institutional environment. Positive Political Theory, or explanatory political theory, is an approach concerned with examination of level two features and understanding the economic and political ramifications thereof. Williamson (2000) characterizes analysis at this level as positive analysis to determine how to design better policies. For instance, much of the property rights research falls into this category.

Figure 1. Level of Analysis in Economics of Institutions

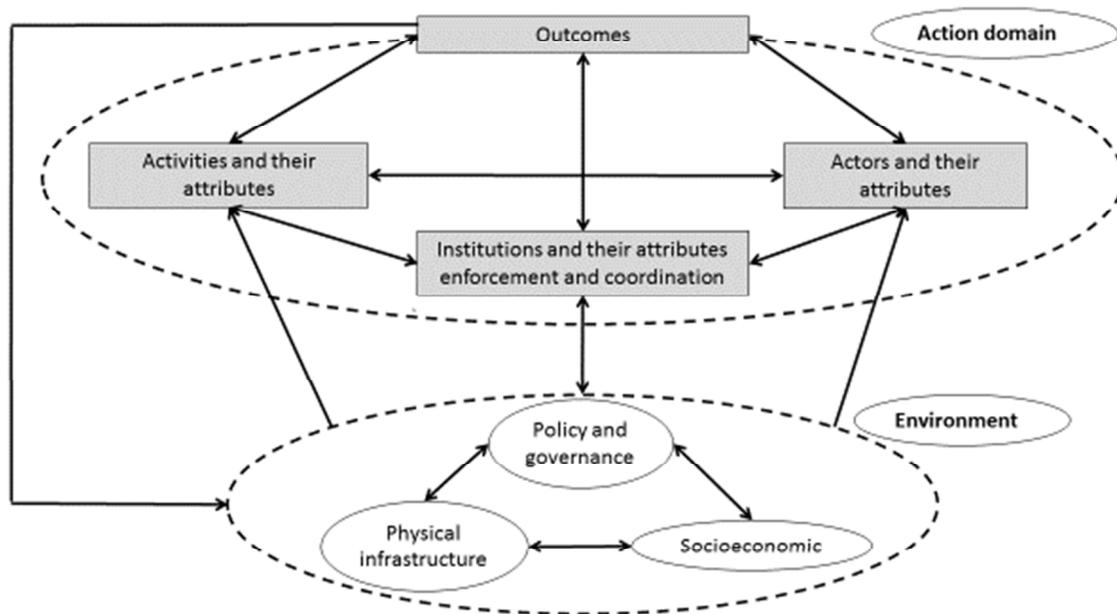
<u>Level</u>	<u>Speed of Change</u> (years)	<u>Purpose</u>	<u>Theory</u>
1. Embeddedness: Informal institutions, customs, traditions, norms, religion	$10^2$ to $10^3$	Protect, preserve (often non-calculative/internalized)	Social theory
2. Institutional environment, formal rules of the game—esp. property (polity, judiciary, bureaucracy)	10 to $10^2$	Get the institutional environment right	Economics of property rights/positive political theory
3. Governance, play of the game—esp. contract (aligning governance structures with transactions)	1 to 10	Get the governance structures right	Transaction cost economics
4. Resource allocation and employment (prices and quantities; incentive alignment)	continuous	Get the marginal conditions right	Neoclassical economics/agency theory

Source: Originally found in Williamson (2000), with adaptations by Dorward and Omamo (2009) and the author.

The third level refers to “how the game is played” (Dorward & Omamo, 2009; Williamson, 2000). This level is particularly concerned with contractual relations, assuming that all complex contracts are unavoidably incomplete, and that economic agents bear the cost of contract failure. The primary concern of analysis at this level is getting the governance structures right to economize transaction costs. And finally, at level 4 analysis is concerned with traditional economic issues of resource allocation, employment, prices, quantities and incentive alignment. Here traditional neoclassical economic analysis and agency theory are appropriate.

Building on the IAD approach and the transaction-cost economics branch of NIE, Dorward and Omamo (2009) develop a framework to guide empirical analysis of institutions for agricultural development in Africa.

Figure 2: Framework for Institutional Analysis of Agriculture in Africa



Source: Dorward & Omamo, 2009, pg. 79

Central to the Dorward-Omamo framework for institutional analysis is the identification of the action domain, borrowed from the IAD approach, which defines the spheres of activity and interest of the analysis (such as economic exchange of goods and services or the management of natural resources) (Dorward & Omamo, 2009, p. 78). The action domain is made up of: the institutions to be analysed, the activities that the institutions engage in, and the actors in those institutions and activities. An important facet of utilizing the analytical framework is the identification of each of these components and their relevant attributes.

The action domain is set in and affected by a wider environment, which is made up of the broader policy and governance environment, socioeconomic characteristics, and physical infrastructure. Institutions, actors, and activities are affected by the broader environment, and in turn they can affect the environment.

The literature reviewed here collectively conveys that institutional analysis can take place at many different levels. However, levels are defined differently by different theorists. For instance, Williamson's levels of analysis refer to the different aspects of the study of institutions that one is interested in, and suggest that different analytical methods are better suited depending on the level of analysis. Others refer to levels of analysis in terms of the framing of the action domain, or determining the *scale* of analysis. For instance, Hodgson says:

*“There are multiple levels, in which organizations provide institutional rules for individuals, and possibly in turn these organizations can also be treated as actors within broader institutional frameworks. For example, the individual acts within the*

*nation, but in turn the nation can sometimes be treated as an actor within an international framework of rules and institutions.”* (2006, pp. 10-11)

While North considers organizations as actors in broader social and political institutions, Hodgson (2006) finds value in exploring the inner working of organizations as made up of individuals. One must simply define the specific action domain institutional scale of interest, as demonstrated nicely in the Dorward-Omamo framework.

Williamson’s (2000) framework of levels of analysis is of particular relevance to the following chapters in this thesis. It helps to categorize different levels of institutional analysis, the analytic approaches they require, and other characteristics. This thesis is largely concerned with the interplay of level 1 institutions—those related to social embeddedness or informal socially-constructed institutions—with other institutional level. As such social theory *and* economic theory are applied in this thesis and qualitative analytical approaches are used to explore this nexus. As norms, customs, and perceptions cannot be easily captured through quantitative approaches.

Furthermore, the Dorward and Omamo (2009) develop a framework well-suited to guide empirical analysis in this field, especially for analysing the interplay of different institutional levels. This framework is explicitly applied in Chapters 2 and 4, and guides some of the thought in the other chapters. Finally, discussions by Hodgson (2006) and others on scale of analysis influence the decision to undertake case studies at multiple institutional scales, from the household, to group, to local government, to national government.

### 1.3.2 Institutional Sub-fields of interest

Institutional theorists, particularly those concerned with NIE, frequently describe the importance of the social context to other institutional and economic outcomes. However, while the study of institutions has gained prominence in recent years, there is a dearth of research on informal institutions by economists as they are largely taken as static (Williamson, 2000). Moreover, the interplay of formal and informal institutions has received even less attention in the institutional literature. This section briefly reviews the specific institutional areas studied in the subsequent chapters. In particular it examines the common approaches to institutional analysis in these study areas and the extent to which a focus on the interplay of formal and informal institution fills a gap in the current state of knowledge.

#### **Gender and decision-making in community institutions**

Kabeer and Subramanian (1996) argue that the norms and values that determine gender inequalities are rearticulated at all levels of institutions, and thus to understand the role of women in groups one must assess institutions at the levels of family, community, market and state. They also define a set of constitutive components of institutions that can be used to empirically assess them: rules, activities, resources, people and power.

This thesis first explores the most basic institutional level: the family. Development economics typically considers household decisionmaking issues through a neoclassical economic lens. Through such a lens, a household members' ability to realize their preferences depend on their bargaining power *as if* spouses are bargaining and the one with the highest "outside option" will win<sup>1</sup>. In this literature women have separate preferences for family consumption and do not necessarily pool income. This has led to the oft cited notion that children are better off when the mother controls a larger percentage of household resources (Haddad, Hoddonott, & Alderman, 1997). However some empirical examples have complicated this picture, and led to questions of the completeness of this conceptualization and the effectiveness of—for instance—asset transfers to women as a mechanisms for improving women and child welfare as it can sometime lead to unintended negative consequences (Eves and Crawford, 2014; Hidrobo and Fernald, 2013).

While there have been many approaches and innovations in terms of quantitatively assessing household bargaining dynamics and women's empowerment, they are typically somewhat detached from their institutional context (Heckert & Fabric, 2013). Chapter 2 develops socially-constructed and articulated definitions of power and decision-making for men and women in rural Kenyan households. The research approach allows for examination of the institution, and the gendered power dynamics that are played out within that institution. This allows for a deeper understanding of the level 1 institutions in order to inform gender policies and programs.

The third chapter examines gender and decision-making in the institution of the community group. Groups are mechanisms for developing women's social capital, improving livelihoods by facilitating risk pooling, promoting the adoption of agricultural technologies, and facilitating asset accumulation (Meinzen-Dick, Behrman, Pandolfelli, Peterman, & Quisumbing, 2014; Meinzen-Dick, Bernier, & Haglund, 2013). While empirical evidence shows a relationship between women's control over group resources and their voice in group decision-making, it has also been found that social risks associated with group participation often outweigh the benefits for women when they are not designed with women's priorities in mind (Meinzen-Dick R. & Zwarteven M., 1998; Valdivia & Gilles, 2001). Thus there is a need for detailed analysis to identify the major factors that can strengthen women's participation in groups, raising one of the central problems considered in Chapter 3.

Along these lines, Agarwal (2001) examines the factors that impact the effectiveness of women's participation in groups in South Asia, which are: gender-restrictive social norms (negative); ability to form women-only groups (positive); and external agents supporting women's effective participation (positive), (especially when supported from the beginning before men's territorial interests are established). Even though women-only groups enhance women's inclusion, other results indicate that mixed-sex groups can be more effective, so understanding how to enhance women's effective

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<sup>1</sup> See below for a critique of Freidman's "as if" argument.

participation in them is worthwhile (Meinzen-Dick et al., 2014; Sultana & Thompson, 2008). Therefore Chapter 3 of this thesis builds on Agarwal's (2001) approach, assessing the governance mechanisms that impact women's effective participation, with an emphasis on the "rules in use" and the effect of the social context in shaping those rules. Distinctly, it is applied in the Sub-Saharan African context where gender-restrictive social-norms are not as strict as in South Asia.

### **Perceptions and legitimacy of local governance reforms**

Chapter 4 moves on to consider issues of agricultural policy and agricultural water management wherein reforms have devolved power from federal to local levels in Pakistan through a constitutional devolution process and an Irrigation Management Transfer (IMT). These types of transfers of responsibility seek to empower local authorities to advocate for local priorities (Mitchinson, 2003). IMT reforms in particular seek to enable local user groups to manage water resources themselves, often in the face of weak state capacity to enforce resource management (Meinzen-Dick & Knox, 1999). When considering this literature it is useful to recall Ostrom et al.'s IAD approach to analysing community management of natural resources (1994a). Ostrom et al. strongly emphasizes the role of "working rules" (rules in use) in addition to formal rules, and the requirement for a shared interpretation of any rule for it to be effective. She also points to challenges measuring the shared interpretation of rules. It is the underlying social beliefs and norms that lead to shared interpretations and *working rules*, described by Ostrom et al. as attributes of the community. However, the IAD framework does not explicitly address how to capture social concepts.

Community management of natural resources is generally viewed as more effective than government in the literature. Failures of community management are typically blamed on low capacity of the groups to manage themselves, inappropriate incentive structures for the groups (such as weak or no property rights), the government's incomplete transfer of responsibility (perhaps due to a resistance to giving up rents that are being earned), or a lack of funding for the local management body (Carney & Farrington, 1998; Meinzen-Dick & Knox, 1999). Much of the institutional research on this topic examines the effectiveness of the transfer of responsibility for managing resources and design elements or rules that objectively increase effectiveness (Carney & Farrington, 1998; Cox, Arnold, & Tomás, 2010; Johnson, 1995). Distinctly, Suhardiman and Mollinga (2012) delve into farmers' and government staff perceptions and shared beliefs about IMT and challenges in implementation to better explain the cause of the challenges. They emphasize that the irrigation agency has an identity and interests of its own and cannot be treated merely as an implementer.

Likewise, chapter 4 considers the identities and interests of the reformed agencies, as well as the other stakeholders that could influence the implementation, by mapping the complete network of actors, their perceived formal and informal linkages and influence. Once again with an emphasis on the "rules in use" as perceived by experts and professionals in the sector, the chapter sheds light on some potential

barriers to the formal reform implementation by determining their shared beliefs about progress in the reform process.

### **Institutional capacity and trade facilitation**

While facilitation of the business environment broadly, or trade specifically, often focuses on physical infrastructure (such as roads or electricity) or decreasing financial barriers (such as import or export tariffs), the quality of institutions can play a powerful role therein. Where institutions are weakly developed, individuals engaging in that particular arena often bear high transaction costs due to weak coordination of economic activity and enforcement of formal rules (Kirsten et al., 2009). Similarly, states with weak institutions are also more inclined to corruption (Levy & Kpundeh, 2004).

A number of studies explore and confirm the relationship between institutional weaknesses—in particular corruption and red tape—and challenges in business and trade facilitation (Eifert, Gelb, & Ramachandran, 2008; Harstad & Svensson, 2011; Levy & Kpundeh, 2004; The World Bank, 2009). However, these have rarely taken place within the agriculture sector in terms of promoting agri-business development. Furthermore, because institutional dynamics are context specific, the quantitative approaches taken by most studies are not able to illuminate the distinct social and political realities underlying the institutional outcomes and incentives for economic actors. Chapter 5 of this thesis fills this gap by exploring the policy and regulatory environment related to agricultural exports. It contrasts the formal regulations and the “rules in use” and explores the shared beliefs about policy reform dynamics that determine the regulatory environment.

### **1.3.3 Methodological Approaches**

The vast majority of research in agricultural development, with its basis in neoclassical economics, is quantitative and postpositivist. Postpositivism is based on an assumption that an objective and measurable social world exists and that there is a separation of object and subject in research (Daly, 2007). Neoclassical economics largely falls into this category because, distinct from purely positivist approaches, it recognizes and tries to account for limitations in knowledge and biases. Distinctly, a social constructionist approach (also described as *interpretivist*) is based on the belief that people construct meaning about their experiences based on “socially available, shared understandings of reality” (Daly, 2007, pg. 32). Accepting the premise that there is an external reality that can be subjectively perceived – through the lens of the past experiences and frame of reference of the observer – this research paradigm lies between objectivist and subjectivist extremes. Thus it is concerned with how participants have *experienced* a particular social phenomenon, rather than attempting to capture an objective truth, and acknowledges the potential for multiple interpretations of reality (Daly, 2007). Furthermore, social constructionism approaches assume that the researcher cannot be separated from the knowledge

creation process, and thus supports a diligent awareness and analysis of the researcher's role in the process of interpretation of reality.

Neoclassical economics has been criticized for being overly concerned with abstract theories and mathematical formalization and thus detached from real world phenomena<sup>2</sup>. As articulated by Ronald Coase, "mainstream economics...has become more and more abstract over time, and although it purports otherwise, it is in fact little concerned with what happens in the real world" (1998, p. 72). This critique is exemplified in both the widespread acceptance of and concurrent opposition to Friedman's (1953) "as if" argument that assumptions need not seem explicitly reasonable as long as they have not been empirically disproved.

However, the study of institutions begins to break away from this paradigm. While NIE often draws from neoclassical economics in terms analytical tools and attempts to build on its theory, it also draws on theory from a variety of other social sciences (Williamson, 2000). And thus there is a basis for also borrowing methodological approaches from other social sciences. In fact, answering some of the level one questions raised by Williamson require it (2000). Furthermore, the increasing prominence of mixed-methods research intends to harness the strengths of both quantitative and qualitative research approaches (Adato & Meinzen-Dick, 2007).

Buchanan, Chai and Deakin (2013) explore a range of methods for assessing institutions and argue that quantitative methods, while helpful, do not sufficiently answer some institutional questions. They point out that institutional phenomena are path-dependent and contingent on local factors, making it critical to ascertain the aspects of the social environment that have shaped the institutions of study. Furthermore, qualitative approaches can more easily reveal nonlinear and cumulative effects, clarify issues of sequencing, and delve into assumptions of quantitative research methodologies. Finally, where social norms and conventions do not yield a high level of respect for laws and rules, issues of enforcement and implementation—which are challenging to measure quantitatively—generally are more important in guiding actor behaviour than are de jure laws.

Econometric and other quantitative analytic techniques are becoming more sophisticated, while donors and other development partners increasingly call for measurable evidence of the effectiveness of their development investments. While these trends promote accountability and rigour, and help to answer a number of important research questions, they also further emphasize quantitative analytic techniques over qualitative. This leaves some of the critical question of development that are embedded in perceptions and norms, and are difficult if not impossible to measure quantitatively, under-researched. Therefore, agricultural economists are challenged to develop and rigorously apply new methodological techniques such that they can begin to fill this knowledge gap.

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<sup>2</sup> Critiques of qualitative research methods are more common and typically revolve around a lack of generalizability and ability to address researcher bias.

This body of research employs Net-Map, process Net-Map, and qualitative interviews with the inclusion of visual Power Mapping. Epistemologically these methods allow us to move away from post-positivist approaches typically employed in the study of neoclassical economics to social constructionist approaches that allow for the analysis of subjective interpretations of reality. Net-Map and related tools are well-suited to subjective and participatory research approaches. The strengths of taking these approaches are that: 1) the researchers are able to examine issues of social embeddedness, or the institutions of norms, mores and traditions, normally viewed as constant and not analysed by economists; and 2) the participants are able to learn from and contribute to the knowledge creation process. Thus, in part, the contribution of the body of work is the realm of understanding provided by this epistemological approach.

There are many other participatory approaches also used in agricultural and rural studies. Perhaps the most common approach is Participatory Rural Appraisal (PRA), which belongs to a broad family of tools, including Rapid Rural Appraisal and Participatory Learning and Action, wherein participatory research and action research are intermingled (Chambers, 2007). These methods require researchers to act as facilitators while local people are directly involved in the investigation of their situation (Chambers, 2007). There are a variety of tools and techniques available that can be used for PRAs, depending on the context or specific objectives of the research, such as ven diagrams, matrix ranking, and matrix scoring, and they generally emphasize visualization of data.

This branch of methods holds dual goals of participatory knowledge creation and *action* or change such that participants' well-being is improved and relationships are more equitable (Reason & Bradbury, 2008). While a number of methods share the dual categorization of action research and participatory research, Bergold and Thomas (2016) note that it is useful to differentiate the core objectives of the two approaches. The common aim of action research approaches is to "change social reality on the basis of insights into everyday practices that are obtained by means of participatory research" (Bergold & Thomas, 2016, p. 3). Thus action research with its emphasis on social change through objectively assessing and altering the social reality falls into a critical paradigm, closely related to postpositivism (Daly, 2007; Pascale, 2011)<sup>3</sup>. While participatory research approaches are commonly applied in a critical realist research paradigm as well (Daly, 2007), their primary aim is for collaborative knowledge production that somehow "enlightens" the participants though there is no explicit objective to promote social change (Bergold & Thomas, 2016, p. 5)<sup>4</sup>.

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<sup>3</sup> Daly (2007, l. 768-909) makes a distinction between critical realism/postpositivism and critical paradigms, putting use of participatory and action research into the toolbox of the latter, while Pascale (2011, pp. 46-49) describes critical realism as a branch of postpositivism (i.e., based on an assumption that an objective social world exists and that there is a separation of object and subject in research), but inflected with theories of Marxism, feminism, and class conflict and seeks to uncover instances of inequality.

<sup>4</sup>Reason and Bradbury emphasize that there are a range of approaches and perspectives that may be considered to be in the family of participatory action research and that to define the field too narrowly is to misunderstand some of the core tenants of inclusivity and creativity (2008). That said, for the purposes of this chapter it was useful to

Net-Map was developed to examine multi-stakeholder governance and to promote participant learning, thus incorporates participatory research concepts into a framework of tools for examining institutional issues. However, in contrast to many participatory research and action research approaches, Net-Map emphasized examination of *informal* social dynamics and supports discussion of *subjective* concepts such as power, influence, and informal social exchanges. While it can be applied in a postpositivist paradigm, as demonstrated in a review of applications in the following section, it lends itself easily to in-depth discussions of participants' perceptions of their social reality and collective, socially-constructed explanations of their networks.

The value of applying a more subjective research approach, or more specifically a social constructionist epistemological approach, is that it allows us to delve into the social embeddedness issues continually raised throughout this thesis. Thus in leaning towards more traditionally sociological research paradigms, this thesis illuminates the social aspects of institutions. Specifically, the research approaches allow for a better understanding of the socially-constructed and agreed upon meanings and beliefs that drive behaviours of economic actors—such as (lack of) rule-following behaviour—and are a key component of the development of institutions at all levels. Furthermore, social constructionist research is well-suited to inductive analysis, which allows for the development of empirically-based theory (Daly, 2007). Considering the critiques of neoclassical economics as being detached from the real world, this is a refreshing approach to the field.

There are a number of other unique and tools and methods for undertaking institutional analysis, some of which are detailed in a World Bank report on the topic (2007). Furthermore, as mentioned above, there is a recent emphasis on explicitly combining qualitative and quantitative research approaches. For instance, Adato and Meinzen-Dick review a number of studies that combine economic and social science analytic approaches, and discuss the contributions of such mixed-methods research to agricultural development (2007). However, many such approaches stay within a postpositivist or otherwise objective research paradigm (Locke & Lloyd-Sherlock, 2011), and thus miss out on the possible contributions of applying subjective research approaches in to the field of institutions for agricultural development outlined in this thesis. Locke and Lloyd-Sherlock (2011) explore this very issue, contrasting the application of the same qualitative method—life histories—applied to a relatively structured critical realist research study, and also to an unstructured more interpretivist study. While both produced complex and policy-relevant results, the second example provided a deeper more complete view of the data and the respondents' lives. They highlight how qualitative studies tend to take on more structured and objective epistemological approaches, in spite of the value of subjective approaches, in order to be seen as valid in a field of development research dominated by postpositivist and quantitative analytical approaches.

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specify the commonalities and distinctions between many applications in action research and participatory research.

The next section describes Net-Map and its family of methods in detail. It also reviews the empirical applications of the methods and the research paradigms in which they were applied to provide more insights into the relative value of the different approaches used.

### 1.3.4 Net-Map: Review of Empirical Applications

Actor-oriented approaches to research help illuminate how individual actions combine to create a “process of mutual construction” of institutions (Keeley & Scoones, 1999, p. 23). A network can be viewed as a conceptualization of the institutional environment, yet it is also made up of individual relations—also referred to as links or ties—that represent social capital, control of knowledge, or aspects of power, depending on the context (Wasserman & Faust, 1994). Net-Map can be described as a participatory interview method combining social network analysis (SNA), stakeholder mapping, and power mapping.

The specific steps involved include, but are not limited to:

1. Listing of all actors involved, through an actor generation exercise to determine who is involved in the network, and physically writing them on cards to place on the network.
2. Drawing linkages among actors with pen and paper. SNA is concerned with relations among actors and, as described by Hanneman and Riddle (2005), it is in selecting linkages that determine the kinds of relationships that exist. Net-Map uniquely encourages multiplex networks (more than one kind of link connecting actors within a network).
3. Attributing actor goals, objectives or policy positions for each actor in the network, which provides the interests that exist for the actors in the network.
4. Attributing actor power examines the relative power or influence of each of the actors in the network over the specific topic of the mapping, or as defined by the group. Participants physically stack wooden pegs to represent power of each actor on the map.
5. Discussion of the map can take many forms depending on the objectives of the research, but commonly will examine strong or weak actors and links, strategic opportunities, or challenges.

Schiffer and Hauck (2010) described the rationale for the design of the approach, in terms of its departures from traditional approaches to collecting network data, the additional layers of power scores and goals, and the visualization of the data during the data collection process, in a methods review of Net-Map. They note that the Net-Map tool enables participants to make implicit knowledge and beliefs

about networks of influences explicit, detect sources of conflicting goals and potentials for cooperation by drawing multiplex networks that include both formal and informal. The following paragraphs summarize Schiffer and Hauck's review of Net-Map and its innovations as a method, or perhaps more correctly put, a combination of methods.

Firstly, the authors describe the motivation for developing a participatory research tool (Schiffer & Hauck, 2010), beyond the ethical motivation of giving a voice to people who normally do not play a part in knowledge creation (Bergold & Thomas, 2016). Agricultural development research is typically undertaken in an intercultural context so the probability of misunderstandings is high. Through participatory, flexible approaches, intercultural differences can be uncovered and discussed compared to predefined closed-ended data collection approaches that do not leave room to explore socially constructed views that may colour responses.

Secondly, the authors describe the innovative and flexible approach to data collection, which moves away from network surveys towards participatory data collection process that can be done with a subset of the network with groups or individuals (Schiffer & Hauck, 2010). While typical social network analysis requires the collection of data from every actor in the network of study, McCarty et al. (2007) showed that, for most purposes, a network of 25 alters can sufficiently reproduce the structure of a 45-actor network, cutting the information needed from 990 to 300 pairs. Furthermore, research by Krackhardt (1987) indicates that the perceptions of a well-positioned actor in terms of network structure and actor power are associated with data collected directly from all network actors. While this requires careful sampling of experts representing different parts of the network and with different perceptions of network actors, the authors then use this empirical result to support the use of small group interviews in the place of full-network individual interviews. As noted above, individual interviews may also be used, depending on the objectives of the research (Aberman et al., 2012; Hauck, Stein, Schiffer, & Vandewalle, 2015), yet still the full population of network actors is not required.

Finally, Net-Map is a tool that layers information to yield a rich picture, valid for application in complex governance situations and other situations with many actors and perspectives. Schiffer and Hauck (2010) suggest drawing multiplex networks—mapping a number of unique types of exchanges of interest in the network, both formal and informal. In addition to the structure-based measures of power that can be assessed from network data, Krackhardt (1990) also suggests asking actors directly who is powerful as it yields different information. This is valuable as it is not uncommon to find an actor with few links who is perceived as highly influential by others in the network. Furthermore, the process of drawing out each of these steps, enables the participants to “make implicit knowledge about networks of influences explicit, detect sources of conflicting goals and potentials for cooperation” (Schiffer & Hauck, 2010, p. 12).

Schiffer and Hauck (2010) describe a case study wherein researchers are working to improve coordination of all the stakeholders of the White Volta River Basin Board toward economically and environmentally sustainable use of water. With little enforcement capacity, it was necessary to understand the influence and goals of stakeholders for board members to use this information strategically. Furthermore, the researcher was interested in testing the effectiveness of the tool for the dual goals of data collection and participants' learning.

Drawing the maps helped the board structure their own thoughts and served as a tool to prioritize their extensive but implicit network knowledge (Schiffer & Hauck, 2010). This, in turn, helped them focus on actors of core importance for strategic planning, due to their alike goals or high influence.

There are many unpublished or non-peer reviewed practical applications of Net-Map. These include initiatives to strengthen development project implementation, understand stakeholder networks, or build actor coalitions (Aberman et al., 2015; Kohli, Pradhan, & Menon, 2014; Schiffer, Narrod, & Grebmer, 2008). However, in the last few years it has been increasingly applied in peer reviewed empirical research in agriculture and rural development, as well as other fields.

Net-Map should be viewed as a method of inquiry. Or, more specifically, a set of data collection tools combined to create a specific useful method. However, it is not inherently linked to any particular research paradigm or epistemological approach, nor are the components of which it is comprised. These, rather, must be applied by the researcher. Most applications of Net-Map that were reviewed here tended to take a social constructionist epistemological approach in that they are concerned with how participants perceive a particular network and its actors' characteristics. A social constructionist approach is concerned with how participants have experienced a particular social phenomenon, rather than capturing an objective truth (Daly, 2007).

For instance, a study using Net-Map to assess the political economy of the charcoal sector in Tanzania, documents the social, political and economic explanations for a lack of movement on previous attempts to reform the sector (Sander, Gros, & Peter, 2013). While the researchers do not explicitly state their epistemology (as is common for most published research outside of sociology and anthropology), their emphasis on stakeholder perceptions and strengthening of dialogues indicates a subjective bent<sup>5</sup>. A number of other unpublished studies take similar approaches, emphasizing stakeholder perceptions and collective social interpretations or beliefs about power and policy change, and how these drive or explain policy processes (Aberman et al., 2012; Aberman, Schiffer, Johnson, & Oboh, 2010; Chapoto et al., 2015; Kohli et al., 2014).

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<sup>5</sup> Daly describes a researchers' epistemological stance as a choice along a continuum from an assumption of complete objectivity to complete subjectivity (2007). Rarely is research at the far ends of the continuum, but neoclassical economics is typically postpositivist and closer to the objective end while Net-Map applications tend to apply a more subjective epistemological approach.

Some published works in the health sector use Net-Map to track and evaluate changes in flows of technical information to key actors, such as to front line health workers. These papers seem to take a postpositivist approach in that they emphasize the measurement and counting of links over the discussions of participants, they note looking for objective criteria for identifying actors and determining influence, and consider it a limitation of the study that some answers were not factually correct (Ahmed, Limaye, & Harlan, 2015; Campbell et al., 2014; Harlan, Sullivan, & Hailegiorgis, 2013).

Another empirical paper on Net-Map explores its use in transdisciplinary research related to environmental change (Hauck et al., 2015). The authors present three case studies of wherein complex governance challenges are central to the research, but otherwise they have different objectives. Contrasting the different objectives of the case studies also highlights the flexibility of the Net-Map tool. The authors note that the first required individual interviews to better understand flows and gaps in the network, the second required an emphasis on participatory and reflexive group interviews as a complement to previously collected network data, while the third was also a group interview but aimed at fostering strategic thinking for the project leader.

A variant of Net-Map, Process Net-Map, was specifically designed to understand implementation of complex processes in practice, wherein linear steps in a process take the place of network data. There have been a couple of empirical examples published recently. In one study, the Process Net-Map tool was used to generate evidence on how social and power relations influence the design and implementation of veterinary policies and the functioning of veterinary institutions in Uganda (Ilukor, Birner, Rwamigisa, & Nantima, 2015). The study used the in-depth discussion and maps to assess the challenges related to veterinary service delivery and found that in Uganda there are a number of institutional challenges at the heart of low quality services.

Another study combined Process Net-Map with survey analysis, experimental games, and key informant interviews to assess the effectiveness of rural producer organizations (RPOs) to improve livelihoods in Uganda (Łatynskiy & Berger, 2016). They found that RPOs were successful in promoting aggregated sales, but did not provide many other services. Furthermore, the mixed-methods approach was useful for understanding the functioning of RPOs and the problems they face from different perspectives. In particular, the Process Net-Maps facilitated stakeholder involvement and improved the quality of the dialog between the respondents and the researchers.

Other unpublished or discussion paper examples apply Process Net-Map to the functioning of development projects or interventions (Birner, Cohen, & Ilukor, 2011; Raabe et al., 2010). They shed light on opportunity points for corruption and breakdown of the systems they assess.

Also, it is worth noting that the Power Mapping approach can be applied on its own without collecting network data, in contexts where networks are not of interest or the target population may not have sufficient education level for abstract thinking required for drawing even pen and paper networks.

Schiffer (2007) applied power mapping to analyse the governance effects of Community-Based Natural Resource Management (CBNRM) in Namibia. Schiffer found that the tool, which is undertaken by asking respondents to physically stack small pegs to create visual power towers, helped illuminate how power had indeed been devolved from the national to the local level. However, on the community level elite-capture was seen as a serious problem. The power mapping tool increases interviewees understanding of their own situation, as they explicitly discuss taken-for granted power dynamics of their community.

Another approach to power mapping involves in-depth qualitative assessments of power, although absent a visual and *tactile* approach, analyses actors, interest groups, and structures to determine the institutional and social distribution of power (World Bank, 2007). Vaughan and Tronvoll (2003) apply the method in Ethiopia with a view that a significant barrier to socio-political change in the country is a lack of power and engagement in political processes and decisions.

This review of Net-Map and related methods clarifies that, while Net-Map is well-suited to subjective epistemological approaches, the research paradigm is the choice of the researcher (Daly, 2007). Furthermore, the theories and analytical approaches brought to bear depend on the research design. The literature reviewed demonstrates a broad range of subject matter to which Net-Map has been applied. Although not explicitly covered here, delving further into the literature described above, the analytical approaches and theories to which results were applied also span various disciplines.

#### 1.4 Organization of the Thesis

The studies in this thesis take a social constructionist epistemological approach, viewing the Net-Map, Process Net-Map or Power Mapping approaches as tools to facilitate semi-structured group or individual interviews. The resultant data is transcribed (and translated when necessary) for textual data analysis. Social network software is used to visualize and analyse the positions of various actors in the network. Information on goals and power can be triangulated with the textual data and/or the network data to produce a deeper understanding of the social phenomena.

The case studies were chosen to explore different themes of institutional development in agriculture, in Malawi, Pakistan and Kenya, where the interplay of formal and informal institutions is particularly important. In addition, because institutions are nested, the case studies cover different levels, including the household, farmer group, local government, and national government. Together the case studies provide insights on how institutional analysis—with an emphasis on social institutions, informal rules, perceptions, and norms—effect agricultural development initiatives.

The rest of this thesis is organized into four empirical chapters and a concluding chapter. This first study, “Gendered perceptions of power and decision making in rural Kenya,” explicitly examines the

first level social analysis related to gender and power, applying focus groups and Power Mapping to understand socially constructed views of gender, power, and household decision-making. Development programs are commonly concerned with altering social norms related to this issue based on an understanding of their embeddedness—the extent to which they negatively affect economic and social outcomes—and so a better understanding of the social norms and beliefs allows us to contemplate how best to promote them to change.

For the second study, “Gender-inclusive governance of “self-help” groups in rural Kenya,” analysis takes place at the first and third levels of social analysis, examining governance structures in community self-help groups and the extent to which they can promote inclusive participation of women in group decision-making. This study also utilizes focus group discussions and Power Mapping as data collection tools.

In the third study, “Progress of constitutional change and irrigation management transfer in Pakistan: insights from a net-map exercise,” we apply Net-Map to examine the effects on local water governance structures after a *de jure* shift in level-two institutions: a constitutional amendment for devolution of governmental power to provincial level and an Irrigation Management Transfer. Barriers related to level one and level three institutions are explored in terms of the barriers to implementation of the reforms.

In the fourth and final study, “Governance Challenges of Agricultural Export Promotion: The Case of Soybean in Malawi,” analysis takes place at multiple levels as we examine both the institutional environment and the rules of the game (levels two and three respectively) using Net-Map and Process Net-Map, but analysis emphasizes the social norms that facilitate the inefficiencies at those levels.

The final chapter describes the broad conclusions from across the four studies and the policy lessons learned from examining the interplay of informal and formal institutions with qualitative methods.

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## 2 Gendered perceptions of power and decision making in rural Kenya

Noora-Lisa Aberman, Julia Behrman & Regina Birner

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*Development policies and programs rest on assumptions about what constitutes power and how to change power dynamics; however, development projects rarely consider local understandings of power. A common perspective among development projects is that improving women's resources relative to men will give them more power in household decision making. In this paper we ask how these assumptions correspond with socially and culturally specific ideas about what power is, who can hold power, and how power can be transferred. We conducted 26 gender disaggregated focus group interviews with 229 individuals in rural Kenya's lake region. We find that men and women are constantly negotiating for power in the household, within the bounds of their gendered limitations. We find a zero-sum conception of power to be common throughout communities, which may undermine common development approaches to empowerment. However, we also explore opportunities through which development interventions can build on local concepts of power to improve intra-household outcomes.*

## 2.1 Introduction

Most development policies and programs rest on assumptions about what constitutes power and how to change power dynamics at the household level and are designed to be inherently transformative by changing people's practices, opportunities and resources (Meinzen-Dick *et al.*, 2011). Furthermore, in recent years development interventions have increasingly emphasized objectives related to empowering women. Typically, understandings of power in development are rooted in economic models of household bargaining that focus on men's and women's relative stores of wealth and human capital. The assumption underlying these programs is that improving women's resources relative to men will give them more power in household decision making and that women will utilize resources more effectively than men. For example most large-scale cash transfer programs—such as *Oportunidades* in Mexico and *Bolsa Familia* in Brazil—target transfers specifically to women to encourage economic empowerment of women and promote positive outcomes such as improvements in girls' education and health (DFID, 2011).

However, these and other assumptions may not correspond with socially and culturally specific ideas about power. This includes ideas about what power is, who holds power and how power can be transferred. Development projects that fail to take into account the complexity of local power dynamics may lead to ineffectual policy or programming or to unintended consequences within the household. This is particularly the case for projects that affect the resource distribution of households or groups. For instance, in some contexts, programs promoting economic empowerment of women have unintentionally increased women's work burden relative to men and even led to increased incidence of domestic violence (Eves and Crawford, 2014; Hidrobo and Fernald, 2013).

In recent years, there have been efforts to understand the implications of asset and cash transfers for household level gender dynamics, mostly in the form of large-scale quantitative impact evaluations (van den Bold *et al.*, 2015; de Brauw *et al.*, 2014; Roy *et al.*, 2015). These studies have started to establish an important evidence base about how development interventions often have heterogeneous impacts on household level dynamics—including both expansion and constriction in women's participation in decision making and ownership of assets. However, quantitative studies cannot answer questions about why development interventions often have heterogeneous impacts on household dynamics. We argue that qualitative understandings of people's socially constructed ideas of power are essential to fully understanding how development interventions alter household dynamics.

This study uncovers the subjective and socially constructed views and definitions of power and decision making using data from rural Kenya's Homa Bay County (part of former Nyanza Province). Data was collected through 26 gender disaggregated focus group interviews with a total of 229 individuals interviewed from August 2013 to May 2014. Qualitative data was coded using inductive reasoning to identify themes and patterns in the data that can contribute to the current body of theory on gender, power and decision making. In doing so we elucidate whether men and women's ideas about power

correspond with economic and development paradigms of power and decision-making. Furthermore, we highlight the importance of understanding culturally conditioned socially constructed perceptions of power in development policy and programming.

## 2.2 Review of Theoretical and Empirical Literature

Literature across disciplines has theorized about the nature of the family and intrahousehold power dynamics. The study of gender in development tends to draw from multiple disciplines. While current consensus in the development context acknowledges distinct priorities and activities of married couples, there are a variety of different conceptualizations of how and to what extent couples cooperate, negotiate, bargain, or threaten. This section provides a brief review of the literature on these issues, specifically in the context of development. We first focus on neoclassical economic conceptualizations of power. Then we explore gendered power from a development perspective, exploring the contributions of a few key authors in the sub-field that can be described as *Gender and Development*. This sub-field has its origins in economics but is heavily influenced by social theory. Finally, we examine conceptualizations of power of some key power theorists to provide more insight into the social dynamics being explored in this study.

### **Household Bargaining in Neoclassical Economics**

Many development projects strive—explicitly or implicitly—to change power dynamics in the household through the allocation of resources at the household level. Current theoretical and empirical understanding of household dynamics is based on economic models of “collective” household behaviour (Lundberg and Pollak, 1996, 2007). In collective models men and women have separate preferences for family consumption and do not necessarily pool income. The bulk of evidence has supported the collective model of the household and has led to the oft cited notion that children do better when the mother controls a larger percentage of household resources (discussed more below and at length in Haddad, Hoddinott and Alderman (1997)).

A key contribution of the collective household model is that it allows for examination of intrahousehold dynamics including consideration of the respective bargaining power of household members (Meinzen-Dick *et al.*, 2014). The literature focuses on the different preferences of household members and their ability to realize their preferences depending on their bargaining power. In this literature, bargaining power is determined to a large extent by an individual’s “outside option” or the level of satisfaction or welfare an individual could attain outside the household or marriage (Manser and Brown 1980; McElroy and Horney 1981; Lundberg and Pollak 2007; Meinzen-Dick *et al.*, 2014). The theory being that the better the outside options the more bargaining power the individual is likely to have within the household or marriage (England and Farkas, 1986; Meinzen-Dick *et al.*, 2014). Similarly, Sen (1985b) considers bargaining power to be a function of household members’ perceived contributions to the

household, creating more favourable outcomes for men as much of the contribution of women is in nonmarket labour.

In her edited book, Quisumbing (2003:19) gives an overview of the factors that determine an individual's "outside option". These include an individual's control over assets, their interpersonal networks, their basic attitudinal attributes, and other factors such as education and skills. She also points to some structural determinants, such as the degree to which social norms and relevant laws will make threats to take advantage of one's "outside option" more credible thus adding to one's power. For instance, in Indonesia social norms allow spouses to take what they brought to the marriage in the case of dissolution.

Arguably, as women gain more education or assets they are able increase bargaining power within the household. Indeed, this is the perspective taken by many development programs aimed at "empowering women" through increased resources such as education or assets. Under this model, it matters considerably to whom resources are distributed in any social protection or redistribution program (de Brauw *et al.*, 2014). As such, a recent trend has been to target resources partially or exclusively to women (DFID, 2011). The assumption underlying these programs is that improving women's resources relative to men will give them more power in household decision making and that women will utilize resources more effectively than men.

### **Gender and Power in Development**

In spite of the power of economic models to assess and explain gender and power, there are still significant challenges in conceptualizing, defining and measuring concepts that are highly influenced by one's social and cultural perspectives (Alsop, 2004:chap. 10). Kabeer (2001) discusses Bourdieu's idea of "doxa" to articulate how some aspects and manifestations of power—structural power to be specific—are so taken-for-granted in a given society that people are not even aware of them, much less able to identify and measure them objectively. While felt, they are implicit to the point of invisibility.

Framing much of the debates around power is the distinction between power as agency and power as determined by structure. Agency can be defined as an individual's ability to make strategic life choices in their best interest. Agency, coupled with resources, forms the basis of Amartya Sen's capabilities approach, allowing people the potential to live the lives they want (Sen, 1985a). As mentioned above, structures, such as laws and social norms, restrict the choices available to individuals. Returning to the discussion of doxa—the undiscussed and un-scrutinized—structural power relations can operate through "consent and complicity" when gender roles are taken-for-granted and naturalized (Kabeer, 2001:25; Swartz, 1997).

Typically economic conceptions of power focus on agency and sociological and anthropological conceptions of power focus instead on social structure. Although gender analysis tends to blur these

disciplinary divisions and some power theorists critique this as a false dichotomy. For instance, Kabeer (2001:24) articulates how structure and agency collectively determine power in the quote below:

*Structures operate through the rules, norms and practices of different institutions to determine the resources, agency and achievement possibilities available to different groups of individuals in a society: our criteria of ‘alternatives’ (could they have chosen otherwise?) recognises these larger constraints. However, the actions and choices of individuals and groups can in turn act on structural constraints, reinforcing, modifying and transforming them: our criteria of ‘consequences’ draws attention to these possibilities.*

Kabeer (1999, 2001) also notes that agency can have positive and negative meanings. In the positive sense agency refers to someone’s capacity to define and pursue their own goals, or “power to”. Whereas agency could also be exercised over another, as in “power over” or domination. In the later sense, power over would over-ride or diminish the agency of another. Agency can also reflect “power within” when viewed in terms of one’s perception of ability and self-worth. This oft-cited—in development policy and practice—typology of power expressions is completed by a fourth power, that stemming from collaboration and solidarity: “power with” (Boudet *et al*, 2013; Csaszar, 2004). While perhaps hardest to measure and research, recent work on quantifying people’s aspirations for the future touches on this conception of power (Bernard *et al*, 2011; Dercon and Singh, 2013).

### **Foundations of power and negotiation in social theory**

Often credited with laying the foundation in this field, Max Weber described power as “the probability that one actor within a social relationship will be in a position to carry out his own will despite resistance, regardless of the basis on which this probability rests” (1978:53). Weberian power is seen as a shared construct in service to the powerful and legitimized by the powerless, depending on obedience. It is theoretically attainable and transferable, but becomes formalized and integrated into social life (Watson, 2014). Weberian power is consistent with concepts of gendered power in the field of development, particularly when examining structural determinants of power. For instance, the concept of internalized gender norms is the state of legitimization of the powerful by the powerless, in such a way that it becomes formalized and normalized in social life.

Further delving into social and institutional aspects of power, Michel Foucault described power as a “machinery that no one owns” (1980, p. 156). Similar to Weber, Foucaultian power is seen as constantly present in all social relations, but not attained or possessed. Rather he saw power as constantly “in play”, based on a network of relations and as individuals constantly try to control the conduct of another, while the other resists (Jackson and Mazzei, 2012:55). Foucault’s characterization of power as both productive and restrictive provides valuable insight to the discussion of positive characterizations of power (Gaventa, 2003; Jackson and Mazzei, 2012). He notably saw power as that

which *produces* and *creates* in the world. While still emphasizing the structural aspects of power, Foucault brings relations, and thus individual action and agency, more strongly into focus. Thus for the study of household power dynamics, his theories are highly relevant.

### **Practical and Empirical Evidence and Study Rationale**

From the above review of definitions and conceptualization of power, we can glean both the importance and the intractability of the concept. It is important to bring this exploration of power conceptualizations to bear on empirical evidence, practical experience, and socially-constructed conceptions.

Alsop warns that development organizations working “without any clear and explicit conceptual underpinning” may unintentionally perpetuate the systems and structures that one is trying to change (2004:16). Moreover, in a review of measures of women’s empowerment, Kabeer critiques them for often being “disembodied from their context” and thus inaccurate (2001:51). Thus, a better understanding of the local conceptualizations of power and gender in the context of development will certainly contribute to the effectiveness of not only efforts to empower women but also policies and programs that generally aim to promote development but for which social norms and gender inequality are barriers to success. This requires delving into the localized foundations of power and assessing the concept as it is defined and perpetuated within a given society.

These studies provide an important foundation for understanding the implications of development interventions on household level dynamics by showing that development interventions have heterogeneous impacts on intra-household decision-making. However in order to understand why these interventions have heterogeneous impacts we need to move beyond program impacts and look at socially constructed ideas of power and how development interventions interact with local ideas about power. We argue, that understanding people’s socially constructed ideas of power is essential to fully understanding the limitations of development interventions to alter household dynamics.

For instance, a social constructionist study on elites and power examines how elites themselves define power (Yamokoski and Dubrow, 2008). This research approach allows for actor-led improvements in social theory rather than reinforcing preconceptions of power. Based on Max Weber’s concept of charismatic power that describes how extraordinary personal characteristics can lead to power over others (1978), the authors hypothesize that elites identify personality and respect as sources of social power. They find these are among the sources of power, and that characteristics must be viewed positively (respected) and they must be constantly displayed by other elites to continue to yield power. Another qualitative study of power examines the nature of power differentials in police-citizen interactions in marginalized communities in Northern Trinidad, as evidenced by their discourses (Watson, 2014). Instead of deriving a general definition of power, the researcher determined that it is more accurate and useful to identify categories which may account for various forms of interactions.

They find that in each interaction between community members and police, both sides are actively working to shift power differentials.

Similarly, this study assesses the socially-constructed and perpetuated definitions of power rather than utilizing preexisting definitions of power, but in the context of gender and development. We assess power and decision making among men and women in the Nyanza Province of Western Kenya, with the specific aim of contributing to the body of theory on power and household decision making currently guiding much of the analysis, policies and programs in development today. Taking a multidisciplinary approach, we attempt to inform and expand on a traditionally economic understanding of gender and household bargaining and power by bringing social theory to bear.

## 2.3 Methodology

This study attempts to uncover the subjective and socially constructed views and definitions of gendered power and household decision making. Thus we are concerned with the collective generation of meaning produced by social processes (Pascale, 2011:52). We formalize the analysis with analytic induction, which refers to the process of systematic examination of similarities within and across the “cases” under analysis (Pascale, 2011:53). Qualitative data is coded to identify themes and patterns in the data. We then contrast the socially constructed definitions with the dominant economic paradigms of power, gender and household decision making that underlie much development work.

### 2.3.1 Data collection and sampling

The lakeshore province of Nyanza is characterized by subsistence agriculture and fishing. In 2010 Nyanza Province was devolved into six separate counties, although national data is still reported by province (KNBS, 2014). This study was undertaken primarily in one of six former Nyanza counties: Homa Bay. Nyanza is predominantly populated by the Luo people, the third largest of Kenya’s 40 different tribes. Smith (2006) describes the Luo as holding a paradoxical position in Kenyan society as they are both among the poorer populations of the nation, and also have contributed to some of the nation’s most notable public figures such as statesmen, academics, and lawyers. However they have a historically troubled relationship with the dominant Kenyan tribe, the Kikuyu, dating back to the 1960’s. Luo society is patriarchal and virilocal, and marriage is usually preceded by payment of bridewealth, often in cattle. An ethnographic study on Nyanza indicates a much higher rate of polygyny among Luo than the national average, although it has decreased over the last decade, and that household bargaining for resources in a polygynous context is detrimental and disempowering to co-wives (Oguda, 2012). Furthermore, the prevalence of early childbearing is highest (19.2 percent of girls from age 15-19) in Nyanza among all Kenyan provinces, and domestic and sexual violence is higher only in Western Province, the bordering lakeshore province (KNBS, 2014). Paradoxically, educational attainment among females in Nyanza is higher than the national average (5.7 years compared to 5.2 years) (KNBS,

2014). As is common in Sub-Saharan Africa, the majority of domestic responsibilities fall to women, as do specific lower-impact aspects of agricultural production such as planting and weeding, while men are seen as responsible for protection of the household and heavy labour such as ploughing with drought animals.

Data was collected through focus group interviews and complemented with key informant interviews and detailed field memos. In total, 26 sex-disaggregated focus group interviews were undertaken with 229 interviewees (135 women and 94 men) between August 2013 and May 2014 in and around Homa Bay County, Kenya. The discussions were guided by a number of prompts to encourage participants to share their perceptions and experiences. After the open-ended discussion, we also asked respondents to rate their own power by choosing and stacking a number of pegs between 0 and 5 (Schiffer, 2007). This visual power rating exercise elicits their perception of their own power, making their views explicit, dynamic, and comparable. Translations of the prompts and initial discussion on the concept of power in the community were discussed in depth by the research team and validated with key informants before the start of data collection and after the first few interviews to ensure that they were culturally acceptable and elicited the desired information while avoiding leading or biasing question structures. In addition, detailed field memos were used to provide context and record nonverbal details of interest from the interviews, and were also viewed as the first level of analysis.

While gender norms among Luo are not seen as highly restrictive compared to some tribal cultures in Kenya, but women are still disadvantaged in many ways, this region serves as a good case of study by providing a moderate or middle-of-the-road example of gender dynamics in the country. Furthermore, the safety and accessibility of the province were also considered, given the instability and violence in other parts of Kenya.

Communities were purposively sampled based on the presence of an active mixed-sex community group. In addition, they were chosen at varying distances from the main town centre, in order to capture differences in gender norms due to exposure to towns. The data collection team made up of two women and two men, all of whom were Luo, as well as one female foreigner who was the lead researcher. Subsequent rounds were collected with a subset of the team. In each community 2-4 focus groups were facilitated. Data from focus groups were recorded, transcribed and translated from Luo to English and then coded for recurring themes to identify patterns across the interviews and patterns or contradictions within the interviews.

Focus group discussions are an important qualitative method in the social sciences and have unique strengths compared to other qualitative methods such as interviews and ethnography. In particular, focus groups allow for discussion and exchange and enable participants to flesh out ideas (Robinson 1999). Furthermore, focus groups give the researchers insight into both individual and group dynamics (ibid). Along these lines, focus groups are uniquely suited to elicit a collective voice or discourse and avoid the imposition of meaning through the research process and decontextualization of the data

(Wilkinson, 1998, 1999). Focus groups also allow us to capture the voices and perspectives of a much larger group of respondents than would be possible through conducting individual interviews or ethnographic observation. While focus groups are sometimes critiqued as likely to obscure important perspectives due to strong individual opinions or group dynamics that reproduce normative discourses, the weaknesses of focus groups can be considered and accounted for during facilitation and analysis (Smithson, 2000; Vaughn, Schumm, & Sinagub, 1996). For this study, focus groups are well suited to examining the collective understanding of power, interpreted from discussions and debates of group members. The dominant and conflicting views on gender and power are thus illuminated for analysis. Viewing power as a shared construct integrated into social life, the definition of the concept with most relevance on social life is that agreed upon by that particular society or group.

This study underwent an ethical review and received consent from the International Food Policy Research Institute's Institutional Review Board as a study bearing minimal risk. To ensure the confidentiality of the interview responses, care was taken to keep transcriptions in a password protected folder. All duplicate copies of recordings and transcripts were deleted from all locations except the primary investigator's computer. Specific names and villages were left out of the text of the paper.

### 2.3.2 Analysis

Based on a social constructionist epistemology, our analysis entails the subjective interpretation of community-defined conceptions of power and decision making (Daly, 2007:32). Rather than begin this research with predefined concepts, we view power as a *sensitizing concept*, defining the concept based on the empirical results rather than from pre-existing theory (Pascale, 2011:22). Sensitizing concepts can be seen as a starting point from which to examine the data and begin the inductive reasoning process (Bowen, 2008:2-3).

The analytical approach taken was inductive and iterative. The initial round of data collection was done with in a relatively unstructured manner, with a few discussion points listed to enable discussion on power and decision-making. After the round of initial coding led to a list of empirically-driven themes of interest, a focused literature review was undertaken. The subsequent two rounds of data collection were based upon a revised—and somewhat more structured—list of prompts and questions. Upon completion of all data collection, all transcripts were coded according to the same set of main themes that came out of initial coding, with sub-themes emerging throughout the coding process. Consistency and variation of thematic patterns are examined across focus groups, within and across communities (2-4 focus groups were held in each community), and between men's and women's responses.

## 2.4 Empirically-based Conceptions of Power

The following section reviews the empirically-based conceptualizations of power in the sampled communities. We distinguish between how respondents defined power and what they described as

drivers of power, and find the common conceptualizations of power described in the literature review above—*power over* and *power with*—as useful ways of organizing the empirical results. The results describe a complex conceptualization of power that is consistent across communities, though it appears to be shifting over time.

#### 2.4.1 Power as Influence: “Power Over”

Universally across focus groups, power was conceptualized as one’s *voice* or influence at home or in the community. Influence, as defined by these communities, can be summarized as being listened to when speaking. Influence manifested in two distinct forms: that of domination and that of leadership. A number of facilitators of influence were described consistently across focus groups, and while the broad categories were the same for men and women, there were some key gendered differences that are illuminated below.

The key facilitators of power include wealth, hard work, providing for the family, and unity. Wealth and control over or ownership of resources such as land were seen as directly contributing to one’s ability to act and make decisions, in addition to having a positive effect on one’s voice. Hard work and accomplishment was raised universally across focus groups; it was often described as setting an example that others would want to follow. The following quote from a male respondent exemplifies many people’s conceptions of power:

*“For someone to be considered powerful they must have sufficient food at home, he may have children in school, [he is] someone who associates with others, and - when amongst peers - he gives good opinions and may also have influence within the community.”*

Having a choice over one’s actions – closely linked to the concept of *agency* – was not a defining component of power in this context. But rather being seen as a hard-worker and overcoming adversity and challenge was central to making someone powerful. Linked to this concept of hard work, caring for and providing for others, especially one’s family, was also raised frequently. This was described in terms of generally providing for the family, ensuring food security of the family, or being able to feed guests. All of these were seen as leading to influence and a higher status in the community. Education, and educating one’s children, was only mentioned a few times and only as a facilitator for wealth development, especially in terms of investing in children for future financial reward. While wealth and social status were included in definitions of power, they were largely seen as the product of hard work, personal characteristics (like intelligence or morality), or luck.

The realization of power, conceptualized as influence, falls squarely within the classification of power over others. This classification was manifested in two distinct forms: that of leadership and that of domination. Leadership was often attributed to inborn or otherwise intangible and un-learnable characteristics, such as charisma. Although other attributes such as confidence and eloquence – especially in terms of public speaking or dealing with conflicts in the home – were also described, and

could be either innate or learned through activities such as participation in community groups. A female respondent contrasts two key types of power in the following quote: “*Power can be manifested in two ways; there are those who are good in the farms, [while] some are good at socializing – that is personality.*”

Power through domination as was discussed absent normative assessments. The ability to command one’s family members, to bring a woman to your land (take a wife), or successfully convene a group were all examples of power through domination. Men lamented moments of powerlessness as those when family members disobeyed them, indicative of both this common conceptualization of power as well as a masculine ideal that they must be highly respected, particularly within the home. The following quote provides a stark example of this, wherein a man feels powerless when he does not react in an expected way (presumably with violence) in an altercation with his wife:

*Interviewer: When did you feel that you were powerless and why?*

*Male Respondent: It was when my wife annoyed me and instead of doing anything I just told her to pack and leave.*

*Interviewer: What made your power go down?*

*Male Respondent: The reason why my powers reduced is because I did not do anything to her, I just told her to pack things and leave. And my family members told me to forgive and I just forgave her.*

Power through domination is also conceptualized as a zero-sum game in many instances, wherein, for instance, women shy away from goals of attaining more power because it would diminish the power of their husbands, or men describe lowering their own power in order to allow their wives to hold some. In this conflictual power equilibrium, empowerment can only happen at the detriment of those who currently have power; or, as many widows note, after their husbands died and they were no longer competing for power in the household. When asked to rate their decision making power at home and in groups from zero to five, respondents universally implied that taking the top score depriving others of power, as illuminated in the quotes below:

*Female Respondent - ...it would be difficult for me to reach five [top power] because at times when we disagree he ends up reigning on me and he carries the day.*

*Male respondent - The reason I picked 5 [top power] is because I am the head of my wife and therefore I am in charge and everything is upon me.*

*Female respondent - Men can do something without telling you; he can sell livestock and may not consult you and if you ask him he will be harsh and during this time you just keep silent and he will start abusing you because he has done something bad and he doesn’t want to be told.*

*He will say that he doesn't want to be questioned after he has done something. There won't be peace if the woman is also high.*

The notion of power as zero-sum complicates the assumptions that underpin many development projects by leading to a situation wherein men sharing power with women would be, by definition, disempowering to men. Thus, changing power dynamics may not be so easy as changing who has control of resources in the household because by implication increasing women's power comes at the detriment of men.

#### 2.4.2 Zero-sum power and household development

In spite of the definition of power as zero-sum, the data also suggests in some situations, men tolerate increased power for women, presumably at the expense of their own power, specifically when it leads to greater development for the entire family. The following quotes demonstrate how working toward household development, and thus greater power for the entire family, may trump resistance to intrahousehold power shifts. The following female respondent's quote explains male-female divisions of power and responsibility, and how they are both responsible when it comes to development: *"When he brings another wife, he will be consulting me because I am the eldest wife who is used to the duties at home. Now here my powers will increase because I have to be consulted. But things like ploughing will depend on him. And when it comes to development, we have to share."* Another female respondent explains that her husband has positive views of her group membership because of the benefit to the family:

*Interviewer: Did you ask your husband when you wanted to join the group?*

*Female Respondent: I asked and he accepted.*

*Interviewer: Was he happy about the group?*

*Female Respondent: Only after seeing the benefits [to our crop yields].*

#### 2.4.3 Domination and leadership: two sides of the same coin

The concepts of domination and leadership appear closely linked. However, we can differentiate the first as power based on having control over someone's actions, whereas the second is based on being seen as influential and worth listening to, regardless of the impact – or lack thereof – on people's actions. The differences between them, though subtle, are important. For the first, one must have control over another person's physical actions, thus diminishing the other's agency, consistent with a zero-sum notion of power. For the second, simply being heard, having a voice, and having one's ideas appreciated is considered powerful. In every community, and almost every focus group, these conceptions coexisted.

One particularly dramatic example of power through domination, widely cited by both men and women, is the power of a man to "take a woman" to his house through marriage. This is then described as the reason behind a woman's lack of power, given that she is living on his land—and anything she

produces with it is his by default—she is subject to his rules, and she can be “sent home” if he is not pleased with her. This type of dominating power diminishes a woman’s agency and overall *capabilities* by making conditional her access to basic necessities for life, shelter and inputs for livelihoods.

Additionally, men who do not fulfil this role—who do not adequately dominate in their homes according to what they perceive as the standards of their community—feel diminished and disempowered as men. The following quote elucidates this point, highlighting that male power is enhanced by virilocal patterns and the heavy physical and social capital he thus enjoys:

*Interviewer: Can you tell me what makes man more powerful than woman?*

*Male Respondent: Men have power to marry a woman and take her to their home; that is one power from where I may decide to send her away if we disagree. But if the two could marry and leave their home and stay at a central place they would be have equal power.*

#### 2.4.4 Gendered differences in power as influence

While women and men consistently defined power similarly, their examples and personal reflections on power were systematically different. In all focus groups, men's examples showed them playing a more dominant role—such as *allowing* the wife some input in household decision making—while the women were systematically more passive, such as describing their power with caveats (for instance, that they are able to command only within the domestic domain) or describing feeling powerful when requests for money or assistance were granted by their husband or other authority figures. While these gendered differences are not surprising but rather fit into highly discussed gendered power disparities, the systematic differences in descriptions illuminate differences in the way women and men consider their own power and ability to gain power. These results point to a power hierarchy wherein male power is viewed as absolute and assumed while female power is conditional.

#### 2.4.5 Power through Unity and Consultative Decision making: “it’s a different world”

Interestingly, the concept of power through domination coexists with a seemingly paradoxical concept of need for consultation in family decision-making. Unity and consultation was discussed by men and women in every community both as sources of power and requirements for a successful and happy family. Respondents described how sharing of ideas, finances, and encouragement can lead to greater power and achievement, in the home and in community groups. Others also described how a family must be united to be powerful. Every community—and almost every focus group—described how consultation on family decisions was a requirement. Some motivated this by a need for harmony and peace in the family—linked to increasing the power of a family and its members—while others discussed this as a requirement for effective planning and joint cooperation, as in the quotes below:

*Male Respondent: So this is what brings disagreement in the house because if you don't sit together and decide on something you will definitely bring conflict in the family.*

*Male respondent: [To be powerful,] you must be a hard worker and one who provides for the family and you must also bring the family together so you can be respected.*

*Female Respondent: [We become powerful] by consulting and sharing ideas so that we can uplift ourselves by working hard as a family.*

However, men consistently noted that there were certain areas that they would open to consultation and others for which they would choose to maintain complete decision-making power. The need or desire for consultation was referred to multiple times as a shift from the way things worked previously—noting that "we are in a different world now" wherein men are required to be consultative and not "reign over" their families. However, this concept of family unity and consultative decision making easily coexisted with a man's dominance of decision-making power, as illustrated in these two female respondent quotes:

*Female Respondent: "I will leave for him to make decisions, though nowadays we help each other and things will be easy."*

*Female Respondent: "When you are two people in the house you have to agree on issues and the man should sit the wife down and consult with her on what he wants to do and even if the woman refuses the man will still go ahead and do it because of the powers he has but in ideal situation the man should consult the wife."*

#### 2.4.6 Hard work, taking care of the family and setting an example

Working hard was universally seen as important. This is congruent with power as dependent upon on how one is viewed by the community because it was often described in terms of an external observer. The following quotes illustrate this connection:

*Female Respondent: I am powerful in my house because I can leave in the morning, I can look for food for my children, I can go to the farm, I can tell my kids to prepare lunch or breakfast or I can do it on my own, when I go to the farm and worked hard until I harvest high produce, my husband becomes proud of me and I also feel proud of myself.*

*Female Respondent: What I see in that issue of power is being persistent with your work and the person seeing you will say that that woman is very powerful.*

*Male Respondent: Long ago when I lost my father and we used to stay in a dilapidated house, we worked hard and built my mother an iron sheet roofed house and so I felt powerful.*

In addition, the degree to which one's hard work yielded results—and this increased one's wealth, food security, and command in the household—was also an important aspect. Having a clean home, well-fed children and flourishing farm were often described as a mechanisms for achieving power because you are seen as successful and others will follow you, increasing your power as a leader. This male respondent described results in terms of development: *"With me I think if someone works hard in his*

*home that person is powerful because he has development at home, you have food and many other things.”*

Taking care of the family is seen as an important driver of power across almost all communities, commonly characterized in terms of ensuring food security for one’s family. Respondents noted feeling powerful when they were able to provide food and described a powerful person as someone who ensures food security at all times for their family. Likewise, some examples of moments of loss of power in people’s lives were times when people went hungry or could not feed their children enough food. A female respondent explained, *“I have power in my house if I can go and buy food, cook it in my house, and the children eat it: that is power.”*

What constituted successfully taking care of the family was gendered. For instance, men talked of being powerful when they were able to “take care of the whole family” often vaguely without describing specific tasks or in terms of being a good “family man” whereas women talked specifically of being powerful when they were able to feed the children and husband well. When asked what different attributes make men powerful versus women, this male respondent replied: *“First for a man if he takes care of the whole family and for a woman if she takes care of the children.”*

In general there was more overlap in terms of gendered accomplishments than the commonly conceptualized domestic and versus commercial split for women and men respectively. Men were highly concerned with ensuring that the family has food, and women described being concerned with the “development” of the family in terms of housing and education. This highlights the interconnectedness of rural life wherein, even though there are gender-specific responsibilities and distinct priorities, gendered concerns are complementary and cannot be separated from each other in terms of the functioning of the household. It may also relate to the increasing importance of family unity, such that divisions between gender-specific concerns become blurred.

#### 2.4.7 Shifting gender norms: circumventing and coping with male dominance

While dominant views of gender roles power were largely reflective of stereotypical concepts of gendered power, such as the greater legitimacy of male power than female described above, there were also indications of shifting norms and associated internal community struggles. Our analysis of household bargaining dynamics lead to a typology of communities in terms of their views and approaches to women’s power.

In some communities, regressive views on gender and agency describe men as being superior--often rationalized through religious beliefs about male superiority--in terms of intellect, ability to “focus”, or ability to “plan” for the future. We characterize communities wherein men and women both held these views as regressive in terms of gender norms. Of note, we find these regressive views are normalized, obscuring the impact on power relations to community members. The following quotes from female respondents exemplify regressive views on gender and power:

*Female Respondent: A man is like a cornerstone of the home, even the kids that we have with him... And even if there is something bad that is going to happen he sees it first before a woman. A man is focused unlike a woman, they also plan the things that they do before doing them but a woman does not. A woman just does things generally.*

*Female respondent - A man has power because he is the one who has brought you to that homestead to stay with him. Another thing is that we came from a man's rib, it is the man who was created first and we have to respect that because it is from the Bible. So even if a man does not have money, we should just respect them because they are the house heads.*

A second view of gender and agency is characterized by attempts to circumvent conventional masculinities. Women described subtle approaches to obtaining desired outcomes such as “speaking softly” and “cooking a nice meal” to convince their husbands to change their minds about something, or indirect approaches such as simply disobeying what they know their husbands want and dealing with the repercussions. The following quotes from female respondents describe ways in which women attempt to circumvent gender norms that enable them to make choices they see to be in their best interest:

*Female respondent - [When there is a disagreement] you should sit down when things have cooled down and talk and be humbled also look for time when he is in his best moods and talk to politely then you will win him back.*

*Female respondent - There are men who put a mark on the maize flour [so we cannot use it without their permission]. They can draw a Kenya map and when he comes back he would like to see that map the way he had drawn it. These are some of the things we hear when people give testimonies and me the way I know about this, I know how to deal with them. Me, if such a thing were to happen to me or if I go to my house and find it, I can give out that maize flour before he even draws that map on it and put it somewhere. Because not giving makes someone sad and I am a God's person. If I can't give and God also knows that I have been forced to do that and if I have some money -- for example ten thousand -- and have been forced not to invest, I will give someone five thousand to keep for me because tomorrow this man who is drawing for you the map will not be there. So I take three thousand and buy a cow then send it to someone to keep for me*

A third view is characterized by women's increasing independence from men. In particular, it was noted that women are now capable of successfully living alone, often as widows. The following quotes exemplify a transformative view of gender and power wherein male and female respondents describe a new approach to gender relations and women's input to the family.

*Female respondent - In the recent world women can have a voice or good ideas because of this gender thing and people are mixed in terms of gender in our group and the men know it.*

*Male respondent - There is a saying that behind every successful man there is a hard working woman so a woman becomes powerful if she is hard working and when she works hard in a family then you shall find that the family shall develop so I think women are very powerful because they are the ones who raise the status of the family and even if a woman were to be widowed then women would always work hard in the family more than a man would do, men become more vulnerable when they are widowed.*

While some communities described exclusively regressive view of gender and agency, circumventive and transformative views often overlapped within focus groups and even by the same person.

Specifically, strong statements across the spectrum from transformative to regressive may be indicative of traditional conservatism clashing with progressive gender norms. While many communities expressed transformative views of gender and power, they were all accompanied by regressive statements and thus characterized as communities in internal conflict.

## 2.5 Discussion

The views of power described here reflect the socially constructed perception that increased power largely comes from diminishing the power of others. The process of negotiation and flux that emerges from the data is reminiscent of the Foucaultian conceptualization of relational power. The network of actors in a household or community are particularly concerned with exerting control over the actions of others. This negotiation is the process through which families decide how to invest their collective resources, such as money and time, the result of which has varying degrees of benefit for different members of the household. While negotiations for control are ongoing within families, it is not to say that there is never unity, collaboration or mutual benefit. Families increasingly value the notion of unity and, in many endeavours, consider working together to be the most productive approach.

Consistent with the economic conception of household bargaining power, there are a variety of personal attributes and characteristics assumed to lead to high a degree of power. These include wealth and control of resources, confidence and charisma, and hard work and determination. The core cause of structural inequality discussed was related to gender. Men are seen as inherently more powerful, and—for men and women—this is often naturalized. Furthermore, when it is critiqued or resisted by women—or by men—there are social and welfare repercussions—especially in that men disproportionately control social and physical capital and so can deny women's access in extreme situations of resistance.

The view of power as zero-sum fits with this conceptualization: men and women are negotiating for their respective priorities within the household, each with some degree of power in their particular domains but with men having absolute power and women having power conditional on men allowing them some. The negotiations continuously, though marginally, alter the balance of powers within the household.

Men are better endowed with physical capital, and this is a key reason for masculine domination. But a key policy question remains, can providing women with more resources necessarily alter this dynamic

and improve women's bargaining power in the household? We see that in cases of extreme resistance of gender norms there may be backlash against women, and that allowing women more power—by definition—must be taking it from someone else (presumably men).

However, there seem to be some cases in which power shifts are not met with backlash. These are situations wherein: 1) there is an exogenous relaxing of gendered social norms; 2) there are changes in family structure (like in the case of the death or absence of a husband); and 3) there are changes (or potential for changes) in power of the family as a unit as opposed to shifts of power within the family. Discussing these three cases in more detail below, we are particularly interested in situations in which the current development paradigm could be harnessed for improvements in women power and agency, based on the empirical results described here.

Firstly, in communities where men and women both recognize and resist male dominance this opens a space for new patterns of bargaining and negotiations to occur wherein women's agency can increase. Secondly, shifts in family structure, such as migration or death of a husband, that result in the household male relinquishing some or all decision making power to the women may open space for women's increased agency. However, widowhood may also leave women vulnerable to loss of the husband's land or other vulnerabilities. Finally, power is primarily viewed as power over others, and discussions are reflective of intrahousehold shifts in power. However, at times the family sees itself as a unit, associated with the potential for extrahousehold power shifts. That is, in some instances, activities that shift power marginally between men and women are viewed as "good for the development of the family" and not a threat to their own power, because they perceive a net increase in the family's power over others in the community. This result suggests that development initiatives that work with the household as a whole rather than men or women separately would be more likely to be accepted in spite of possible intrahousehold shifts in power and that interventions should benefit realms that are of importance to men and to women.

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### 3 Gender-inclusive governance of “self-help” groups in rural Kenya

Noora-Lisa Aberman, Regina Birner, Elizabeth Okiri, Mary Anyango Oyunga, Barrack Okoba and George Otiep

*There is vast literature on groups as a useful mechanism for rural development, especially for women. However, for group participation to fulfil on potential benefits to women, gender-specific constraints must be addressed. This study examines how to promote gender-inclusive governance of mixed-sex self-help groups in the African context, analysing twenty mixed-sex focus group discussions with 190 group members in rural western Kenya. Emphasizing group member perceptions and beliefs about participation and governance, we undertake an empirical assessment of institutional factors that explain and facilitate effective participation of female members. We find that group-member endowments impact the group’s interpretation in terms of their understanding of gender issues and political processes, and that the pro-gender intentions behind governance structures are more important than the structures themselves. Furthermore, groups in this context serve as a distinct parallel institution to that of the home that enable them to push the boundaries of community gender norms.*

### 3.1 Introduction

There is vast literature on groups as a useful mechanism for rural development, especially for women. The literature largely views group participation as a mechanism for developing social capital in women and also an indicator of empowerment (Meinzen-Dick et al., 2014). Groups are also mechanisms for improving livelihoods more directly by facilitating risk pooling, promoting the adoption of agricultural technologies, and facilitating asset accumulation (Meinzen-Dick et al., 2013). Groups can generally decrease transaction costs that tend to be high for small farmers and women in particular and thus can address women's specific agricultural constraints and increase women's wellbeing and capacity to adapt to climate change (Dorward et al., 2009; Fischer & Qaim, 2012; Markelova, Meinzen-dick, Hellin, & Dohrn, 2009). However, for group participation to fulfil its potential for women, gender-specific constraints must be addressed. In addition, group performance is enhanced when all members are active participants (Ostrom, 1992).

Women's and men's participation are each constituted by different interests, priorities and abilities. Their respective roles and responsibilities—determined largely by existing gender norms—will determine their needs and priorities in terms of climate change adaptation and wellbeing more broadly (Bryan & Behrman, 2013). Thus women's ability to voice their concerns and determine activities and strategies of groups' approaches will largely determine how effective they are as mechanism for addressing women's needs. That is, the degree to which groups fulfil women-specific needs depends in part on how substantial women's engagement is in the group (Meinzen-Dick et al., 2014, 2013).

Groups made up only of women may be dismissed by men and face community challenges, while groups made up of both women and men may find women playing perfunctory roles in decision-making (Baden, 2013; Pandolfelli, Meinzen-Dick, & Dohrn, 2008). In addition, some authors criticize an attempt to address gender issues by focusing on women only, recommending approaches that examine the roles of men and women—and their social dynamics—to promote development and women's empowerment (Bellows & Lemke, 2011; Connell & Messerschmidt, 2005; WCRWC, 2005). Thus it is important to assess which institutional characteristics can promote effective engagement of women in group decision-making of mixed-sex groups. Agarwal's (2000a, 2001) research in India pointed to gender norms related to women's roles in public as the major inhibitor to effective participation. However, in contexts where gender norms related to public appearances tend to be less restrictive, such as many—though not all—communities in Sub-Saharan Africa, gendered-dynamics in mixed-sex groups may be different. In addition, analysis in this context may provide additional insights into gendered group participation and which group governance mechanisms may promote effective participation of women.

The degree of participation will affect the benefits accrued by a group member and the gender composition of the group impacts women's participation (Meinzen-Dick et al., 2014). Thus failing to

understanding how best to design groups for women's participation, we can miss out on many potential benefits of interventions, in particular the potential to address the gender gap in agriculture and food security and improve women's ability to adapt to stresses of climate change. The majority of studies examining gendered group governance have done so in the South-Asia context where gender norms are more restrictive than much of Sub-Saharan Africa (Meinzen-Dick et al., 2014). As such, this study builds on past work on this topic, but applied to communities in rural Kenya.

This qualitative study analysed twenty mixed-sex focus group interviews with 190 group members in rural western Kenya between August 2013 and May 2014. The objective was to determine the institutional characteristics—with an emphasis on group design and governance—that explain and facilitate effective participation of female members. It examines group member perceptions and beliefs, and then applies an analytical framework to guide the empirical analysis of gender-inclusive group decision-making.

The paper is organized as follows: the following sections review the evidence on gender and group governance, lay out the analytical framework that guides analysis, and then describe the social, economic and political context in the study area. Then we provide detailed description of the methodology. Finally we summarize the empirical results and end by discussing the implications for policy and practice and the utility of the analytical framework for future studies.

### 3.2 Review of Evidence on Gender and Group Governance

As mentioned above, groups have become the major mechanism for development interventions and targeting of programs and services. There are a number of reasons for this, including using groups as mechanism to enable small farmers to pool risk and engage in the market economy, to broaden the reach of development partners or government interventions given limited funds, to encourage social capital development and women's empowerment, or to promote sustainable natural resource management (Meinzen-Dick et al., 2014; Thompson, Teshome, Hughes, Chirwa, & Omiti, 2009). Thompson et al (2009) describe groups (farmers groups in particular) as having elements of both traditional and formal organizations. They are often formally registered with the government and/or facilitated by non-governmental organizations (NGOs) and organized around economic principals. But they are also based in communities and "rooted in local contexts and customs" (Thompson et al., 2009, p. 2). Groups are particularly important for women as they provide access to information and resources that women may otherwise be excluded from (Meinzen-Dick et al., 2014). Given the emphasis on groups in development policy and practice, groups have been the focus of research in a number of sub-fields of development.

For instance, studies in development economics assess the incentives for collective action in group savings schemes such as ROSCAs (rotating savings and credit associations), where neoclassical economic theory would tell us that people are better off not participating, or participating once and then

dropping out. This body of literature finds various social considerations that promote group membership and continued participation such as women trying to separate some assets from the typical intrahousehold bargaining rules for assets, a desire for social capital and need to protect oneself against social rejection, and the power of self-commitment to a savings goal as an important mechanism for improving savings outcomes. Furthermore, these types of savings groups are generally found to be beneficial to members in terms of welfare outcomes, though they do tend to leave out the poorest of the poor (Greaney, Kaboski, & Leemput, 2013).

In addition, natural resource management literature, often based on Ostrom's seminal work on collective action and management of common-pool resources, considers how various groups can facilitate sustainable use and management of natural resources such as water resources, forests, or pasture, or more broadly for promoting community-based adaptation to climate change (Bryan & Behrman, 2013; Ostrom, Gardner, & Walker, 1994b). This body of work provides some guidance on group design principles specifically for the sustainable management of common pool resources (Cox et al., 2010; Ostrom et al., 1994b).

Some of this literature goes beyond natural resource management to focus on gender dynamics in groups. For instance, Valdivia and Gilles (2001) review a series of case studies looking at gendered access to and control of resources and find a close relationship between women's resource control and voice. They also find that, in addition to a mechanism for risk sharing, group participation gives women a "legitimized and institutionalized context through which they can work" to develop their livelihoods and increase not only social capital but social control (Valdivia & Gilles, 2001, p. 8). However, according to Meinzen-Dick and Zwartveen's (1998) review of evidence on female participation in water user organizations, the time costs and social risks associated with group participation often outweigh the benefits for women. Thus they note the need for detailed analysis to identify the major factors that can strengthen women's participation in groups. Similarly, Fischer and Qaim's (2012) quantitative assessment of commercialization through farmers organizations finds that the benefit-cost ratio may be lower for women such that better targeting group activities to meet the needs of women would likely increase their participation.

Kabeer and Subramanian (1996) develop a framework for the institutional analysis of gender programs and policies. They argue that the norms and values that determine gender inequalities are rearticulated at all levels of institutions, and thus to understand the role of women in groups one must assess institutions at the levels of family, community, market and state. They also define a set of constitutive components of institutions that can be used to empirically assess them: rules, activities, resources, people and power. Agarwal (2000a) finds that women in community forest groups in South Asia have low levels of participation in groups.

In a related paper, Agarwal (2000b) specifies factors that affect women's participation: formal rules of entry, degree of awareness of rules by women, social norms restricting appearing and speaking in public, workload and logistics of childcare and tasks, and personal attributes such as education level, confidence and age. She describes a more meaningful definition of participation than the quantitative studies described above, explaining that beyond membership (which is linked to rules of entry) and attendance, there are finer degrees of participation that require such things as speaking out and having one's opinions carry weight in decision-making.

Along these lines, Agarwal (2001) develops a typology for group participation, ranging from nominal participation (membership) to interactive participation, wherein women have voice and influence in group decision-making. She illustrates empirically that women's needs are not addressed when their participation is limited. She finds a number of factors that impact the effectiveness of women's participation in groups, which are gender-restrictive social norms (negative), ability to form women-only groups (positive), and external agents supporting women's effective participation (positive), especially when pushed from the beginning before men's territorial interests are established. Agarwal also suggests consideration of various institutional levels that impact group dynamics, such as the state, community and household.

In addition, in a review of evidence on women's participation in mixed-sex groups, Meinzen-Dick et al. (2014) found that women's active participation improves rule enforcement, conflict resolution, and overall group effectiveness. In addition, the literature they reviewed showed that mixed-sex groups may be harder to set up but have higher pay-offs. For instance, in a study of women-only, men-only and mixed-sex organizations for natural resource management in Bangladesh, Sultana and Thompson (2008) find that women-only groups prioritize inclusivity while men-only groups prioritize clear rule-making. Furthermore, compliance with rules limiting fishing in protected areas is higher when both men and women are actively involved in the management groups, though women-only groups improved with time.

In an empirical assessment of African farming cooperatives, Baden (2013) finds a few group characteristics that seem to work best for women. First, where women already have some assets and experience managing groups, women-only groups can be quite successful in promoting development. Second, with a critical mass of women members, women are more likely to gain leadership roles but that will not necessarily lead to equitable decision-making. Lastly, a rotational leadership mechanism ensured a minimum number of women in the group leadership at all times and lead to greater recognition of women's positive contributions in mixed-sex cooperatives.

The literature highlights the increasing importance of groups, and especially effective participation in groups, for development. While there is some evidence that women-only (or mostly women) groups can be beneficial, especially in a context where women are highly restricted in terms of public appearances,

the possible benefits of mixed-sex groups necessitates further examination of these to better understand how to support their pro-gender governance. As such this study complements previous studies on gender-inclusive group governance by developing and applying an analytical framework that assesses the various institutional factors that may affect women's inclusion in the African context.

### 3.3 Analytical Framework

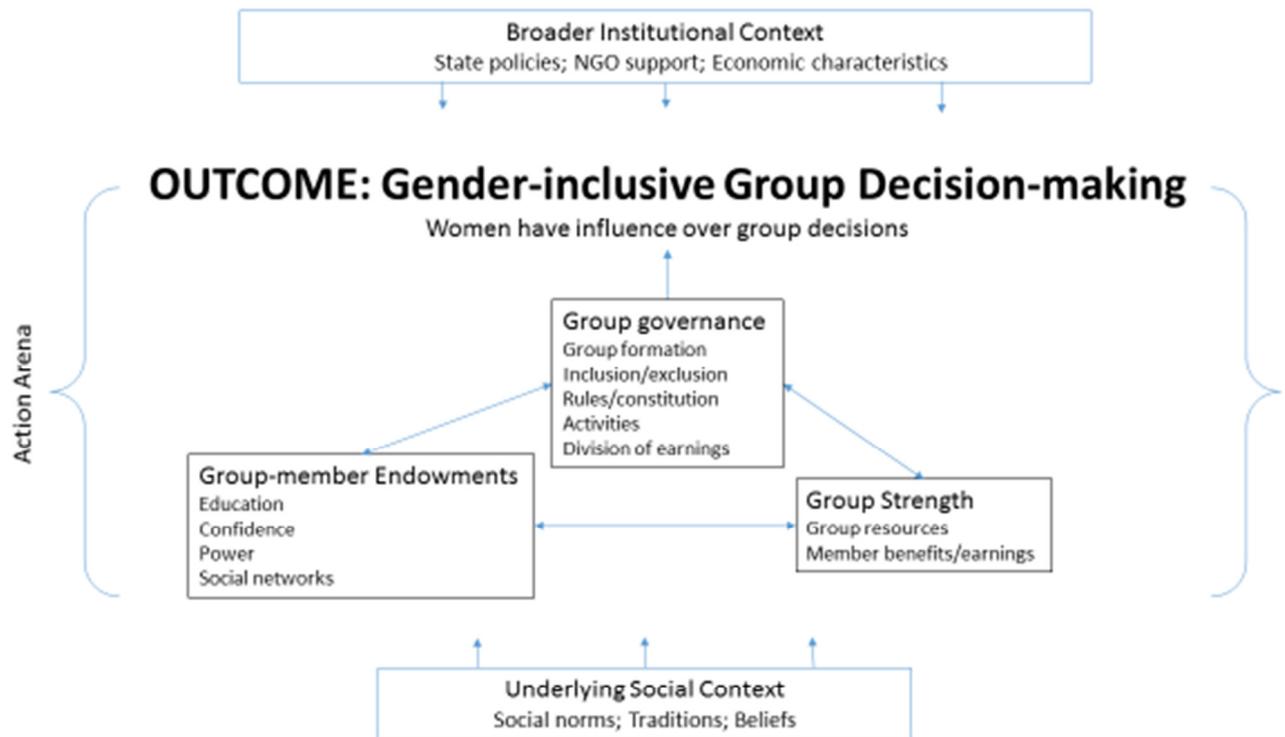
Gender analysis entails examination of how institutions create and reproduce, or break down, gender inequalities (Kabeer, 1999). Institutions affect inequalities through the rules, norms and practices they espouse. This view of inequality is often described as structural inequality, or as described by Dani and de Haan (2008, p. 3) "by the condition of attributing an unequal status to a category of people in relation to another," in this case the status of women to men. This is a relationship "reinforced by a confluence of unequal relations in roles, functions, decision, rights and opportunities" (2008, p. 3). Institutions are human constructs that govern the peoples' behaviour. As such, within the structural confines of these institutions, people also take actions and make choices. The extent to which they have freedom of action and choice can be described as agency. Agency and structure interact as structure defines the choices available, and the choices and action of individuals and groups can break down, reinforce or otherwise alter structural constraints (Kabeer, 2001, p. 26).

Just as institutions exist at different levels, gender analysis can take place at different levels, such as that of the state, the community, or the family (Kabeer, 1999). This study undertakes gender analysis of the institution of the group, which is a community construct.

This study is guided by an analytical framework adapted from the Social Relations Framework (Kabeer & Subrahmanian, 1996; Kabeer, 1999), the Framework for Institutional Analysis (Kirsten et al., 2009), and the Bargaining Framework (Agarwal, 2000b). The new framework is applied here as a guiding structure for the gender analysis undertaken.

We begin with a definition of effective participation in line with Agarwal's depiction of interactive participation wherein women have voice and influence in group-decision making (2001). As shown in Figure 1, the first three elements make up the *action arena* (the area under investigation): group member endowments, group strength, and group governance. We hypothesize that the components of the action arena determine the outcome of interest; the gender-inclusivity of group decision-making. The broader institutional environment is made up of national policies and other external support or services such as NGOs, while the underlying social context is made up of the social and cultural norms that drive beliefs and behaviours related to gender and livelihoods. We can think of the groups as embedded in the broader

Figure 2. Analytical Framework for Assessing Group Gender-Inclusivity



Source: Adapted from the Social Relations Framework (Kabeer 1999; Kabeer and Subrahmanian 1996), the Framework for Institutional Analysis (Kirsten et al. 2009) and the Bargaining Framework (Agarwal 2000b).

In addition, Kabeer’s and Subrahmanian’s classification of development policies in terms of their approach to gender issues—gender blind, gender neutral, gender specific, or gender transformative—is a useful analytical tool for this analysis (Kabeer & Subrahmanian, 1996; Kabeer, 1999). The rules and organizing structures of groups can be seen as group *policies*, per se, making this classification relevant. Policies can either be *gender blind*, not considering gender in their development, or *gender aware*. All the groups assessed here are gender aware in that the mixed-gender groups by design and deliberately have both men and women as members. Gender aware groups can then be categorized as neutral—largely operating within existing gender division of resources and responsibilities and target delivery of services to both men and women—or specific—wherein they still work within existing gender divisions, but specifically respond to the practical needs of men and women. Finally, policies can be transformative in that they both recognize and seek to transform existing gender relations through the redistribution of resources and responsibilities. This last category is the most politically challenging category and that addressing the structural aspects of gender relations (Kabeer & Subrahmanian, 1996, p. 18).

### 3.4 Economic, Social and Political Context

The rural western Kenya is characterized by subsistence agriculture and fishing. In 2010 Nyanza Province was devolved into six separate counties, although national data is still reported by province (KDHS, 2014). This study was undertaken primarily in one of six former Nyanza counties: Homa Bay. The locality is predominantly populated by the Luo people, the third largest of Kenya's 40 different tribes. Smith (2006) describes the Luo as holding a paradoxical position in Kenyan society as they are both among the poorer populations of the nation, and also have contributed to some of the nation's most notable public figures such as statesmen, academics, and lawyers. However they have a historically troubled relationship with the dominant Kenyan tribe, the Kikuyu, dating back to the 1960's.

As in many communities in Sub-Saharan Africa, women in this region are disadvantaged by gender norms that restrict their control over productive resources such as land (Farnworth, Sundell, Nzioki, Shivutse, & Davis, 2013), yet they are tasked with much of the labour involved in cultivation and with the majority of domestic responsibilities (Potash, 1985). Furthermore, women in Kenya have much lower access to agricultural inputs and training than men (The Nature Conservancy, 2013).

Luo society is patriarchal and virilocal, and marriage is ideally preceded by payment of bridewealth, often in cattle. An ethnographic study on polygyny in Luo communities indicated a much higher rate among Luo than the national average, although it has decreased over the last decade (Oguda, 2012). Furthermore, they found household bargaining for resources in a polygamous context was detrimental and disempowering to the co-wives. The prevalence of early childbearing is highest (19.2 percent of girls from age 15-19) in Nyanza among all Kenyan provinces, and domestic and sexual violence is higher only in Western Province, the bordering lakeshore province (KDHS, 2014). Paradoxically, educational attainment among females in Nyanza is higher than the national average (5.7 years compared to 5.2 years) (KDHS, 2014).

Indigenous social groups of many sorts have long been common throughout Africa and in Kenya specifically, including funeral associations and labour sharing groups, wherein communities pool risk or labour in the absence of state support (Meinzen-Dick et al., 2014). Farmers' organizations such as cooperatives were a major part of agricultural policy previously. The Government of Kenya encouraged farmer cooperatives through the Cooperative Societies Ordinance in 1945 and the Swynnerton Plan in 1954, resulting in the substantial growth of these farmer groups (Thompson et al., 2009). However, there was a major decline in groups throughout Africa, Kenya included, in the 1980's leaving farmers largely without a collective voice (Thompson et al., 2009).

In recent years, group-based approaches have once again taken an increasingly central role in the policies and programs of governments and development partners in Kenya (Meinzen-Dick et al., 2014; Thompson et al., 2009). Currently the Ministry of Gender, Children and Social Development supports formally registered self-help groups through: community trainings on group dynamics, financial

management, leadership and governance; connecting the registered groups with other service providers; and providing financial support between Ksh 20,000 and 50,000 (approximately US \$200–\$525), depending on the proposed activities. In order to receive support, groups must have a valid registration certificate, be gender-sensitive (defined as having a majority of female members), hold elections to be attended by ministry officials, and be actively undergoing some group activities. This support seems to provide an incentive for groups to both register formally and ensure female-majority of members.

In addition, international organizations and non-governmental organizations increasingly promote groups; some examples are the proliferation of group-loan schemes, the rise of the concept of social capital—through group participation or social networks—as a new key to development, and the use of groups as a mechanism for targeting of non-governmental organization (NGO) services and for facilitating market access for smallholders (Fischer & Qaim, 2012; Markelova et al., 2009; Pandolfelli & Meinzen-dick, 2007).

Among the many reasons mentioned for starting groups, one is for better access to NGO and agricultural extension services. For instance, many NGO's only target services to already formalized groups and group membership facilitates information sharing regarding services available, such as subsidized fertilizer and seeds, from the Ministry of Agriculture.

The gender-focused policy environment in Kenya, historically subjugating women both in customary norms and through skewed legal colonial and post-colonial frameworks, has developed into one highly supportive of gender equality over the last decade, on paper if not in practice (Institute of Development Studies, 2013; Odhiambo & Oduor, 2010). A number of policies and plans have been put in place to address gender issues from the national government level down to the local village level, including revisions to the Constitution, Kenya's Vision 2030, the Kenya National Policy on Gender and Development, and the Agricultural Sector Development Strategy 2010-2020. There have been critiques of some of these policies in terms of their effectiveness and degree of implementation, but the understanding of gender as a national issue in Kenya is widespread.

While these new policies indicate a commitment by the Government of Kenya to begin to address the challenges of gender inequality, Odhiambo and Oduor (2010) remind us that even with adequate laws and policies in place, the structural aspects of gender discrimination may be slow to change without deliberate and practical interventions to address specific challenges.

### 3.5 Methodology

This study attempts to identify the institutional characteristics that promote effective participation of women in groups. We apply a social constructionist epistemological approach that allows us to define participation and supportive institutional characteristics based on the subjective and socially constructed views of the respondents. Qualitative data is coded using inductive reasoning to identify themes and

patterns in the data that can contribute to the current body of theory on gender and decision-making in farmers' organizations (Pascale, 2011).

Inductive analysis relies on the identification of patterns in the data, and logical explanations for those patterns. A strength of this approach is the emphasis on searching out and explaining “negative cases” that do not fit with emerging explanations or theories, and thus helping to avoid weak or abstract conclusions (Pascale, 2011, pp. 54–55).

The analytical framework outlined above guides our analytical process by providing a broad set of categories into which data were coded. However, within the broad categories, specific themes and codes were empirically driven and not predetermined at the onset of the research. This allows for results that are driven by patterns within the data, rather than attempting to fit the data into a specifically defined framework that may encourage overlooking of unexpected results. While we hypothesized that all aspects of the analytical framework would be salient to effective participation, through the inductive analytic process we determined ones were supported by the empirical data.

### 3.5.1 Data collection and sampling

Data was collected through twenty mixed-sex focus group interviews with ten farmers groups and a total of 190 interviewees between August 2013 and May 2014 in and around Homa Bay County, a primarily Luo tribal area in western Kenya. Interview groups were made up of members of existing farmers groups and were purposively sampled according to their emphasis on activities that can be characterized as climate change adaptation and their geographic location. For smaller farmers groups all the members attended, but for larger ones, group leadership was asked to choose a subset of members to invite in order to make interview smaller and more manageable.

While increasingly applied in the social sciences, the value and validity of focus groups has been debated by social scientist. Focus groups are sometimes critiqued as likely to obscure important perspectives due to strong individual opinions or group dynamics that reproduce normative discourses (Vaughn, Schumm, & Sinagub, 1996). However, other researchers consider focus group data to have unique strengths that make the weaknesses worth coping with. In particular, focus groups allow for discussion and exchange, enable participants to flesh out ideas, and give the researchers insight into individual and group dynamics (Robinson, 1999). Along these lines, focus groups are uniquely suited to elicit a collective voice or discourse and avoid the imposition of meaning through the research process and decontextualization of the data (Wilkinson, 1998, 1999). The weaknesses must simply be considered and accounted for during facilitation and analysis (Smithson, 2000).

In addition, respondents were each asked to rate themselves in terms of their own decision making power in the group and their power at home, choosing and stacking a number of pegs between 0 and 5. This exercise was meant to encourage them to concretely consider and describe their experience of the social dynamics of power (Schiffer, 2007). The numerical data from the exercise were not quantitatively

analysed, but the discussions elucidated by the exercise were a very interesting part of the qualitative transcripts. Other data collected include three key informant interviews with staff working to support some of the groups and detailed field memos from each interview site. Field memos were used to provide context and record nonverbal details of interest from the interviews, and were also viewed as the first level of analysis. In advance of the data collection, the research team discussed and debated the appropriate translation of key terms into Luo.

### 3.5.2 Analysis

Data from focus groups were recorded, transcribed and translated from Luo to English and then coded for recurring themes to identify patterns across the interviews.<sup>6</sup> The data was analysed using NVivo 10 qualitative analysis software. Coding was undertaken in multiple phases. The first phase was broad coding into the categories laid out in the conceptual framework. Then, within those broad categories, data was re-coded into related themes and sub-themes. Finally, coded data was reviewed across interviews for patterns and divergences. We then sought empirical and theoretical explanations for the patterns. Analysis emphasized two main objectives: determining socially constructed group typologies related to their degree of gender inclusiveness, and identifying specific institutional characteristics that are associated their degree of gender inclusiveness.

### 3.5.3 Reflexivity, Validity and Ethics

The field team was very well-versed in the context of agricultural development, group engagement, and climate change, and were ethnically Luo, giving them an insight and understanding of the culture and society. This enhanced the validity of the results, while also providing opportunities for the whole team (the foreign principal investigator and the Luo field team) to reflect on our own expectations and biases throughout the data collection and analysis process.

One limitation of the team was that all except the principal investigator were largely unfamiliar with qualitative methods. A training on the research approach and the interview guide was undertaken before the start of the data collection. The data collection process was closely monitored by the principal investigator, leading many of the interviews in partnership with the field team, discussing and reflecting on results and interview techniques at the end of each day, and taking time for short refresher trainings. In this way, the field team developed a good understanding of the data requirements. Nevertheless, the lack of experience in the approach combined with the principal investigator's inability to speak Luo, does create the possibility of data quality issues and misinterpretation of responses, which was carefully considered during data analysis.

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<sup>6</sup> Some of the interviews were translated to English in the course of the interview. Most of the interviews were done completely in Luo. All interviews, even those translated during the course of the interview, were translated word-for-word into English to ensure no details were missed.

Given limited time and resources, there was a trade-off between assessing additional groups versus understanding decision-making dynamics in more depth for a few groups. While useful and insightful empirical information was gained from this study, a useful follow-on study would entail deeper longer-term assessment of group dynamics including going beyond group interviews to undertake participant observation in group meetings and individual interviews.

Preliminary results of the analysis were presented to representatives from all the groups interviewed for their own learning and for validation of the results. Key elements of the later stages of analysis, such as group typologies, were circulated throughout the field team for validation and discussion.

This study received approval of the International Food Policy Research Institute's Institutional Review Board as minimal risk research. To ensure the confidentiality of the interview responses, care was taken to keep transcriptions in a password protected folder. All duplicate copies of recordings and transcripts were deleted from all locations except the primary investigator's password protected computer. Names and village names were not mentioned in the text of the paper.

### 3.6 Results: Assessing the Gender-Inclusivity of Group Governance

The following sections describe the empirical results related to the examination of the *action arena*—including group governance, member endowments, and group strength. Results are then synthesised in a table for comparison of group cases.

#### 3.6.1 Group Governance

As discussed in the above analytical framework section, we consider women's effective participation in groups to be characterized by their voice and influence in group decisions, or, simply put, their decision-making power. Empirically, group members universally considered attendance and speaking up in the group to be a key driver of a member's decision-making power, along with other personal attributes such as intelligence and respectability. The ability to speak up and be listened to in the group is seen as a contributor to a member's decision-making power, though it does not guarantee a voice in group decision-making. The quotes below illustrate the extent to which speaking up is seen as a driver of power in the group, such that it can overcome other weaknesses:

*Male Respondent: "I (have a lot of power) due to my nature of contributing always to the group and it happens that if someone does not always contribute then he may be considered as weak."*

*Female Respondent: "Women who talk well with people or relate well with people (are powerful) even if they are not wealthy. That also makes a woman earn more in terms of power. Yah they will be respected a lot."*

The groups interviewed were all formally registered with the government and thus all had a constitution and group by-laws, as per the requirements. The types of rules and governance practices in place were relatively consistent across groups, with elected officials and set term lengths, rules about taking on new members, participation requirements, and rules related to sharing of earnings and assets. The existence of these rules and governance mechanisms, in particular voting, were frequently cited as the reason for gender equality in decision-making in the group, in contrast to the home where a man has more decision-making power than a woman. However, when probed further, many respondents revealed that equality based on the formal rules does not ensure women's effective participation.

### **Addressing the Barriers: Typology of Approaches to Gendered-Governance**

Both men and women discussed barriers to women's effective participation. Barriers mentioned were related to the personalities and other personal attributes of women, such as lacking confidence or knowledge. Other barriers mentioned were structural such as socially-based tendencies for women to keep quiet and not contribute their opinions. Based on these governance approaches of these groups, we apply the gendered typology of policies introduced earlier to characterize three different approaches to gendered group governance:

1. gender-neutral groups are those who acknowledge the barriers to women's effective participation but do not specify any governance mechanisms to address them,
2. gender-specific groups specify governance mechanisms or rules in place that can help to overcome the barriers, and
3. gender-transformative groups have governance mechanisms or rule in place that are explicitly meant to overcome women's barriers to effective participation.

Both gender-transformative and gender-specific groups showed an understanding of the structural nature of barriers to women's participation. They both acknowledged gender inequalities and challenges to participation and pinpointed governance mechanisms to address them. But only the one group characterized as gender-transformative took explicit action to alter structures in favour of women—in this case, group rules. Rules developed explicitly to prioritize women's needs and challenges start to rebalance the social structures that decrease women's participation and provide a signal to female members that they are a priority and have an explicit right to engage in group decision-making. The four groups with gender-specific governance designs interpreted the typical group rules (typical in the sense that they were consistent across all groups) in terms of how they can be used to support women's participation and decision-making power, putting the responsibility for equal participation on the group. However, importantly, they did not put in place governance mechanisms designed explicitly to promote women's participation.

Alternatively, gender-neutral groups emphasized the *de jure* equality of men and women, and put the responsibility on the female members themselves to assert their rights and overcome their personal *weaknesses* and structural barriers. These groups considered the *possibility* of equality as sufficient. They put the responsibility for effective participation on the women themselves rather than on the group.

Demonstrating the distinct nature of gender-neutral group governance, the following quote from a female respondent illustrates her acceptance of the democratic rules as ensuring that intra-group bargaining is fair and equal: *“We are in this group and we are supposed to give our ideas. So in the group we cannot say that so and so has more power than the other. Or so and so has less power than the other. Because here everyone has to give his/her ideas, and after giving ideas is when we come to [a] conclusion.”* Along with this blanket acceptance of the formal rules, there was a systematic resistance to discuss any deviations from the formal rules among women in gender-neutral groups.

And when asked what constrains women from participating in group decision-making, the following quotes from gender-neutral group members demonstrates tendency to put the onus on women to overcome their limiting personal characteristics:

*Male Respondent: “Traditionally women were not allowed to contribute their ideas publicly and therefore this makes them until now not to be brave enough to air their ideas in an open manner.”*

*Female respondent: “Women may not contribute in the group because they are not confident. Talking less makes women feel that they have less power in the group.”*

In the gender-specific groups, it was the men who noted the mechanisms or rules with potential for improving women’s participation. Only in one case did both women and men do so. In all other cases women described the personal attributes that lead to lower participation of women members but did not focus on the mechanisms for improving the effectiveness of women’s participation. Quotes from both gender-specific and gender-transformative groups illustrate these points:

*Male respondent from gender-specific group: “(Strengthened) democracy will help make women feel respected and valued in the group.”*

*Female respondent in transformative group: “Being a group founded and run by women, men in this case don’t underrate our opinions since we own the group first hand.”*

### **Rules and Governance Mechanisms**

The rules and governance mechanisms were largely consistent across the groups, but the interpretation and enforcement differed greatly. All groups voted on leadership either annually or every two years and

all included women in leadership roles. Voting was described by all groups as the key mechanisms for resolving conflict or disagreement. Rules for including new members ranged from simply having to agree to the group rules, to undergoing a vetting process and having to prove adequate assets to “keep up” with group activities. All groups had attendance requirements: commonly, missing three meetings would constitute dismissal from the group and late arrivals would be charged a small fine, but the extent of enforcement was varied. For instance, one group mentioned that they had not been charging fines to latecomers in spite of having such a rule.

In addition to variation of extent of enforcement, interpretation of the rules also varied, and had implications for gender-inclusivity. For instance, a rule interpreted by gender-neutral groups as promoting “equality of group members”—with no emphasis on gender—could be interpreted by a gender-specific group as promoting women’s effective participation. While the formal rule was the same in both situations, its interpretation and application was an indication of group responsibility for gender equality.

As discussed above, only the transformative group had rules in place explicitly designed for gender inclusivity. For instance, it instituted a rule that only women could hold leadership positions. These positive discrimination mechanisms promote a sense of ownership and legitimacy in female members.

### **Conflict and Resolution**

Conflict and disagreement among group members tended to be viewed as negative, such that ‘working together’ surpasses democratic participation as a normative priority. Some respondents even described backlash against them for disagreeing with the majority or pushing for governance reforms, as demonstrated in the following quotes:

*Male respondent: “There was a time I demanded from the office bearers that they give us a financial report but they told me that they do not want people who are suspicious.”*

*Male respondent: “I am the one who opposed the idea of registering the group into cooperative society. From then colleagues don’t trust me with some issues in the group.”*

Women were particularly uncomfortable with the idea that group dynamics may involve conflict or disagreement. Men tended to describe conflict in more concrete terms, discussing a specific instance where group members disagreed and how it was dealt with. Women were less likely to admit that the group experienced any conflicts or to describe those conflicts in detail. In particular, women in the gender-neutral groups did not provide examples of specific conflicts, rather stating that conflicts did not happen or that differences in opinion were insignificant as the “good governance” mechanisms ensured

that no conflict happened. The following quote exemplifies the difference in women's and men's views of conflict in gender-neutral groups when asked for an example of disagreement:

*Female respondent from gender-neutral group: "Most of the time we agree on the issues. Such a thing [disagreement] has not happened here."*

*Male respondent from same gender-neutral group: "We have disagreed on our opinions; the recent one was when we were advised by the Ministry of Social Services to register savings and loaning project as cooperative society. When we came back and shared that idea with members some disagreed and opposed and instead colluded and left the group, a number of members left the group reason being that they thought we wanted means to eat their shares. We had to invite social services officials to come and clarify the idea, they came and talked to the members and they were able to see light in it the idea, those who opposed the idea felt a shamed and apologized. They came back and re-joined the group though this delayed the registration process. It is this disagreement that made the group officials to call the social services officials to intervene."*

In one instance the women of a gender-neutral group clearly recounted the details of a conflict. This group had experienced a crisis in recent years, falling from more than seventy members to just over twenty and coming close to dissolving. This crisis and the process by which the group dealt with it was clear in women's minds and they recounted the details. We interpret this pattern as an indication that women are typically less experienced with political processes and thus have a tendency view rules and governance concepts (such as fairness and equality) at face value. However, the experience of a major conflict allowed the women of one group to reflect critically on governance challenges.

Female members of groups that are cognizant of structural constraints to women's participation—gender-specific and gender-transformative groups—were better able to critically assess group governance, perhaps due to the presence of a critical dialogue present in the group.

### **Allocation of Group Tasks and Roles**

Group activities were varied though all had some agriculture-related activities, and some had expanded into poultry-keeping. Many practiced aspects of conservation agriculture (typically combined with some chemical fertilizer use) as a means of coping with increasingly inconsistent rain and drought patterns<sup>7</sup>. It was also described by some widows as a means of cultivating their land without a man's labour because there is no need to plough and less need for weeding. Most groups also had a formalized savings and loan program, wherein members contributed funds (through paying membership dues or, often,

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<sup>7</sup> While droughts and other issues of climate variability were mentioned by interviewees, it was not an explicit focus of this research. Another study undertaken in Kenya by Roncoli et al. (2010) delves more deeply into current gendered challenges and perceptions of climate change, the results of which were consistent with our results.

through buying shares in the group) into a group pot that could then be loaned out to group members. Some groups also had off-farm livelihoods activities, either as part of group activities—such as chair rental or catering services—or as individual small-businesses—such as kiosks—started with funds from group savings and loans programs.

Issues related to the allocation of tasks include whether activities maintained traditional gender assignments and how leadership roles are assigned. A few groups described allocating group activities according to traditional gendered divisions of labour, while others explicitly stated that they do not consider gender when allocating tasks and roles. There was no clear pattern in terms of group typology and the extent to which group members perceived that tasks were determined by gender, but assessing the same issue through participant observation could uncover some patterns that we have not.

The presence of female leadership did not seem to have any implications for the effective inclusion of women. All the groups interviewed had women in leadership roles, but those women were not necessarily the most outspoken, empowered, or gender-aware of the groups. In fact, similar to previous studies (Meinzen-Dick et al., 2014), one group explained that men prefer to have women as treasurers because they are less likely to “run off with the money,” thus using women’s lack of mobility and perceived purity as rationale for putting them in a leadership role. Also, when women were asked to assess their own group decision-making power, women in leadership positions did *not* systematically give themselves higher power scores. The only mechanism through which female leadership seemed to impact the gender-progressive governance effectively was in the case of the gender-transformative group wherein only women were allowed to hold leadership positions.

### **Group Formation**

Most commonly, people were motivated to form groups in order to take advantage of services and support targeted to groups and to generally cope with challenges of poverty and food insecurity. They described being prompted by NGO representatives to form groups (or formalize pre-existing groups) in order to take advantage of their services. In the case of CARITAS—a common supporter of groups in this area and supporter of many of the groups in this study—formal registration of the group with the government was a prerequisite of receiving CARITAS agricultural group support services.

Two groups were formed by religious leaders in religiously homogenous communities to promote development therein. Both of the religiously motivated groups had a more top-down governance structure, tending to be leader-focused.

Other groups started as simple saving groups for women, or merry-go-rounds, wherein women contribute small amounts of money on a monthly basis and each month one member benefits from a pay-out. The two groups that started this way describe using the funds to purchase household items like cups and plates or to pay for school fees. These groups eventually expanded into other activities like

more formalized village savings and loan programs, agricultural activities, or other livelihoods activities. When activities began expanding men took notice of the group and requested membership. In both cases the expansion of activities was prompted by an external organization taking notice of the group and providing support to expand into other activities.

The last two groups, the transformative group and in one case a gender-specific group, were founded to promote development for the members and to provide charity to the less fortunate in their communities. They noted being motivated to uplift women and support orphans or poorer children in the community. They were distinctly focused on both developing their own members as well as contributing to the broader development of the community.

The groups with a developmental impetus for formation were gender-transformative and gender-specific, both demonstrating relatively high awareness of gendered challenges to inclusion and governance solutions. The groups that were externally motivated—those motivated primarily by the promise of NGO support or due to a religious leaders' prompting—were gender-neutral, groups that did not take responsibility for women inclusion, with two exceptions. The exceptions are groups that had had the benefit of in-depth trainings on gender and governance from Action Aid. Men and women in both of these groups referred to the trainings as useful for improving their understanding of gender issues and ability to govern the groups inclusively.

*Male respondent from gender-specific group: "This [women's exclusion] may only happen if the leadership is not always democratic and therefore does not feel free to talk during meetings. But right now through [governance trainings we] have become stronger."*

### 3.6.2 Group Strength

We hypothesized that the strength of the groups, defined as the level of assets controlled by the groups and the benefits received from being a part of the group such as through NGO support, might improve the degree to which members are invested in the group and thus strengthen their governance. We did find that more gender-progressive groups tended to report a high level of assets and savings. When probed, all groups reported some NGO support, so we were not able to ascertain any pattern in this area. Furthermore, our data does not clarify the causal relationship, and in fact the results suggest that individuals in groups that have high levels of assets may have started out with relatively higher levels of assets.

### 3.6.3 Group-member Endowments

The relevant group member endowments that arose are largely driven by gendered social norms. For instance women's overall confidence and ability to be articulate was raised a number of times as a socially-driven constraint to power and decision-making in groups and elsewhere. Knowledge and

education were also raised as endowments that women had less access to but that were potential drivers of overcoming restricting gender norms. The central empirical result on endowments was the extent to which group members viewed groups as a mechanism to ensure effective participation in spite of a lack of endowments.

Another important group-member endowment discussed above is the extent of political experience of the members. And the degree to which they have been sensitized to gendered challenges and strategies for addressing them through governance mechanisms. More developed capacity in both of these areas appears to be important for group members' interpretation of the rules and their responsibilities in terms of equity in decision-making, and thus for promoting women's effective participation.

**\*\* Summary of Results Table \*\***

### 3.7 Discussion

Considering the drawbacks to women-only groups, the effectiveness of mixed-sex groups in supporting women's empowerment and development deserves continued examination. However, for such groups to address the needs and priorities of women, they must promote gender inclusivity. As such, we examine the gender-inclusive governance of mixed-sex group in the African context where social restrictions for women tend to be less binding than in the South Asia context, where previous empirical work found social norms to be a major constraint to women's basic participation in mixed-sex groups.

Through a series of sex-disaggregated focus group discussions with members of mixed-sex self-help groups in rural western Kenya, we assess the socially-constructed views of group governance and decision-making. As expected, and in contrast to the South Asia context, women are not restricted from basic participation, but the effectiveness of their participation is limited by social norms. As such, we are able to build on the work of Agarwal (2001) to investigate most effective governance mechanisms for promoting women's effective participation, in a context where social norms are somewhat less restrictive.

Consistent with past literature (Agarwal, 2000b), group members universally considered attendance and speaking up in the group to be a key driver a member's decision-making power, along with personal attributes such as intelligence and respectability. Therefore, attendance and speaking up were not seen as sufficient to ensure decision-making power if one is not perceived by group members as someone worth listening to.

Most groups perceived the existence of democratic rules and governance structures as adequate group action for ensuring equality in decision-making in their groups. Women's shyness or unfamiliarity with speaking in public was often blamed as the main barrier to their effective participation and input into group decisions. This conceptualization emphasized personal attributes as the core constraint to participation, putting the onus on women members to claim their *de jure* equality within the groups. We can relate this to Kabeer's discussion on structure and agency that points to *false choices* wherein women are expected to take actions as though they are equal but the given structure makes such actions untenable for them (Kabeer, 2001, p. 26). However, a few groups, while acknowledging the constraints in agency faced by women, considered the group to be responsible for explicitly facilitating women's participation through group rules and governance structures. Thus they focused on the structural aspects of gendered power inequalities and took responsibility for mitigating them.

Contrasting these different group approaches, we develop a typology based on their approach to gender-inclusive governance wherein: 1) groups that assume *de jure* equality and put responsibility on women to claim their rights are described as gender-neutral; 2) groups that emphasize the structural barriers to women's decision-making power and consider the effectiveness of standard group rules and governance structures to help address them are described as gender-specific; and 3) groups that not only emphasize

structural barriers but develop specific governance mechanisms favouring and empowering women are described as gender-transformative.

A few factors can be viewed as driving group approaches to governance and the extent to which the group takes responsibility for pro-gender outcomes. First, the original reason that the group was formed is a determinant of group governance approaches. Those that had explicit community-development and gender equality objectives at formation also took responsibility for women's effective participation through rules and governance mechanisms. This is in line with Agarwal's (2001) assertion that early (from formation) support of gender-inclusivity ensures that male interests do not become entrenched in group governance. There are some exceptions wherein groups had pro-gender governance in spite of no emphasis on equality and development at their formation, but in these cases groups underwent extensive gender and governance trainings.

In addition, women's own experience with and understanding of political processes and power dynamics is a potential driver of pro-gender group governance structures. Female group members in gender neutral groups did not critically assess intra-group power dynamics and tended to take group rules supporting fairness and equality at face value, overlooking intra-group power dynamics and limitations to women's de facto decision-making power. Women in gender-neutral groups tended to repeat idealized descriptions of democracy while men in all groups provided examples of disagreements or conflicts and how the groups were able to resolve them. However, women in a gender-neutral group whose group had recently undergone and recovered from a major group-governance crisis also discussed and critiqued power dynamics and governance. This implies that engagement in political processes such as community and group governance processes, and governance trainings, including role playing and other mechanisms that enable women to gain experience in political processes, will support women's ability to critically assess the effectiveness of their own participation and their resultant decision-making power.

While lack of experience in political processes and exposure to critical gender dialogues may be part of the explanation for women's hesitance to take a critical view of the governance structures and their own inclusivity, the idealized view of harmonious group functioning likely makes it even harder. Voicing problems is commonly seen as disturbing group harmony. In some cases disagreements on group's activities were characterized as the fault of the protestor, as though one should not have different opinions from the collective. We can imagine that the same characterization could be applied to women who criticize the governance structures in place if it is not the common viewpoint.

In order to apply these results more broadly, extract specific institutional lessons. Reflecting on the analytical framework presented above, we assessed group governance characteristics, groups strength and group member endowments. All three domains are found to be relevant to women's effective decision-making. While we do not measure effective decision-making objectively, we analyse women

and men's perceptions of gendered decision-making processes in their groups interpretively. First, find that group sense of responsibility for women's inclusion is critical, and gender-trainings can promote this type of pro-gender governance. Secondly, rules and governance structures explicitly favouring women increase their feeling of legitimacy. Thus the rules themselves address structural challenges while the *spirit* of the rules enhance women's agency, as reflected in other empirical studies (Baden, 2013). Thirdly, a lack of political experience could hinder women's ability to critically assess group governance and thus decrease their ability to engage in some aspects of governance or advocate for their own voices to be heard. This is a result also supported by previous empirical studies (Baden, 2013; Sultana & Thompson, 2008). Incorporating role-playing of conflict situations and governance challenges into trainings may begin to address this.

We find that more important than the specific governance structures in place is the group's interpretation of its role in ensuring gender-inclusive governance. Group member endowments impact the group's interpretation in terms of their understanding of gender issues and political processes. More developed capacity in both of these areas appears to be important for group members' interpretation of the rules and their responsibilities in terms of equity in decision-making, and thus for promoting women's effective participation.

Finally, we confirm that variations in the restrictiveness of social norms across communities, countries, and regions greatly impacts the way in which women can participate in mixed-sex groups. However, similar to other empirical examples (Valdivia & Gilles, 2001), groups serve as a distinct parallel institution to that of the home, governed by constitutions and by-laws, that do enable them to push the boundaries of community gender norms, although both are embedded in the same community.

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## 4 Progress of Constitutional Change and Irrigation Management Transfer in Pakistan: Insights from a Net-Mapping Exercise

Andrew Reid Bell, Noora-Lisa Aberman, Fatima Zaidi and Benjamin Wielgosz

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*Pakistan hosts the world's largest irrigation system, but it is fraught with issues of inequity and inefficiency. Several recent processes of institutional reform are expected to have significant impacts on the agriculture and irrigation sector, namely the process of Irrigation Management Transfer (IMT) and the 18<sup>th</sup> Amendment to the Pakistan Constitution, which among other things devolved a number of decision processes from the federal to provincial governments. We analyse the results of a Net-Map exercise conducted with water sector experts at the federal and provincial (Punjab) scales. We find some indicators in the data suggesting potential for successful shifts under the 18<sup>th</sup> Amendment. However, we find weaker perceptions of the IMT role in water governance than would be expected given its 15-year (or longer) history, providing further evidence that something new is necessary to help move the paradigm shift away from traditional modes of governance towards the decentralized IMT model.*

## 4.1 Introduction

Boasting nearly 60,000km of distribution canals, Pakistan hosts the world's largest continuous irrigation system (Khan, 2009). The sheer scale of this system seems to almost doom the prospect of any centralized approach to its governance to address problems of inefficiency and inequity - which in practice are widely reported (e.g., Kamal 2009, Raza et al. 2009, Ul Hassan 2009). However, the appetite of this system, consuming 97% of Pakistan's water resources (Kamal, 2009), makes these issues of equity and efficiency particularly critical from a planning perspective, particularly in light of the looming uncertainties of climate change. Expectations for the climate future of the Indus range from strong deglaciation (e.g., Briscoe and Qamar 2005, Warren et al. 2010) to water-resource neutrality (e.g., Archer et al. 2010) to possible snowpack accumulation (e.g., Tahir et al. 2011). Facing such broad uncertainty in the future of water resource availability, improving the capacity of the irrigated agricultural system to make efficient, equitable use of the resources that it has, and adapt to changes in availability, is critically important. There is a significant body of literature in the fields of resilience and sustainability science that suggest decentralized approaches to resource governance as being a critical ingredient in building such capacity (e.g., Brannstrom, Clarke, & Newport, 2004; Smit & Wandel, 2006).

There are currently (at least) two processes of change within water and agriculture management in Pakistan that are devolving decision-making capacity to lower, more local scales. The first of these, Irrigation Management Transfer (IMT), has roots as far back as the late 1970s in World-Bank-sponsored on-farm water management projects (World Bank, 1981); with efforts to reform water use at the national scale beginning in the mid-1990s. IMT moves decision-making authority from centralized provincial irrigation departments (PIDs) to a tiered management structure with organs for participatory irrigation management (PIM) formed at the scale of the local watercourse, the distributary, and the broader canal command. The second, more recent process follows from the 18th Amendment to the Constitution of Pakistan (in 2010) and devolves a number of hitherto federally or jointly (federally and provincially) governed issues to exclusive provincial domain.

Both of these reforms are acts in progress, and it remains to be seen how fully the process and spirit of decentralized governance will be embraced by Pakistan's irrigation and agricultural sectors. In this study, we examine data provided by a set of focus group interviews using the Net-Map method (Schiffer & Waale, 2008) undertaken in Pakistan in December of 2011 with local experts in water and agriculture issues, to look for signals of the extent to which the goals of these reform processes have taken hold among experts and professionals connected with the agriculture and water sectors.

## 4.2 Background

### 4.2.1 Water Governance and Processes of Reform

Water is allocated among Indian and Pakistani riparian states by the Indus Water Treaty (IWT) (India & Pakistan, 1960), and inter-provincially via the 1991 Water Accord (WA) (Briscoe & Qamar, 2005;

Pakistan, 1991). These agreements are not without current criticism. While the IWT allocates most of the Indus Basin water resources to Pakistan, current dam development by India (allowed within the IWT) is raising concerns within Pakistan, as such development would give India the capability to disrupt discharge to Pakistan during critical points of the growing season; the development has currently been halted and is under arbitration (PCA, 2011). Under the WA, the Indus River System Authority (IRSA) coordinates the allocation of about 114 MAF (million acre feet, the measure most commonly used in the Pakistan irrigation discourse;  $1 \text{ MAF} \cong 1.2 \text{ billion m}^3$ ) of water among the 4 riparian provinces with the bulk allocated to Punjab (56 MAF) and Sindh (49 MAF), and the remaining water (a little under 10 MAF) allocated among Balochistan and what is now known as Khyber Pakhtunkhwa (KPK); proportions are established in the WA for allocation of surplus supply in years it is available (Pakistan, 1991). However, the inter-annual variability of the Indus system, coupled with a lack of storage and considerable leakage, mean that the annual supply is often much lower than 114 MAF (Kamal, 2009); in practice, Punjab and Sindh end up sharing these shortages according to ‘historic use’, while Balochistan and KPK are exempted (IUCN, 2010). The downstream riparian province of Sindh suffers from this shortfall, with ‘environmental flow’ to the delta (negotiated to be about 10 MAF) typically not being maintained (Kamal, 2009); perhaps ironically, Sindh as the lower riparian ends up receiving the larger share of floodwaters (a water surplus) under ‘historic use’ allocation, and ends up a victim under both scenarios (IUCN, 2010). This power imbalance raises concerns regarding upstream hydropower and storage development that mirror at the provincial scale the above-cited concerns of Pakistan with India and the IWT.

Distribution of water resources within provinces – largely for use in irrigated agriculture – is an area of active reform. Pakistan does not have a comprehensive national water policy in place; the current draft (Pakistan, 2006) is more a “list of actions” without a “comprehensive approach” (Kamal, 2009). However, driven by support from the World Bank and other donors<sup>8</sup>, the last two decades have seen the advancement of Irrigation Management Transfer (IMT) efforts to devolve many of the responsibilities held by provincial irrigation departments to local users groups, punctuated most clearly by the 1997 Provincial Irrigation Authority Act (PIAA) (Khan, 2009) and a World Bank-funded National Drainage Program (NDP) (Briscoe & Qamar, 2005). Under the reformed structure, responsibility falls to Provincial Irrigation and Drainage Authorities (PIDA) to manage delivery to canal commands (43, of which 24 are in Punjab); Area Water Boards (AWB) to manage delivery within commands to distributaries; Farmer Organizations (FO) to manage delivery within distributaries/minors to watercourses; Water User Associations (WUA) – locally referred to as Khal Panchayat (KP) – to manage delivery within watercourses (Asrar-Ulhaq, 2010). The rules for distribution within the KP are

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<sup>8</sup> In this paper, the term *donors* broadly refers to private funders, unilateral funders, multilateral development banks and international financial institutions. While all these institutions do not speak with one voice, they were often aggregated in discussions and interviews by sources for this paper.

negotiated variants of the traditional warabandi or 'fixed turn' system, under which each user is entitled to the entire flow of the watercourse for a fixed turn in a rotation, with the duration proportional to the area under irrigation (and in practice, the user's capacity to bargain and negotiate) (Bandaragoda, 1998).

#### 4.2.2 Progress of IMT Reform

Pilot AWBs were established in each of Punjab, Sindh, Baluchistan, and KPK in the years following the PIAA and the start of the NDP. At present, reform has expanded to 5 AWBs (of 24 canal commands) in Punjab (PIDA, 2012) and 3 (of 14 canal commands) in Sindh (Memon, 2006; SIDA, 2012); the irrigation departments of NWFP and Baluchistan do not include reference to AWBs or the IMT reform on their websites (BID, 2012; KPID, 2012), though performance of the pilot AWB in the Upper Swat Canal in NWFP under the Frontier Irrigation and Drainage Authority (FIDA) has been reported (Latif & Tariq, 2009). Flow gauging is reported at the distributary level in NWFP (Latif & Tariq, 2009) and Punjab (Asrar-Ulhaq, 2010; World Bank, 2010), with up-to-date flow data posted to the PIDA website in Punjab (PIDA, 2012). It is beyond the scope of this introduction to examine in detail the factors explaining the slow advance of the reform, but one factor worth highlighting is that the PIDs in each province stand to lose much of their authority over irrigation in the reform, yet (in the case of Punjab) the PID has held responsibility for advancing it (Briscoe & Qamar, 2005).

Within the expansion that has occurred, there have been issues with the reform and the performance of the new AWB and FO institutions has been mixed. Various authors have observed that the reformed system does not recover the costs of operation and maintenance, leaving the organizations far from self-sufficiency (Ghumman, Khan, Hashmi, Kamal, & Khan, 2011; Memon, 2006). This results from problems at multiple points in process, starting with a price that is yet too low (Kamal, 2009; Khan, 2009). Problems also arise in the ability of FOs to collect water fees or abiana from users (Asrar-Ulhaq, 2010); in many cases, FOs are inheriting a broken system where unreliable flow leads to a low willingness to pay (World Bank, 2010), where FOs may not have capacity to maintain adequate accounts or records (Asrar-Ulhaq, 2010), and where pre-existing power relationships among farmers may limit the authority imposed by the FO structure (Ul Hassan, 2011). Additionally, some FOs reported delays receiving their share of revenues back from irrigation departments, further limiting their capacity (Ul Hassan, 2011). Ul Hassan (2009, 2011) attributes these poor performance aspects to a lack of downward accountability of the PIDAs and AWBs to their constituents, and to a focus in the reform on organizational design rather than the necessary incentives or instruments to drive reform. The historical lack of enthusiasm for reform has been pervasive across actors - from the Irrigation Departments, who feared loss of authority under the restructuring to PIDAs; from large land-holders, who feared loss of the excess, unauthorized uses of water they

had accessed under the old system; and from smallholders as well, who feared increases in price and exploitation at the hands of more powerful elite farmers (Ul Hassan, 2009). It is worth noting, however, that where NGOs (as opposed to the ID/PIDA staff) were deployed to mobilize and build capacity for the reform (as was the case for Sindh), efforts have been much more successful (Ul Hassan, 2011). Among the accomplishments of the Sindh reform are a large number of small- and mid-size farmers represented among the Chairmen of FOs, and deliberate efforts to mainstream women's participation into management, though there are yet no women represented among Chairmen (Memon, 2006).

Despite the institutional, political, and operational challenges to IMT, efforts so far have manifested in reported improvements to water supply and crop production. The reliability of irrigation supply in NWFP has improved, and cropping intensity (as well as crop yield) have increased, though it is noted that the current water supply may lead to waterlogging (Latif & Tariq, 2009). Similarly, yields are improved in Punjab (Raza, Ashfaq, Hassan, & Hussain, 2008; Raza et al., 2009), with the note that differences in yield from head- to tail-enders of canals yet remain. IMT implementation is not a controlled experiment, of course, and some care must be taken in considering the attribution in these reports of water outcomes to the reform process.

### The 18<sup>th</sup> Constitutional Amendment and the Ministry of Food and Agriculture

The 18th Amendment to the Constitution of Pakistan was passed in April 2010 and, among other elements, made a number of significant changes to the scale at which agricultural issues were governed. One key change was the removal of the Concurrent Legislative List – a collection of issues for which there existed joint provincial and federal legislation, with federal legislation taking precedence in cases of overlap – with many issues shifting to exclusive provincial or federal domain, and others moving to the domain of the Council of Common Interests (CCI), which governs subjects for which significant inter-provincial coordination is necessary (Shah, 2012). Most significantly, the Ministry of Food and Agriculture (MINFA) was dismantled, ceasing to exist by July 2011. While provincial agricultural departments had initially expected to absorb all of the functions previously performed by the ministry, the strong position of MINFA was to be restructured rather than completely dismantled (National Management College, 2012). In the final result, about a third of MINFA's functions were devolved to provincial control, about a third were redistributed to various other ministries, while the remaining third were held by the newly formed Ministry of Food Security and Research, established in October 2011. This process is still in progress, has commenced very recently, and there yet remain great uncertainties in funding and responsibilities. At the same time, it is a process sure to be of relevance to experts connected with water and agriculture in

Pakistan, and the timing of the Net-Map exercise provided a unique opportunity to capture current understanding and perceptions of legislative authority in Pakistan in the months following the initial implementation of this major reform effort.

### 4.3 Net-Map Exercise

Net-Map is a participatory interview technique that combines social network analysis (SNA), stakeholder mapping, and power mapping (Schiffer & Hauck, 2010). Interviewees create physical maps, enabling them to clarify their own view of a situation, promote consensus when views differ, foster discussion, and develop strategic approaches to their networking activities. The process also helps outsiders understand and monitor complex multi-stakeholder situations.

Social network data is distinctively suited to move beyond the formal aspects of a network to examine the informal interactions and relationships between actors of interest (Wasserman and Faust, 1994). Net-Map's visual and participatory characteristics are innovations on typical SNA data collection that support intercultural understanding and discussion of sensitive topics (Schiffer and Hauck, 2010). Furthermore, when formal interactions are mapped Net-Map allows a unique view into the perceptions and behaviours in practice, which often differ from the official design or procedure. For instance, when used to understand ex-post the influences that led to changes to fertilizer policy in Nigeria the Net-Map interviews illuminated an interruption to the formal process by which policies are supposed to be funded (Aberman et al., 2010). In a similar exercise in Malawi, some interviewees indicated in their maps, with unexpected links and high levels of power, perceptions of clientelism and nepotism that they were not willing to discuss verbally (Aberman et al., 2012). In the current study, we apply Net-Map to examine how perceptions of reform processes affecting agricultural water management in Pakistan differ from official plans and intended outcomes.

To understand how actors interact with each other in a given process or policy field, social network analysis (SNA) approaches are especially suitable, as they allow for a sophisticated representation of system components and interactions, putting the actions of individuals and organizations into a larger context. SNA explains the achievements of actors and the developments within groups of actors by looking at the structure of the linkages between these actors (Hanneman & Riddle, 2005). Thus, while traditional social science survey approaches collect data about attributes of some members of the observed population, network analysis data pertains to the interaction, linkages, and flows between each of the actors in a population. The degree to which various actors in the network can influence or control other actors and outcomes is critical to understanding the policy context. Max Weber wrote that "power is the probability that one actor within a social relationship will be in a position to carry out his own will despite resistance" (1922, p. 53). While social network analysts consider actor power to

derive from an actor's position in the network (Wasserman and Faust 1994), Net-Map considers that this may only be a partial reflection of an actor's power. In line with Weber's definition, Net-Map considers power to be socially constructed and thus relies on interviewees to determine socially-relevant indicators, meaning, and sources of power (Schiffer 2007). Furthermore, in intercultural research settings, often the terminology applied must be palatable in the context; for instance, in an early application of Net-Map in Ghana, the authors found the term power to denote negative concepts such as corruption, whereas influence was tended to be used interchangeably (despite their formal meanings) but without the negative connotation (Schiffer & Waale, 2008).

The Net-Map process typically involves the following three steps<sup>9</sup>:

- 1) Actor Generation: who is involved in an issue?
- 2) How do these actors interact? In what ways are they linked, related to the specific issue?
- 3) How powerful is each of these actors related to this issue?

In the exercises analysed in the current study, two separate Net-Map exercises were undertaken – one at the national level and one in the province of Punjab. While the processes were the same in the two locations, the focus and scale differed; the national interview focused on the influence over policy at the national level and the Punjab interview discussed influence over water policy in Punjab. Given Punjab's key role in agriculture in Pakistan, national level decisions are particularly pertinent to and dependent on Punjab. In the context of these exercises, the Net-Map questions became:

*Overall Question:* Who influences agricultural water management policy (at the national level/in Punjab)?

*Links:* Who has formal oversight over whom? Who provides funding to whom? Who provides technical information to whom? Who informally influences whom?

*Power:* How powerful is each actor over agricultural water management policy (at the national level/in Punjab)?

The answers to these questions were arrived at by group consensus, facilitating discussion among the interviewees when there was disagreement. The actors' names were written on small note cards and spread across a large piece of paper. Upon nominating an actor to be included, respondents explained why that actor was important to add. Next, links or flows were drawn between the actors, according to the group's knowledge and perceptions. The specific links

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<sup>9</sup> A typical Net-Map usually includes a fourth step that examines the primary goals or priorities of each actor. This step was dropped in the exercises used for this study due to the challenges of pinpointing and the political sensitivity of specifying the competing goals.

drawn were: formal oversight depicting formal lines of authority, usually within the government; funding depicting allocation of funds, grants, or loans; technical information depicting provision of information related to technical aspects of agricultural water management; and *informal influence*<sup>10</sup> depicting pressure for particular policy outcomes through informal mechanisms, regardless of degree of effectiveness. Then power scores were attributed to each actor card, with 0 signifying that an actor has no power and 5 signifying the highest degree of power in the Punjab exercise and with 0 signifying no power and 3 signifying the highest power in the national exercise.

The result of these two exercises is visual depictions of the stakeholder network for agricultural water management in Pakistan from two perspectives, and notes from the in-depth discussions during the interview process. The network data was entered into a social network analysis program, VisuaLyzr<sup>11</sup>, a program that forms network data into a graphic depiction of the actors as nodes and the links between them and allows for a variety of network analysis functions, allowing us to better assess the network structures and characteristics. The power scores attributed by the respondents were inputted as well, so that the nodes (the representations of each stakeholder in the network) can be sized according to perceived influence over shaping agricultural water management policies and decisions. The visual depictions of the network, and the key lessons learned from the networks, and in particular from the discussions with respondents, are described in the next section. In addition to discussing the quantitative results (social network data and influence scores) and qualitative results (discussion with experts), we also attempt to put the results in perspective, analysing the reasons for conflicting opinions or inconsistent data.

## 4.4 Net-Map Results

### 4.4.1 National Net-Map results

The national-level Net-Map exercise yielded linkages among actors at both the national and provincial level and perceived influence scores for each of the actors considered relevant. Figure 1 shows the computerized version of the network drawn in the national Net-Map exercise, including all four types of links that were asked about and with the actors (or nodes) sized according to the power score, ranging from 0 to 3). Networks for technical information, funding, and formal oversight combined with informal influence are shown separately in Figure 2. The resultant network includes 48 actors (Annex 1) and 130 individual links (Annex 2). It has a very high level of centralization, meaning that a few actors are highly

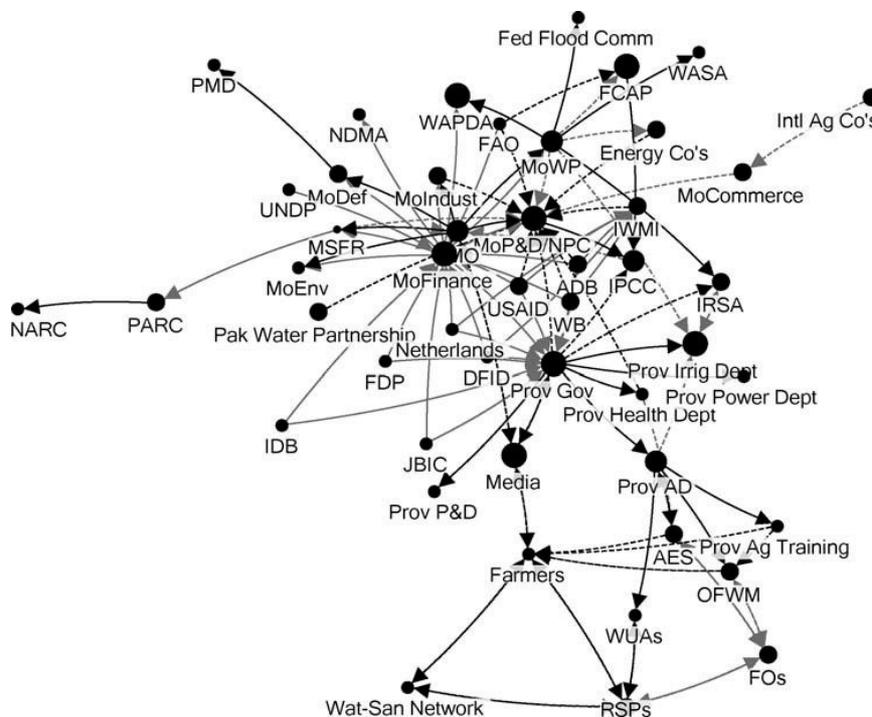
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<sup>10</sup> While this link was largely used to indicate instances of actors pressuring others to take actions to their favor (excluding instances wherein formal authority was the means, and sometimes described as nepotism or clientelism), the interviewees appeared to be more comfortable describing this as influence.

<sup>11</sup> VisuaLyzr, Massachusetts Institute of Technology. Dept. of Electrical Engineering and Computer Science, 2009. <http://hdl.handle.net/1721.1/53135>

linked while most actors have few links. A core-periphery analysis shows that the Ministry of Finance, the Ministry of Planning & Development (MoP&D) and the Provincial Government make up the core of the network and all other actors are seen as the periphery. Sixteen of the actors are a part of the federal government and 9 are in the provincial government, making the majority of actors governmental. While the emphasis of the interview was to examine water management policy nationally, because Punjab plays a large role in water policy nationally, provincial actors also show up in the national network and, as noted above, play a central role in the network. In fact, when respondents were asked to rate the power of the actors, the Provincial Government and PID were rated as equal in power to the key federal government actors: the Water and Power Development Authority (WAPDA), the MoP&D and the Ministry of Finance.

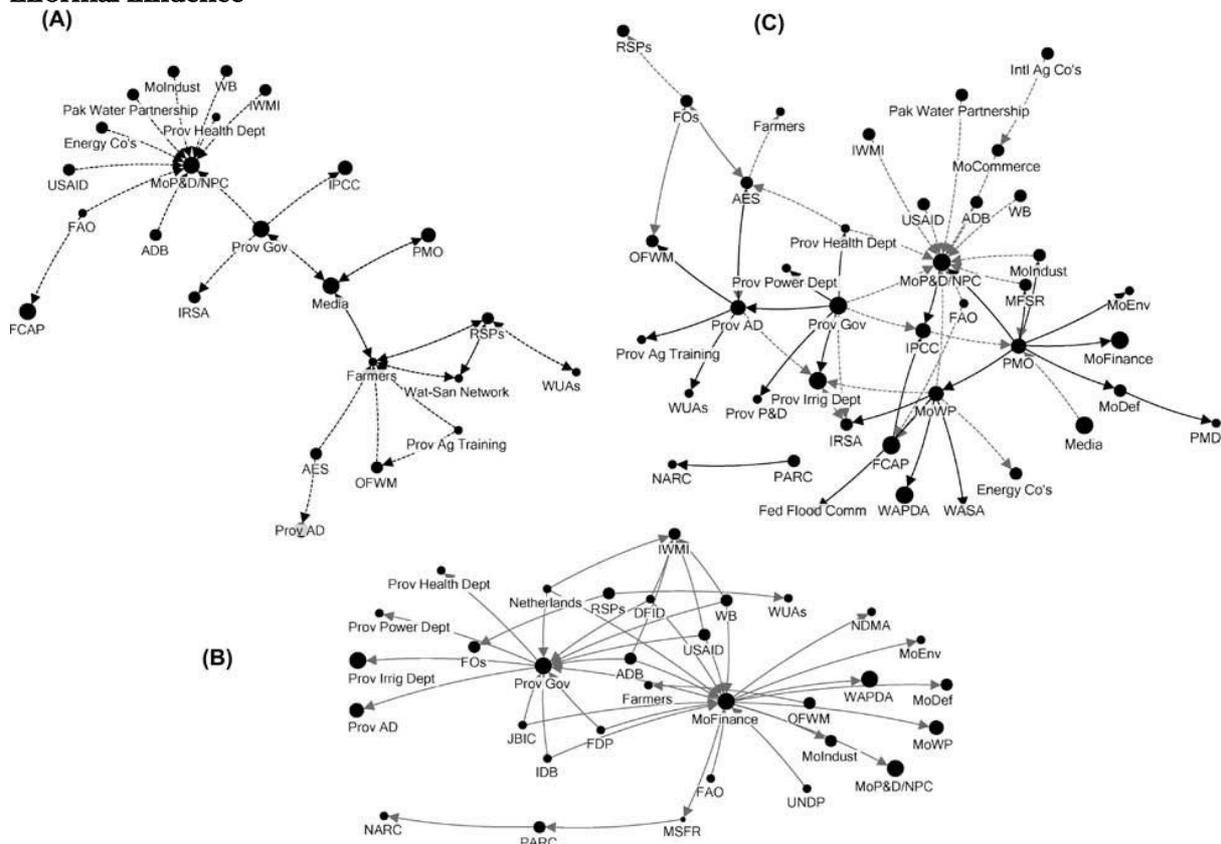
**Figure 3. National multiplex network**



Source: Author's calculations from Net-Map data, figures created in XLNode.

Note: Links indicating formal authority are shown by black solid lines, informal influence by grey dashed lines, technical information by black dashed lines, and funding by grey solid lines. Actors are sized by power score.

Figure 4. National networks of (a) technical information, (b) funding, (c) formal oversight and informal influence



Source: Author's calculations from Net-Map data, figures created in XLNode.

Notes: Links in (C) indicating formal authority are shown by black solid lines, and informal influence by grey dashed lines.

While some actors related to the IMT process did appear in the network, they were not thoroughly discussed and they are not directly connected to each other. PID was mentioned but not PIDA. WUAs and FOs were mentioned but not linked to each other, to PID or to farmers. According to the perceptions of the interviewees, PID is under the formal authority of and receives funding from the Provincial Government. A few actors also attempt to pressure or influence PID: IRSA, the Federal Ministry of Water and Power (MoWP), and the Provincial Agriculture Department (PAD). The WUAs are perceived to be under the formal authority of the PAD and to receive funding from and exchanging technical water-related information with Rural Support Programmes (RSP). While there was little discussion about these exchanges, interviewees noted that FOs attempt to influence RSPs, the Agricultural Extension Services (AES), and On-Farm Water Management (OFWM). And AES, in turn, tries to exert influence on the FOs. Farmers receive technical information from a variety of sources, and are also pressured by AES presumably related to their irrigation practices. They are also shown as receiving funding from OFWM.

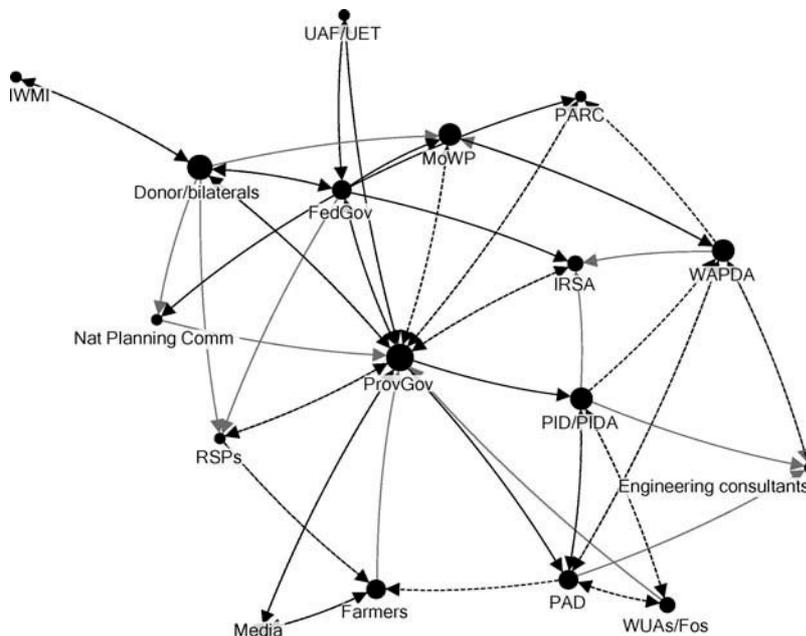
When we view each of the links as a separate networks, the Ministry of Planning & Development (combined with the National Planning Commission by the interviewees) is highly targeted (high in-degree centrality) with technical information and informal influence by various

donors and a few government bodies. The newly formed Ministry of Food Security and Research (MFSR) is the only ministry perceived as trying to influence the Prime Minister’s Office on agricultural water management policy.

#### 4.4.2 Punjab Net-Map results

The Punjab Net-Map interview yielded a multiplex network made up of four types of links: formal oversight, informal influence, funding and technical information. The resultant network has 17 actors (Annex 1) and 73 total links (Annex 2). It has very low centralization, meaning that there is a relatively equal level of participation of all the actors. The Provincial Government (ProvGov in Figure 5) represents the Chief Minister of Punjab as well as the other “central” provincial government bodies under his purview. This actor has the highest degree centrality—total number of links—on the map, with 21 links. Respondents noted that since the passing of the 18<sup>th</sup> Amendment this actor has become more active in decision-making and as a recipient of funding from donors. However, the Federal Government (FedGov in Figure 5) yet remains the actor with the second highest degree centrality (11 total links) suggesting that it still plays a significant role in Punjab’s water management.

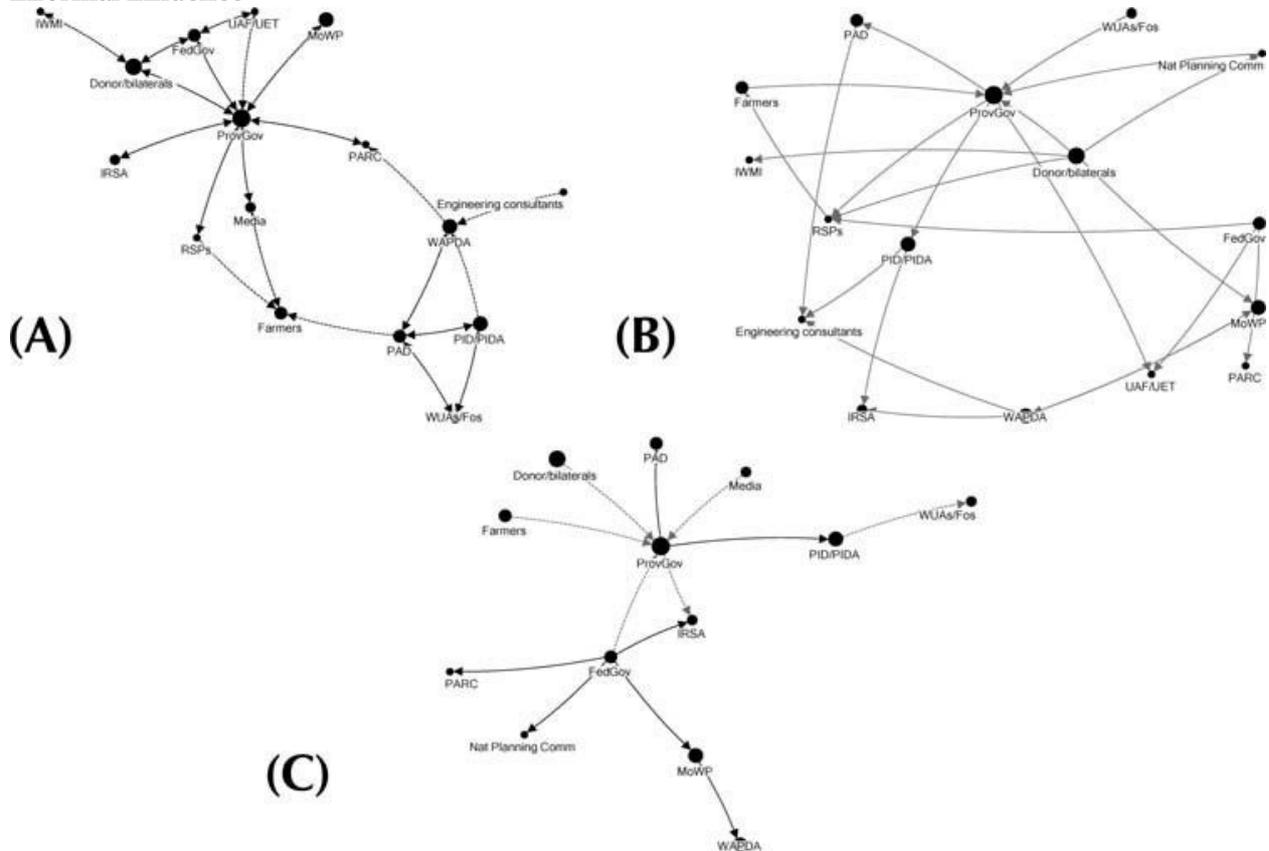
**Figure 5. Punjab multiplex network**



Source: Author calculations from Net-Map data, figures created in XLNode.

Notes: Links indicating formal authority are shown by black solid lines, informal influence by grey dashed lines, technical information by black dashed lines, and funding by grey solid lines. Actors sized by influence.

Figure 6. Punjab networks of (a) technical information, (b) funding, (c) formal oversight and informal influence



Source: Author’s calculations from Net-Map data, figures created in XLNode.  
 Notes: Links in (C) indicating formal authority are shown by black solid lines, and informal influence by grey dashed lines.

Interviewees chose to group together many of the actors related to the IMT reform. For instance, PID and PIDA were grouped together as a single actor. While interviewees noted that they would not consider themselves the same organization, a variety of perceptions about these two bodies caused interviewees to combine them: First, they are seen as simultaneously managing the same water issues and thus having largely the same links to other actors; second, they are both managed by the Secretary of Irrigation; third, interviewees described a lot of “shuffling” of staff between the two bodies diminishing their independence from each other.

Similarly, while WUAs and FOs were both mentioned in discussions, the network that was drawn during these discussions showed them as a single actor. (Also included in this grouping were “Kisan Boards”. It is unclear if the respondents were referring to AWBs or some other body that they thought was involved in the irrigation management structure so we leave this out of the results.) WUAs and FOs were considered to be parallel in terms of formal oversight and to all have approximately the same links. Farmers are also denoted in the network as a distinct actor. Interviewees described WUAs and FOs, which were designed to give small farmers a

voice in the irrigation management process, as largely led by and representing the interests of large landowners.

Figure 4a depicts formal oversight and informal influence or pressure. The Provincial Government is the only actor with formal oversight over other actors at the provincial level. According to the figure, PID/PIDA does not have formal oversight over the other bodies in the reformed irrigation system: WUAs and FOs. Interviewees described the relationship between PID/PIDA and WUAs/FOs as “regulatory” but not one involving formal oversight. They also note, as is depicted in the network, that PID/PIDA has tried to exert informal influence over them. The technical information network in Figure 4b shows that PID/PIDA and WUAs/FOs are also thought to exchange technical information about water and irrigation management.

Farmers are shown in the Figure 4a network as attempting to influence the Provincial Government. This link refers to the perception of interviewees that influential or wealthy farmers can successfully pressure the government on water rates and other policy details in order to skew water policy to their favour.

Most flows of technical information in the network are bi-directional. That is, they reflect exchanges of information. The actor with the highest degree centrality in the information network (Figure 4b) is the Provincial Government, with 16 links (8 incoming and 8 outgoing). This suggests that the provincial government exchanges information on water management with many different types of actors, including the federal government, research, media, NGOs and donors/bilaterals.

The Punjab Agriculture Department (PAD) has the second highest centrality, with 7 total links. PAD is one of the few (3) actors giving information to farmers. In addition, PAD is linked directly to the federal government body WAPDA

The provincial government has an equal number of incoming and outgoing funding links. This indicates that it may play the role of a conduit for funding; receiving from some (NPC and donors) and then allocating these down to others (PAD and PID/PIDA). The RSPs receive both external funds from donors/bilaterals and governmental funds from the Provincial and Federal Governments.

Interviewees explained that PID and PIDA receive a large amount of funding from the Provincial Government. PID and PIDA are also seen to assess the fees charged farmers for water use, but because this money is thought to be paid directly to the Irrigation Department (within the Provincial Government) they do not denote a funding link from WUAs/FOs to PID/PIDA. PID/PIDA do have a direct funding link to IRSA, meant to denote the fees they pay for taking water out of the river basin. WUAs/FOs receive payments directly from farmers.

Farmers also receive funding from RSPs, described as credit schemes and other social support programs.

## 4.5 Discussion – Signals of Reform in the Net-Map Exercise, and Implications

### 4.5.1 IMT, Formal Authority and Informal Influence

The IMT process establishes a clear, decentralized system of formal authority within the irrigation sector. Farmers participate in WUAs; WUAs send representatives to FOs; FOs send representatives to AWBs, which fall under the broader authority of PIDA. A functioning, decentralized system would thus have formal authority links between WUAs and FOs, between FOs and AWBs, and between PIDA and the AWBs. In a truly functional system, these links would be bi-directional – representative, decentralized governance provides a formal mechanism for stakeholders at more local tiers to have a voice in higher-level decision-making. Given the definition of formal authority as oversight in the Net-Map exercise, this mode of influence might be represented as informal influence links rising from the WUAs through to PIDA.

This structure was not reported in either of the discussions in the Net-Map exercises. At the national level, formal authority over WUAs directly from the Provincial Agricultural Department (as opposed either the PID or PIDA) was noted, while AWBs were not cited at all, and FOs had no formal authority link mentioned. FOs were noted as trying to informally influence the World Bank-funded On-Farm Water Management (OFWM) projects, agricultural extension services, and RSPs, programs focused on community-level development and mobilization, but their role in water management was not observed in the discussion. At the Punjab level, none of the management tiers of IMT appeared in the formal authority network, save for the PID and PIDA – their roles not clearly distinguished in this discussion – falling under the authority of the provincial government. Farmers were noted as directly pressuring the provincial government (not mediated via WUAs or FOs), while the only link among any of the management tiers was an informal influence link from PID/PIDA to the WUAs.

Though IMT remains a work in progress, the poor fit of these results with the expected model is surprising, given the extent to which IMT has been implemented nationally and within Punjab. The role of FOs within irrigation management appears to have been missed in both discussions, suggesting that to date WUAs play a more relevant role in addressing local irrigation issues while FOs (and their role in assessing water-use fees – discussed below) are not yet nearly as established within the IMT structure. In the Punjab discussion, it was noted that not only are the established FOs having difficulty exerting their designated influence over water

management, but that in many villages they have not even been set up. The absence of a distinct PIDA in the national level discussion, as well as the poor distinction between PID and PIDA in the Punjab discussion, likely reflects the early stage (and challenging path) the PIDA has faced in claiming dominion over its set of functions from the PID (notes taken during the discussion indicate a perception that PIDA, emerging as the head of a participatory management approach through efforts by FOs, struggles to claim any legitimate power from PID). Notable as well is the absence of AWBs in the discussions, suggesting that their role and function is not resolved in the minds of participants in the sector as distinct from that of the PIDA.

There are several interpretations of this lack of fit. Though implementation of IMT has been widespread, it is certainly not yet comprehensive (as above, only about 1/5 of command areas across Punjab and Sindh have established functioning AWBs). One interpretation of the Net-Map results is that participants had simply not had the opportunity to observe the IMT mode of governance in practice, only being familiar with prior management via the PID. Another interpretation is that their perceptions of the system reflect judgments on their part of the function and future of the IMT. In either case, through lack of exposure or through judgment, the results provide an indication to those interested in the advance of the reform that the relatively low levels of adoption are mirrored by a weak perception of the importance of IMT institutions among water sector experts.

#### 4.5.2 IMT and Financing

Similarly to formal authority, IMT provides (in principle) a clear and direct mechanism for financing of irrigation operation, maintenance, management, and development via water-use fees or abiana. Abiana are assessed twice a year by FOs at the flat rates of Rs. 85/irrigated acre in the Kharif season and Rs. 50/irrigated acre in Rabi (rates are cut in half for properties in the tails - downstream 20% - of their water course) (Raza, 2008a). KP chairmen collect abiana from the members of their watercourse (a task previously undertaken by local tax collectors known as numberdars and patwari), keeping a 5% share of the collected abiana as incentive and passing the rest up to their FO; FOs in turn retain a 40% share of the abiana they receive and pass the remainder up to PIDA via the AWBs (Raza, 2008b). Thus, the functioning system of irrigation management would have a funding chain beginning with farmers and feeding up through the KPs to the FOs and from there to AWBs or directly to PIDA.

The discussion of financing in the Net-Map exercises deviated from this expected model. In the national-level discussion, the farmers, WUAs, and FOs were discussed only as recipients of funding - farmers receiving funding from OFWM projects, and WUAs and FOs receiving support from Rural Support Programmes (RSPs). At the Punjab level, funding from farmers to

the WUAs/FOs was noted, as well as directly from the WUAs to the provincial government; the RSPs appeared again as a source of funding but here directly to the farmers. AWBs do not appear in the Punjab-level discussions at all. While PID and PIDA were discussed in Punjab as able to assess fees to farmers, they were not noted as direct recipients of financing from FOs or WUAs; funding was noted only via the provincial government. This observation suggests the participants in this exercise are cognizant of the lack of a closed loop in the system as currently designed – not managing the funds itself, PIDA perhaps lacks some incentive not only to oversee collection of fees but also to advance the reform process more broadly.

These deviations are striking as the process of IMT has been ongoing for more than a decade, and abiana collection via the current model has taken place since 2004. While collection rates for abiana have been in decline in recent years, they remain significant (for example dropping from around 80% to 60% of the amount assessed in Punjab's LCC East Canal from 2004 to 2007; Asrar-Ulhaq, 2010), and it is surprising that this widely-practiced and well-established financing mechanism is neither consistently nor accurately represented in discussions with experts connected to water and agriculture. One possibility is that the abiana – whose nominal rates have been insufficient to cover O&M costs since the 1970s and are widely regarded as being too low (Briscoe & Qamar, 2005; Khan, 2009) – were not considered as significant by the participants in either of our discussions, or rather, the financing collected via abiana is not sufficient to stand out in a clear and consistent way to participants in the water and agricultural sector not directly connected to its assessment, collection, or use. Once again, while the data are agnostic on why the participants' perceptions don't match the IMT model, they suggest that either by judgment or by lack of exposure, IMT has not embedded itself strongly in the perceptions of water sector experts.

It is worth highlighting, as a last note on financing, that three major sinks for donor and bilateral funds were perceived by the participants at the national scale – the Ministry of Finance (and onward to various ministries), the Provincial Governments, and the International Water Management Institute (IWMI). It is not possible to resolve from the data whether this acknowledges a past body of research and support from IWMI in agricultural water management, recognizes a current and future role for IWMI, or simply reveals a perception that IWMI acts as a siphon for donor funds that might otherwise go directly to federal or provincial agencies. Further inquiry into the perceived impacts of IWMI efforts in the region could shed valuable insight on the potential for such outside research bodies to leverage donor funds in moving the reform efforts forward.

### 4.5.3 Constitutional Amendment and Devolution of Responsibilities

Because the implementation of the amendment is so recent, and the distribution of responsibilities so complicated, it is difficult to lay out an ‘expected model’ of how the functioning national governance system ought to be perceived. There are however some key insights that can be drawn from the Net-Map exercises.

First, the national scale discussion referred to the recently formed MFSR as an actor, and identified three disconnected networks of formal authority relevant to agriculture and water – the federal government, the provincial government, and the Pakistan Agricultural Research Council (PARC, the apex of Pakistan’s federal and provincial agricultural research institutes). This suggests recognition of the goals of the reform among participants – that provinces have domain over a range of issues in agriculture and water management, as does the federal government, but that there are no areas of joint domain. Significantly, the perceived influences of the provincial government and provincial irrigation departments are as great as any of the actors at the federal scale, suggesting potential for true devolution and relevant institutions existing at multiple scales. Additionally, the Inter-provincial Coordination Committee (IPCC) – under the domain of the CCI – appears to have significant influence and has an informal influence link from the provincial government, again suggesting some connection to the intended realities under the reformed constitution – here, that with more powers devolved to the provinces, the importance of the CCI (and thus the IPCC) is greater.

The national-level discussion noted correctly the maintenance of the funding link from the newly formed MFSR to the PARC, but the absence of a formal authority link to PARC is of interest. Under the reform, both the federal and provincial governments maintained parallel research-council structures – a failure to devolve that Pakistan’s National Management College notes as a significant missed opportunity (National Management College, 2012). Both the national-level and Punjab-level discussions show bi-directional exchange of technical information among actors at the provincial scale, suggesting (as did the National Management College study) that more efficient and effective research work could be accomplished at the provincial scale.

The separation of federal and provincial formal authority networks is replicated in the Punjab-level discussion, as is the bi-directional exchange of technical information among actors. One additional important feature of the Punjab-level discussion is the direct linkage (informal influence and funding) of donors to the provincial government – a linkage made much more significant under the reformed constitution. Overall, we see a number of indicators from the exercises that suggest either i) despite the early stage of implementation and remaining uncertainties, the 18th amendment has already had significant impacts in the perception of how

governance of water and agriculture does or should operate, or ii) pre-existing structures and perceived notions of how governance should operate already appear supportive of many of the aspects of decentralized governance pushed forward by the constitutional reform. In either case, these results – though from a small study – suggest strong potential for the changes made under the 18th amendment to be successfully implemented and embraced.

#### 4.6 Limitations, Conclusions, and Next Steps

There are several key limitations that must be placed on the inferences we have drawn in this study. Firstly as has been previously stated, the Net-Map exercises upon which we base our discussion were conducted with a small number of individuals working within water-related agencies or working on water-related issues in Pakistan and specifically in Punjab in the provincial-level exercise. Invited individuals were not within a sample of individuals designed for statistical power or significance. Further, hierarchical aspects of Pakistani government and academic culture may have influenced the willingness or interest of more junior participants to volunteer opinions differing from those more senior, implying a less-representative polling of opinion from those present. Finally, it is worth highlighting once more that the processes of change upon which the current study has focused (IMT and the 18th Constitutional amendment) remain active areas of change. In the case of the 18th amendment, the process has only quite recently commenced. Thus, it is reasonable to expect these perceived actor networks to continue to change as the outcomes of both IMT and the 18th amendment begin to accrue. This study is meant only as an opportunistic glance into current processes of change affecting water and agriculture.

With limitations thus stated, there are a few insights from this work worth highlighting in conclusion. Now many years into IMT, the perceptions of the participants in the Net-Map exercises at both the national and provincial scales were poorly matched with the clear roles of AWB, FO, and WUA groups as designed. Coupled with the unwillingness of participants in Punjab to make a distinction between PID and PIDA, it is further evidence that something new may be necessary in order to make the paradigm shift away from traditional PID control effective, and devolve power and management capacity from the provincial scale downward into the canal, distributary, and watercourse scales. Bengali (2009) suggests that water management in Pakistan retains a fetish of developing physical water infrastructure to answer water issues, with water management seen as a vehicle to finance and pay for these developments. Along this line of thinking, a more ‘socio-centric’ re-imagining of the reform process that is built more around developing appropriate water use practices and norms for sharing resources than

around managing available water supply may be necessary to shift the level of engagement and awareness of the reform observed in our exercise.

In contrast to the lack of clear foundational support for IMT, in the case of changes related to the 18th amendment and devolution of responsibility from national to the provincial scale, there are indications that the underlying relationships among actors at the provincial scale will provide some necessary social and institutional infrastructure for these provincial actors to work effectively. Though this process is new and much of how it will actually take place is still uncertain, this is an encouraging sign. To draw further insight on the potential for effective decentralization from the federation to the provinces, and from the provinces downward across the scales of the irrigation system, we hope to expand upon the results highlighted in this study, extending downward to reach actors from the AWB, FO, and WUA groups formed under IMT, and extending across to Sindh, where the process of devolution (as above cited) is known to have followed a different trajectory.

## 4.7 References

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## 4.8 Appendix 1. Complete actor lists

Table A1-1. National map: complete actor list.

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ADB	Asian Development Bank
AES	Agricultural Extension Services
DFID	Department for International Development
Energy Co's	Energy companies
FAO	Food and Agriculture Organization
FDP	Friends of Democratic Pakistan
Fed Flood Comm	Federal Flood Commission
FOs	Farmer organizations
IDB	Islamic Development Bank
Intl Ag Co's	International agricultural companies/importers
IPCC	Inter-Provincial Coordination Committee
IRSA	Indus River System Authority
IUCN	International Union for Conservation of Nature
IWMI	International Water Management Institute
JBIC	Japan Bank for International Cooperation
FCAP	Federation of Chamber of Agriculture
Media	Media
MFSR	Ministry of Food Security and Research
MoCommerce	Ministry of Commerce
MoDef	Ministry of Defense
MoEnv	Ministry of Environment
MoFinance	Ministry of Finance
MoIndust	Ministry of Industries
MoP&D/NPC	Ministry of Planning and Development; National Planning Commission
MoWP	Ministry of Water and Power
NARC	National Agricultural Research Centre
NDMA	National Disaster Management Authority
Netherlands	Dutch government
OFWM	On-Farm Water Management
Pak Water Partnership	Pakistan Water Partnership
PARC	Pakistan Agricultural Research Council
PCRWR	Pakistan Council of Research in Water Resources
PMD	Pakistan Meteorological Department
PMO	Prime minister's office
Prov AD	Provincial Agricultural Department
Prov Ag Training	Provincial agricultural training institutes
Prov Gov	Provincial government
Prov Health Dept	Provincial Health Department
Prov Irrig Dept	Provincial Irrigation Department
Prov P&D	Provincial Planning and Development Board
Prov Power Dept	Provincial Power Department
RSPs	National and Punjab 'Rural Support Programmes'
UNDP	United National Development Programme
Network	UNICEF's Water-Sanitation Network
USAID	United States Agency for International Development
WAPDA	Water and Power Development Authority
WASA	Water and Sanitation Agency
WB	World Bank
WUAs	Water user associations

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Table A1-2. Punjab map: complete actor list.

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Donor/bilaterals consultants	JICA, WB, ADB, JBIC, Netherlands, USAID Engineering NESPAK: National Engineering Services Pakistan (semi-government); ACE: government contractor
Farmers	Farmers
FedGov	Federal government; prime minister's office
IRSA	Indus River System Authority
IWMI	International Water Management Institute
Media	Media
MoWP	Ministry for Water and Power Nat Planning Comm National
Planning Commission	
PAD	Punjab Agriculture Department/OFWM
PARC	Pakistan Agriculture Research Council
PID/PIDA	Provincial Irrigation Department; Punjab Irrigation and Drainage Authority
ProvGov	Punjab government
RSPs	Punjab Rural Support Program; National Rural Support Program
UAF/UET in Research	University of Agriculture of Faisalabad; UET Center for Excellence
WAPDA	Water and Power Development Authority
WUAs/FOs	Water user associations, farmer organizations and "Kassan Boards"

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#### 4.9 Appendix 2. Network analysis tables and figures

Table A2-1. Comparison of centrality and influence scores, national multiplex network.

Actor	Degree	InDegree	OutDegree	Influence
MoFinance	20	11	9	3
Prov Gov	20	10	9	3
MoP&D/NPC	17	16	1	3
PMO	12	4	8	2
MoWP	9	2	7	2
Large Farmers	9	6	3	0
RSPs	8	4	4	1
Media	8	4	4	3
Prov AD	7	2	5	2
Large Ag	4	1	3	3
PID	5	4	1	3
WAPDA	2	2	0	3
IPCC	3	2	1	2

Table A2-2. Comparison of centrality and influence scores, provincial multiplex network.

Actor	Degree	InDegree	OutDegree	Influence
ProvGov	21	11	10	5
FedGov	11	3	8	2
PAD	9	4	5	2
Donor/bilaterals	9	3	6	4
WAPDA	9	4	5	3
PID/PIDA	8	3	5	3
MoWP	6	4	2	3
IRSA	5	4	1	1
WUAs/FOs	5	2	3	1
Farmers	5	3	2	2
Engineering	4	3	1	0
Media	4	2	2	1
PARC	4	3	1	0
UAF/UET	4	2	2	0
Nat Planning	3	2	1	0
IWMI	2	1	1	0

## 5 Governance Challenges of Agricultural Export Promotion: The Case of Soybean in Malawi

Noora-Lisa Aberman, Brent Edelman, and Regina Birner

*The development of the agricultural sector, including diversification of crop production and promotion of non-traditional exports, is an important strategy for low-income countries to reduce poverty and stimulate economic growth. However, governance challenges often hinder agricultural export growth, such as cumbersome bureaucratic procedures faced by exporters and politically motivated interventions. This mixed-methods study assesses institutional context related to the soybean export sector in Malawi and finds a high amount of discretion and variability in the enforcement of the rules and a reliance on clientelism for exporters to fulfil the requirements in a timely manner, stifling the growth of the sector.*

## 5.1 Introduction

The development of the agricultural sector is an important strategy for low income countries to reduce poverty and stimulate economic growth. Diversification of crop production and promotion of non-traditional exports can play an important role in this regard. However, to apply this agricultural development strategy, countries need to overcome the governance challenges that often hinder agricultural exports, such as cumbersome bureaucratic procedures faced by exporters and politically motivated interventions. While such governance problems have, in general, received increasing attention in recent years, specific empirical studies on the governance problems occurring in agricultural exports are rare. This study uses the soybean export sector in Malawi as a case study.

In spite of relatively strong per capita Gross Domestic Product (GDP) growth, Malawi continues to face a variety of economic challenges, including severe balance of payments shortfalls, fiscal deficits, and pervasive poverty. In 2013, Malawi imported USD 2.8 billion worth of goods and services, but managed to export only USD 1.2 billion (ITC, 2014); this USD 1.6 billion trade deficit represents 36 percent of Malawi's GDP (World Bank, 2014a).

Malawi's economy relies heavily on agriculture—it contributes one-third of the country's GDP. Agriculture is critical to Malawi's trade—agricultural products make up 90 percent of export revenues, with tobacco alone accounting for 60 percent of Malawi's exports by value (World Bank, 2010a). The country's reliance on tobacco as its primary export revenue earner leaves its economy vulnerable to exogenous shocks. In 2012, for example, the impact that the erratic rains of that cropping season had on the tobacco crop reduced real GDP growth by 2 percent (Reserve Bank of Malawi, 2013). Furthermore, with the official poverty rate at 50 percent of the population and an estimated 1.9 million people at risk of food insecurity in 2013-14, economic shocks potentially can have dire human consequences (FEWSNET 2013).

One strategy for promoting a more stable and vibrant economy is to diversify away from tobacco and broaden Malawi's export base. In the *Malawi National Export Strategy: 2013-2018*, soybean (*Glycine max*) is identified as a high-potential crop and prioritized for export promotion (MoIT, 2013). Within the oilseeds sector, soybean is identified further as a commodity that has strong domestic and regional demand, has high potential for improved incomes for farmers, and is a subsector of the economy in which Malawi already has a comparative advantage. Moreover, planting more soybean has the potential to increase incomes of the smallholder farmers who produce 93 percent of Malawi's soybean, can improve soil fertility through the ability of the crop to fix atmospheric nitrogen in the soil, and could address dietary deficiencies if consumed by more Malawians (Jayne & Rashid, 2013; Salvagiotti et al., 2008; Ecker & Qaim, 2011). One part of developing a more dynamic soybean sector in Malawi is to develop the soybean export sector. However, data shows that, while Malawi's soybean production has steadily increased over the last

decade, and is internationally competitive, exports have been volatile in spite of rising international prices.

In order to stimulate robust and sustained growth in Malawi's soybean export sector, the academic literature on trade policy reform generally advocates reducing existing barriers to trade in order to improve linkages between domestic and international markets (ITC, 2012; Hoppe et al., 2013). In addition, many developing countries, such as Malawi, face challenges in the implementation and enforcement of the formal laws and regulations on agricultural exports. The uncertain regulatory environment that results may be equally or more limiting for trade than traditional barriers such as tariffs, because it increases risk and, thus, transaction costs for exporters (Kirsten et al., 2009; Andrews & Bategeka, 2013).

This study undertakes an institutional analysis of the soybean export sector in Malawi to determine the critical institutional barriers to engaging in and expanding soybean exports. Institutional analysis allows for the study of both formal and informal rules, examining the impact both on transaction costs and resultant actor behaviour.

### 5.1.1 Institutions and the business environment in Sub-Saharan Africa

Institutions can be defined as systems of established and prevalent social rules that structure the interactions of economic actors (Hodgson, 2006). Where institutions are weakly developed, individuals engaging in that particular arena often bear high transaction costs due to weak coordination of economic activity and enforcement of formal rules (Kirsten et al., 2009). Similarly, states with strong institutions are also less inclined to corruption (Levy & Kpundeh, 2004). Thus, while facilitation of the business environment broadly, or trade specifically, often focuses on physical infrastructure (such as roads or electricity) or decreasing financial barriers (such as import or export tariffs), the quality of institutions can play a powerful role therein.

Drawing on the World Bank's Enterprise Survey's, analysis by Eifert, Gelb and Ramachandran (2008) suggests that the indirect costs associated with poor infrastructure and public services, particularly the state capacity to deliver business services, present a major barrier to competitiveness for firms in poor African countries.

Highlighting the role of capacity in institutional quality, Levy and Kpundeh (2004) discuss challenges of state capacity for effective public administration in Africa. They highlight that state capacity is embedded within a complex system, made up of the bureaucratic apparatus, political institutions, and social, economic, and political interests, counter to earlier approaches to development that considered it purely a management issue. Similarly, Levy (2007) specifies that for governance reform to be effective it must consider the formal and informal political and social institutions.

Describing challenges of state capacity in Africa, Levy and Kpundeh (2004) review the process of post-independence bureaucratic decay that took place in many countries across Africa, characterized by a decline in transparency and increase in governance through informal rules. While there has since been improvement in many states throughout Africa, this decline in bureaucratic performance increased corruption and the cost of doing business and thus negatively impacted economic performance, as described in the quote below:

*“The decline of bureaucracy influenced economic performance by affecting policymaking, regulation, and service delivery. Neopatrimonial rule generally operated by conferring discretionary rents on favored allies, giving little attention to the impact of rentier policies on economic growth, the efficiency of public services, or the quality of business regulation. The classic consequences, evident in country after country, included the disruption of markets, rising costs of doing business, urban bias, and increased protectionism. The intensification of a rentier relationship between business and government progressively transformed the structure of the business class itself, bringing about a progressive rise of a politically dependent business class.” (Levy & Kpundeh, 2004, pg.5)*

Furthermore, they describe how the level of corruption can be seen as a useful proxy for the quality of political institutions in a country. This is because the level and characteristics of corruption demonstrates the extent to which institutions can: a) constrain public actors from extracting rents and otherwise pursuing objectives for personal benefit, and b) direct private interests to use formal rather than informal channels to influence policy (Levy & Kpundeh, 2004). Rodrik (2004) supports this last point, maintaining that public-private engagement is important for economic development, but must be facilitated through a democratically accountable and publicly legitimate body to decrease corruption and rent seeking.

In their related study, Harstadd and Svenssen (2011) describe the evolution from bribery to lobbying. They theorize that income growth will typically drive this evolution, but that in equilibrium incentives to invest may be reduced. Because bribe amount tend to be linked to firm wealth, with wealthier firms paying higher amounts, and bureaucrats cannot commit to not charging bribes in the future, firms eventually get priced out of bribery and prefer to engage in lobbying. But as firms anticipate the hold-up problem and the larger bribes to come as they grow, this may reduce their incentive to invest. Thus they may never reach a high enough capital level to switch to lobbying, resulting in a poverty trap.

Furthermore, they model interaction among firms, bureaucrats and the government, and prove that government could benefit from bribery (in addition to bureaucrats) because it can pay bureaucrats a lower wage based on expected bribes to be collected and because it could monitor and collect a fraction of the bribes (Harstadd & Svenssen, 2011). However, given that bribery may decrease firm investments,

the government may also lose out with bribery, assuming that it benefits from economic development and taxable output. Thus, they show that “red tape” policies—those policies in place mainly to extract bribes from firms—will be relaxed by lobbying when there is a large enough effect on economic development because there are more firms or they are wealthier. Finally, they show that for lobbying to be successful firms must be coordinated and share the cost of lobbying.

Schleifer and Vishny (1993) argue that corruption occurs when bureaucrats have “control rights” over firms: specifically, the degree of discretion public officials have in implementing, executing, and enforcing rules and benefits that affect firms, such as business regulations and licensing requirements. Similarly, interviews with firms from the Middle East and North Africa region support this, specifying that the core challenges with the business environment lies not in the de facto regulations, but in the inconsistent, discretionary and preferential implementation of them (World Bank, 2009).

Given the dearth of good data on the business environment, The Doing Business index, developed and collected by the World Bank, is an important data source (World Bank, 2014b). It measures the ease of doing business across 189 countries throughout the world. It is a composite measure of a number of different business activities, such as the ease of starting a business, getting electricity, paying taxes enforcing contracts and trading across borders. It primarily measure efficiency, such as by recording procedures, time and cost to trade across borders or start a business.

The 2015 scores show Sub-Saharan Africa at the bottom of the ranking at 51.87 (where best practice is 100) on average but with a large distance between the highest and lowest in the region: 74.81 and 33.16 respectively (World Bank, 2014c). Malawi performs particularly badly in this measure, ranked at 164 of 189 countries globally, and 31 of 47 in Sub-Saharan Africa (World Bank, 2014b).

Narrowing the discussion slightly, we will now focus on the trade facilitation environment. Although tariff barriers are relatively low across countries in Sub-Saharan Africa, trade performance has not grown as expected. The “Trading Across Borders” component of the Doing Business index is of particular interest here, as it reflects the trade promotion from a regulatory perspective. It records the number of documents required, the cost, and the number of days required to expedite import or export of a 20-foot container (World Bank, 2010). On this measure Malawi is ranked at 172 out of 189 countries in Sub-Saharan Africa. It is also underperforming compared to its neighbours and trading partners, with Mozambique at 136, Zimbabwe at 167 and Zambia at 157 (World Bank, 2010).

There are a number of empirical studies examining the effects of institutions on cross-border trade. Francois and Manchin (2007) estimate the effects of institutions on trade using a measure of economic freedom—including legal structure and property rights, business regulation, and size of government—to reflect institutional quality. They find that strong institutions are associated with increased cross-border trade for developing countries. Similarly, another global study by Anderson and Marcouiller (2002) focuses on insecurity and corruption and the impact on trade. They find that the increased transaction

costs associated with weak institutions and insecurity have a major impact on trade, wherein a 10 percent rise in a country's index of transparency and impartiality leads to a 5 percent increase in import volumes.

Using the Doing Business data, Portugal-Perez and Wilson (2009) run an econometric model that assessed the impact of costs and time requirements of trade, compared to traditional tariff barriers. They find that the higher the trading costs, the lower the propensity to trade and the lower the volume of traded goods. Deconstructing the indicator, they find that the number of days needed to fulfil regulatory requirements is negatively correlated with trade flows but the number of documents required is not significant.

Similarly, Djankov, Freund and Pham (2010) demonstrate the impact of delays in time for an export to clear customs, including pre-shipment activities such as inspections and technical clearance; inland carriage and handling; terminal (port) handling, including storage if a certain storage period was required; and customs and technical control. They find that each additional day of delay reduces trade flows by 1% and is the equivalent of a county distancing itself from its trade partner by 70 kilometre. Furthermore, 75% of the delays reported were related to administrative hurdles, often before the container reached the port, rather than due to insufficient physical infrastructure.

Hoekman and Nicita (2011) estimate the effects on trade of red tape and entry barriers--reflected by the Doing Business Index and a logistics performance index--compared to border protection. Their results suggest that the impact of the behind-the-border domestic costs of trade could have a greater payoff for developing countries than further reductions in border barriers such as tariffs and NTMs, or seeking additional trade preferences.

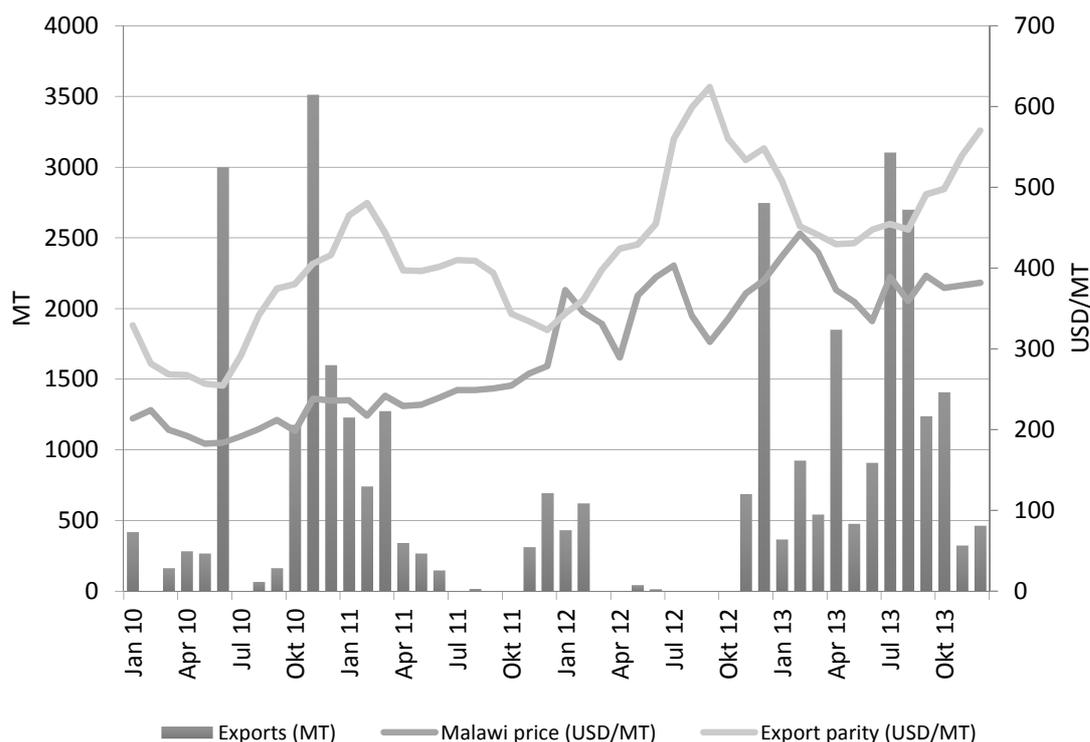
The studies reviewed here highlight state capacity, corruption and red tape as reflections of institutional quality, and institutional quality has been found to be important to business and trade facilitation. However, few studies have assessed institutional quality in the agriculture sector, in terms of its facilitation of agricultural businesses. In Sub-Saharan Africa, the agriculture sector is typically viewed as made up of public sector service delivery and farmers (primarily medium and small scale), who are considered to be a part of the informal sector. Little emphasis is given to agriculture as the main income earning and business activity throughout most of this region. By assessing the extent to which institutions facilitate business activity within the agricultural sector, we hope this study begins to fill this gap. Furthermore, because institutional dynamics are context specific, the country-specific sector-specific case study approach undertaken here allows us to understand the distinct social and political realities underlying the institutional outcomes and incentives for economic actors.

### 5.1.2 Competitiveness of Malawi's soybean sector

Malawi is well suited for a case study on this topic because there is evidence that institutional problems are a major obstacle to agricultural export growth in the soybean sector. Malawi's soybean production

has steadily increased over the last decade (12.5 percent compound annual growth rate<sup>12</sup>). However, data shows that, while the price is internationally competitive, exports have been volatile. As shown in Figure 1, there is little relationship between the competitiveness of Malawian soybean (as measured by the domestic price of soybean relative to the export parity price) and exports<sup>13</sup>. Soybean exports are close to zero at times when the domestic price is well below export parity<sup>14</sup>.

**Figure 1: Soybean in Malawi - regional and domestic prices and exports, 2010 to 2013**



Source: International Trade Centre 2014

Note: Export parity prices are calculated as monthly averages of the South African Futures Exchange (SAFEX) spot prices for soybean minus freight, insurance, and administrative costs for exporting to Harare, Zimbabwe, the largest regional importer of soybean from 2010-13 (International Trade Centre, 2014). Costs are based on interviews with transporters and exporters.

One can also examine revealed comparative advantage (RCA) as indicative of the competitiveness of a specific product in terms of its cost of production and other non-price factors (Mzumara, Chingarande & Karambakuwa, 2013). RCA considers the share of domestic exports of a specific product compared to the global share of exports of the product. An RCA between 0 and 1 indicates comparative advantage for a given commodity. According to authors' calculations with TradeMap data from 2010-2013 (ITC, 2014), Malawi's soybean RCA shows strong volatility, falling from 1.7 to 0.8 in 2011 and 2012 and then

<sup>12</sup> Authors' calculations based on MoAIWD production estimates

<sup>13</sup> Export parity prices are calculated as monthly averages of the South African Futures Exchange (SAFEX) spot prices for soybean minus freight, insurance, and administrative costs for exporting to Harare, Zimbabwe, the largest regional importer of soybean from 2010-13 (International Trade Centre, 2014). Costs are based on interviews with transporters and exporters.

<sup>14</sup> One potential explanation is the imposition of export bans on soybean. See Section 6 for further analysis of soybean export bans.

increasing to 2.36 in 2013. RCA is a proxy for comparative advantage with actual exports, however, RCA measures can be susceptible to trade restrictions such as trade tariffs and non-tariff barriers such as export bans that distort trade flows (Ng & Yeats, 2000). On the other hand, a recent soybean value chain analysis that takes a variety of other factors into consideration beyond actual exports, concludes that Malawi soybean is competitive both compared to regional and Argentinian soybean (Technoserve, 2011).

The focus of this study is on the institutional and policy environment, the exporters and the regulatory actors, the framework of legal rules and requirements for exporting soybean from Malawi, and the way in which the environment and the regulatory framework influence actor behaviour. We hypothesize that there are institutional barriers impeding consistent growth in soybean exports from Malawi and seek to identify the critical ones and understand the context in which they arise. The innovative study methodology, combining qualitative and quantitative analytic techniques, and sampling approach are described in the next section. Then the paper presents the study results through describing the policy and governance environment in the soybean export sector, the actors involved and their attributes, the details of the regulatory framework, and actor responses to these institutional characteristics. Finally, the implications for policy are discussed.

## 5.2 Methodology

This study undertakes an institutional analysis of the soybean export sector in Malawi to determine the role of institutions in impeding growth of soybean exports. Institutions are characterized by various degrees of formality. This study assesses both the formal rules and regulations associated with the soybean export sector as well as the social norms and conventions that determine how the rules are complied with and enforced (Ostrom, 2005; Buchanan, Chai, & Deakin 2013).

The empirical approach is guided by the analytical framework described in the next section and utilized innovative data collection tools—Net-Map and Process Net-Map—to implement a series of participatory interviews. These interviews yielded both qualitative and quantitative data about the institutional characteristics of the soybean sector in Malawi. This novel empirical approach can be replicated in other studies on this topic.

### 5.2.1 Analytical Framework

When institutions are not viewed as embedded in the social, economic and political systems, attempts at institutional reform are likely to be unsuccessful. For instance, An example of extensive institutional reform in Uganda contrasts institutional reforms in terms of form (policy reform) versus function (the implementation of the reforms), and concluding that in spite of best-practice institutional mechanisms put in place, institutional weaknesses have caused them to be unsuccessful in terms of improving actual government functionality (Andrews & Bategeka, 2013). In the case of Uganda, corruption reforms did

not address the contextual issues around corruption, such as low pay and poor leadership among policemen, the body tasked with enforcing anti-corruption laws.

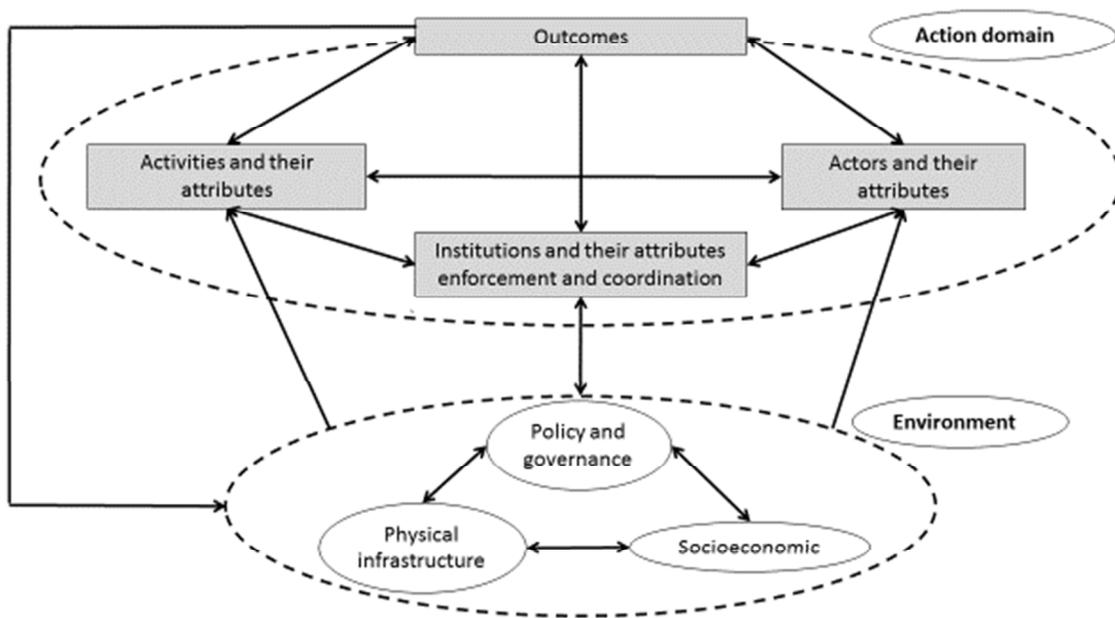
Dorward and Omamo (2009) argue that understanding institutional dynamics is fundamental to understanding and influencing processes of social and economic change in agricultural development. As such they develop a framework to guide empirical analysis of institutions for agricultural development in Africa. They build on the Institutional Analysis and Development (IAD) approach (Ostrom, 2005) and the branch of New Institutional Economics known as transaction-cost economics.

Central to the Dorward and Omamo framework for institutional analysis is the identification of the action domain, borrowed from the IAD approach, which defines the spheres of activity and interest of the analysis (such as economic exchange of goods and services or the management of natural resources) (2009, pg.78). The action domain is made up of: the institutions to be analysed, the activities that the institutions engage in, and the actors in those institutions and activities. An important facet of the analytical framework is the identification of these components and their relevant attributes.

The action domain is set in and affected by a wider environment, which is made up of the broader policy and governance environment, socioeconomic characteristics, and physical infrastructure. Institutions, actors, and activities are affected by the broader environment, and in turn they can affect the environment.

**Figure 2: Framework for Institutional Analysis of Agriculture in Africa**

Source: Dorward & Omamo, 2009, pg. 79



## 5.2.2 Methods

Buchanan, Chai and Deakin (2013) explore a range of methods for assessing institutions and argue that quantitative methods, while helpful, are limited and do not sufficiently answer many institutional questions. They point out that institutional phenomena are path-dependent and contingent on local factors, making it critical to ascertain the aspects of the social environment that have shaped the

institutions of study. Furthermore, qualitative approaches can more easily reveal nonlinear and cumulative effects, clarify issues of sequencing, and delve into assumptions of quantitative research methodologies. Finally, where social norms and conventions do not yield a high level of respect for laws and rules, issues of enforcement and implementation—which are challenging to measure quantitatively—generally are more important in guiding actor behaviour than are de jure laws.

Consistent with the above discussion, this study takes a mixed-methods approach to assessing the institutional environment for the soybean export sector in Malawi. The focus is on the *action arena*—the exporters themselves and the regulatory bodies they engage with to fulfil the legal requirements—and on the broader policy and governance environment, particularly in terms of how it influences trade policy rules and governance structures.

### 5.2.3 Data collection and sampling

Primary data was collected through semi-structured interviews with exporters, regulators, government actors, and other policy stakeholders. We undertook a criterion sampling approach, wherein individuals with rich information on a topic are identified for interview (Cohen and Crabtree 2006), and interviews continued until saturation was reached. In addition to recording actors' narratives about the formal requirements for exporting soybean and the institutional environment in which these requirements are embedded, quantitative information was also recorded, including:

- a. Costs and time requirements for completing formal export requirements;
- b. Perceptions about the amount of discretion that regulatory actors employ in the soybean export process, quantified into a ranked score of 1 to 5;
- c. Social network data reflecting policy actors involved in pressuring for or, alternatively, blocking reform of the formal export requirements for soybean.

The key data collection tool utilized is Net-Map, which allows for the collection of quantitative and qualitative data in the context of a semistructured interviews (Birmer, Cohen, & Ilukor, 2011; Schiffer & Hauck, 2010). Net-Map is an interview-based mapping tool that layers actor interactions—in the form of social network data—with principles from stakeholder mapping and power mapping to assess how different actors influence outcomes (Schiffer & Hauck, 2010). A paper-based tool, Net-Map is participatory, rather than extractive, is flexible for adapting to various research questions and contexts, and its use in illuminating the structure of the institutional environment is based in principles of actor-network theory and social network analysis.

Actor-oriented approaches to research help illuminate how individual actions combine to create a “process of mutual construction” of institutions (Keeley & Scoones, 1999). A network can be viewed as a conceptualization of the institutional environment, yet it is also made up of individual relations –

also referred to as links or ties – that represent social capital, control of knowledge, or aspects of power, depending on the context (Wasserman & Faust, 1994).

A variant of Net-Map, Process Net-Map, was specifically designed to understand implementation of complex processes in practice, a critical piece of understanding the action arena (Raabe et al., 2010). This tool was applied here to track the steps required to export soybean from the farm gate to the border. Adaptations made to the tool include the addition of questions on the time and cost requirements for each step of the process and framing discussion of power in terms of the discretionary power of each regulatory actor, as discussed above.

In order to collect qualitative and quantitative information, semi-structured individual interviews were held with nine policy stakeholders (which accounts for approximately 70 percent of the soybean trade policy actors<sup>15</sup>) using the Net-Map method and with eight soybean exporting firms (which accounts for approximately 40 percent of firms who planned to export in the year leading up to the study<sup>16</sup>) using the Process Net-Map method. In addition, unstructured interviews were held with all government and private sector entities involved in implementing the formal export policy rules. Furthermore, formal government documents were sought and acquired whenever possible in order to triangulate the information collected through the semi-structured interviews.

#### 5.2.4 Analysis

Qualitative data was recorded through detailed note taking during interviews and, when permitted by the interviewee, interviews were recorded. This data was used in forming the narrative of the study and for triangulation of the quantitative data collected.

Social network analysis data was compiled and analysed for network and actor characteristics using UCInet software (Borgatti, Everett, & Johnson, 2013). The mapped soybean export process was compiled across interviews and confirmed with government officials.<sup>17</sup> In addition to the export process map, we report on two additional outcomes for each step in the process: time (in number of calendar days) and cost (in USD), similar to the Doing Business Trading Across Borders measure (World Bank 2010b). For time requirements for a given step, we present the median values. For costs, only official fees and fees for legal services required by law are reported; any unofficial or informal payments are

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<sup>15</sup> An actor generation activity was undertaken with each of the policy stakeholders, asking interviewees to list all the actors involved in influencing soybean trade policy in a given time frame, in order to confirm that none were missing. Those that were included in the population of actors were agreed to across at least three interviewees.

<sup>16</sup> Based on a review of MoIT-issued export licenses for soybean for the period 2011 to 2013.

<sup>17</sup> Network data was collected in the form of complete network, rather than ego networks, which is the more common approach in the social network analysis literature. The complete network approach was preferable because: a) we did not know the bounds of the network as a policy network is ill-defined, and b) some actors are no longer available or not willing to submit to interviews (such as the President). We rationalize the validity of a sample of actors' ability to represent the whole network based on research by Krackhardt (1987), who suggests an actor's perceptions of a given network structure and the power of the relative actors in the network are associated with objective measures of structure and power. However, an actor's position in the network will influence their perception. As such, we ensured that data was sought from different types of actors in different positions in the network and aggregated the data obtained in order to capture all the relevant perspectives of the network and to mitigate positional bias.

excluded. This approach is a direct application of the Doing Business method (World Bank, 2014b) of measuring the time and costs.

To complement the qualitative and social network analysis where necessary, we studied formal exports of soybean using Malawi Revenue Authority (MRA) data, informal exports based on the Famine Early Warning Systems Network (FEWSNET) border monitoring reports. Price data was acquired from the Ministry of Agriculture, Irrigation and Water Development (MoAIWD) and from the South African Futures Exchange (SAFEX). And data on trade flows were downloaded from TradeMap.

All respondents' identities have been kept confidential given the possibly politically sensitive nature of the discussions. In addition, the study was approved by the Institutional Review Board of the International Food Policy Research Institute.

### 5.3 Regulatory framework governing soybean exports

This section describes the regulatory system, including implementation and enforcement of policies, governing soybean exports. It describes the steps required to export soybean from the vantage point of an exporter who procures the soybean at the farm gate and then follows all of the rules and regulations required to formally export soybean within the Southern Africa Development Community (SADC) region. Using data collected in the Process Net-Map interviews, we also quantify the time and cost requirements for exporters. Thereafter, we use findings from the interviews to examine how consistently the rules and regulations governing the export process are enforced on exporters.

The export process is complex and time consuming. The complete process is illustrated in Figure 3. First, the exporter, who must own a registered business in Malawi, and the process to export soybean requires the exporter to obtain the six official documents.

Before a prospective exporter can purchase soybean from a farmer, she or he is required by law to apply to the Ministry of Agriculture, Irrigation and Water Development (MoAIWD) for a Buying License. Authorities can enforce the Buying License requirement; if an exporter does not have a valid Buying License, the entire consignment can be confiscated. The application process typically requires three visits: after submitting the required documentation, if the application is approved, the exporter must return to the Ministry one week later to pay. Then three days later she can pick up the license. The Buying License is valid from the date of approval until March 31 of the following year, but not for longer than one year, as applications are accepted only after March 31 of the current year.

Second, the exporter must acquire an export license. Up until September 2013, prospective exporters of soybean were required by law to have a valid Export License issued by the Ministry of Industry and Trade (MoIT). Exports without a valid Export License were subject to detainment at the border and possible confiscation. In September 2013, the Minister of Industry and Trade amended the Third Schedule of the Control of Goods Act to remove soybean from the list of goods requiring an export

license (Malawi Government Printer, 2013), but several exporters reported on exports that took place before the removal of the requirement. Exporters indicated that the removal of the export license was a positive development, but that the permanency of the reform was uncertain. See section VII for further discussion.

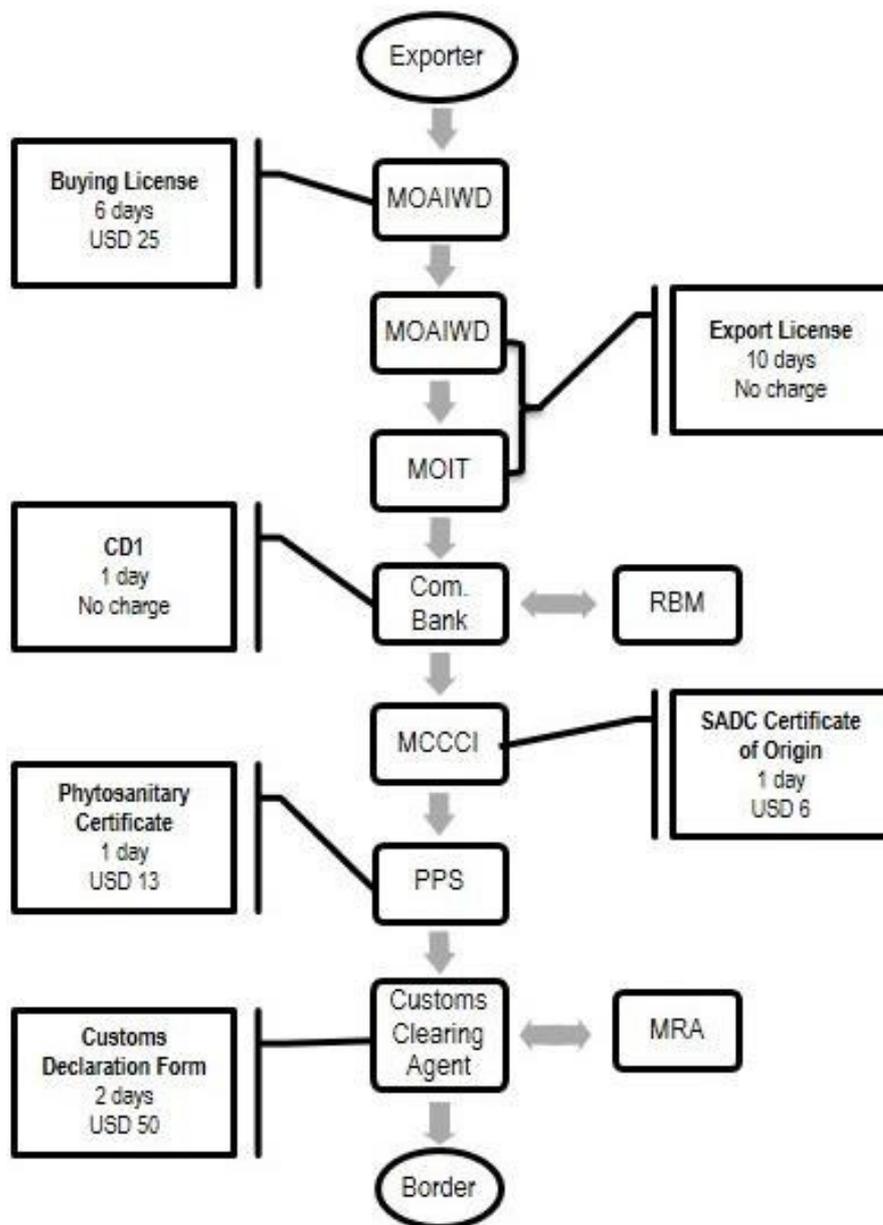
The exporter must submit required documentation to MoAIWD, and typically visit again to check on the status of the application, but eventually will pick up the license from the MoIT in Lilongwe, if approved. The Export License is valid for three months from the date of issue.

Third is the Currency Declaration Form (Form CD1), which is a legally required foreign exchange and currency control document that must be submitted by the exporter's commercial bank on behalf of the exporter to the Reserve Bank of Malawi for any export valued at more than 1000 USD. Parliament has been debating raising this threshold to 5000 USD. The process to complete the Currency Declaration Form requires three office visits to the exporter's commercial bank and is valid for six months from the date of issue and three months from the date of export. While it is usually a simple step, new exporters reported this as particularly challenging to determine bank requirements.

The fourth requirement is the Phytosanitary Certificate is a document issued by Malawi's Plant Protection Services (PPS) stating that the consignment is free from any pests specified by the importing contracting party. As such, it is not a legal requirement to export but is required in order to apply for the Customs and Excise Declaration Form in Step 6. The process takes two days and costs 5000 MWK, plus any associated chemical costs. The process to receive the Phytosanitary Certificate requires the following two office visits: 1) Contact PPS to come to storage facility of exporter to fumigate the consignment; 2) One day later, contact PPS to return to de-gas the consignment and issue the Phytosanitary Certificate. It is unclear for how long the Phytosanitary Certificate is valid.

The SADC Certificate of Origin is the fifth step. It is a document issued by Malawi Confederation of Chambers of Commerce and Industry (MCCCI) stating that the product being exported was indeed produced in a SADC country. As with the Phytosanitary Certificate, the SADC Certificate of Origin is not legally required to export but necessary in order to apply for the Customs and Excise Declaration Form in Step 6. The process requires a single office visit. It is unclear for how long the SADC Certificate of Origin is valid.

Figure 3: Soybean export process



Source: Authors' calculations from interview data

Notes: CD1: Currency Declaration Form. MCCI: Malawi Confederation of Chambers of Commerce and Industry. MoAIWD: Ministry of Agriculture, Irrigation and Water Development. MoIT: Ministry of Industry and Trade. MRA: Malawi Revenue Authority. PPS: Plant Protective Service. RBM: Research Bank of Malawi.

The fifth step is the Customs and Excise Declaration Form (also known as Form 12), which is a legally required document issued by the Malawi Revenue Authority. While the law or act governing the Customs and Excise Declaration Form is not clear, no export can leave Malawi without the Form. Required documents must be taken to an authorized customs clearing agent. Two days later, receive the Customs and Excise Declaration Form. It is unclear for how long the Customs and Excise Declaration Form is valid.

From start to finish, formally exporting 30 metric tons of soybean requires 21 calendar days and USD 95 to comply with the administrative requirements imposed by the government of Malawi.<sup>18</sup> In addition to these cost and time requirements, exporting legumes requires a total of 15 unique supporting pieces of documentation, 11 separate office visits, and interactions with 8 different institutions. These figures do not take into account the time and costs of transport of the soybean within Malawi or the costs and time delays incurred after the export has crossed out of Malawi into a neighbouring country.<sup>19</sup>

Figure 3 shows the institutions responsible and the reported time and cost requirements for each step in the export process for soybean from Malawi. These time and cost requirements pertain to a first-time exporter who has not previously engaged in the export of soybean in a given year. As each of these documents is valid for less than one year and a unique copy is required for a single container – here, a 30 metric ton truck – being exported, these time and costs requirements align with the World Bank’s methodology for its “Trading Across Borders” indicator (2014b)<sup>20</sup>. The results are comparable with the “Trading Across Borders” indicator, specifically the section on document preparation as we did not take into consideration time and cost for freight to the border or to the destination port.

### 5.3.1 Discretionary power and consistency of enforcement

We also sought to determine the consistency with which rules and regulations governing the export process are applied and enforced and the degree to which discretionary power was applied by regulatory bodies. To accomplish this, we first asked exporters about the average or “normal” amount of time a particular step in the process took. We then inquired about the shortest and longest amounts of time each particular step of the export process took for exporters. With these measures we can better understand how much the time taken for a given step in the export process deviates for a given exporter across multiple exports. If rules and regulations are being applied consistently across exports for a given exporters, then these times should converge.

Second, we asked exporters about the relative discretionary power of each institution involved in the export process. If a given institution has little ability to speed up or slow down the process, then rules and regulations are being applied consistently for that step of the process; if, however, an exporter has the impression that an institution has the discretion—either through deliberate actions or increased efficiency—to speed up the export process, then this is an indicator that rules and

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<sup>18</sup> All costs are reported in USD and time is reported in calendar days; the Reserve Bank of Malawi’s 9 June 2014 exchange rate of 397 MWK/USD is used for all currency conversions.

<sup>19</sup> This study assumes that the exporting entity has already established itself as a legal company within Malawi; based on the World Bank’s Doing Business survey (2014b), this requires an additional 38 days and USD 243.

<sup>20</sup> As most soybean exporters engage in multiple exports throughout the season, some documents can be used for multiple export consignments, whereas other documents are required in original for each truck within a given export consignment. In order to capture these complexities, we pro-rate the time and cost requirements outlined above for a typical soybean export consignment of 30 metric tons, along with an estimate of costs incurred due to time delays.

regulations are not being applied consistently across exporters or across the different export experiences of a given exporter.

Finally, we asked exporters to describe the effectiveness with which the rules and regulations of the export process were enforced. In other words, to what extent does the formally stated process for fulfilling the rules differ from how the exporter navigates the process in practice? If enforcement is effective, then the underlying reason for which a particular administrative requirement was originally put in place—assuring the sanitary state of the export through the phytosanitary certificate, for example—is being satisfied.

**Table 1. Discretionary power by institution**

Step	Days			Institution	Discretionary Power (0-5)
	Min	Median	Max		
Buying License	5	6	15	Ministry of Agriculture, Irrigation, and Water Development	2.8
Export License	5	10	30	Ministry of Industry and Trade	2.3
Currency Declaration Form	1	1	10	Reserve Bank of Malawi	0.0
SADC Certificate of Origin	1	1	3	Malawi Confederation of Chambers of Commerce and Industry	0.0
Phytosanitary Certificate	1	1	3	Plant Protection Services	0.0
Customs and Excise Declaration Form	1	2	3	Malawi Revenue Authority	1.6

Source: Authors' calculations from Net-Map data

For time requirements, the period needed to obtain the export license (5 to 30 days) and the buying license (5 to 15 days) exhibited the most variation; the other four steps of the export process showed little variation in time requirements (Table 1). Not surprisingly, the two regulatory institutions involved in issuing the export and buying licenses, MoAIWD and MoIT, were ranked as having the most discretionary power in the soybean export process.

Regarding consistency of enforcement, information from interviews indicated that enforcement was either inconsistent or non-existent for the following requirements:

1. **Buying License:** exporters reported that this was almost never enforced.
2. **SADC Certificate of Origin:** exporters reported that they could obtain this certificate without showing any proof that the soybean was actually grown in Malawi.
3. **Phytosanitary certificate:** exporters reported that they could obtain this certificate by taking their own sample of soybean to Plant Protection Services (PPS), rather than having PPS staff come to visit the export consignment and randomly sample the soybean. In some cases,

exporters obtained the certificate without showing any evidence of the condition of the soybean that they were to export.

For two of the other procedures, the currency declaration form and the export license, enforcement of the requirements did not provide government with the information the requirements were put in place to obtain. Officials reported that the currency declaration form (intended to ensure that foreign exchange earned on exports was being repatriated to Malawi) was being underreported by exporters, but that resources for enforcement were lacking. The export license requirement was originally put in place to ensure that only registered exporters were engaged in exporting and to enable government to track exports. However, exporters reported not being asked to show proof of being a registered exporter when applying for the license and government did not have a mechanism in place to track which export licenses had been used and for what quantity of goods.

Finally, a review of detailed informal export data from 2013 shows that both registered and many other smaller scale unregistered exporters shipped consignments of soybean across Malawi's borders illegally. These ranged in size from 120 to 600 metric tons (based on authors' calculations analysis of FEWSNET informal trade data). In these cases, firms did not show any documentation, but rather bypassed the formal border checkpoint altogether. The existence of these large scale informal exports means that, in at least some instances, none of the requirements for formal soybean export were enforced, and that the risk of the illegal crossing (and resultant bribe cost if discovered) is worth avoiding the formal requirements.

These findings all point to inconsistent application of the rules and regulations governing the export process for soybean: specifically, administrative processing time variations, perceived discretionary power, and lack of enforcement of regulations. These examples of institutional weakness are due to a combination of limited state capacity and a high degree of clientelism.

For instance, the large time variations in obtaining the export license and the lack of enforcement of its use could be partially explained by understaffing of officers to issue such licenses and the impracticality of randomly checking farm gate procurers for whether they possessed buying licenses. In the case of PPS, the agency simply lacks the resources to effectively sample and test soybean exports and to issue a phytosanitary certificate that can be trusted by exporters and buyers in the importing country.

In addition, the clientelist nature of the regulatory system explains some of the institutional weakness. For instance, based on Harstad and Svensson (2011), unenforced and meaningless regulations, can be viewed as beneficial only to the bureaucrats who can collect associated rents. Furthermore, exporters report that having access to high level bureaucrats within MoAIWD or MoIT facilitates timely completion of the export requirements. In addition, the higher in the hierarchy ones contact is, the

speedier response you are likely to get. While not reportedly based upon bribes, there is likely some *quid pro quo* behind this time of clientelist favouritism.

#### 5.4 Policy and governance environment

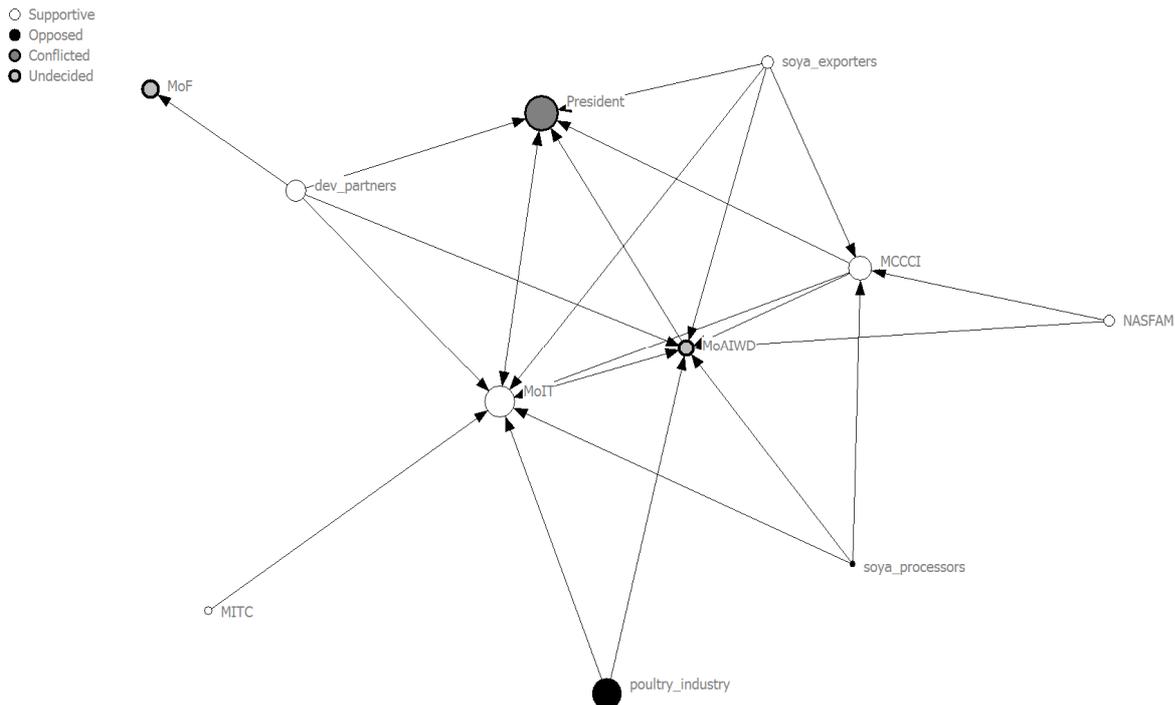
The policy and governance environment is a key aspect of the institutional environment in which the action domain is embedded. Characteristics of the environment will condition how actors react to institutions. Kirsten et al., (2009) describe the policy and governance environment as a set of fundamental political and social ground rules in which institutions are developed. The environment is considered to be fixed in the short and medium-term.

This section examines the characteristics of the policy and governance environment for the soybean export sector that, in part, determine trade policy rules and governance structures. We use social network analysis to assess the policy network structure and characteristics. The network analysis is complemented with qualitative data obtained from interviewees further describing the network and its characteristics. The network, shown in Figure 4, depicts the way in which actors try to influence soybean export policy. The trade policy network includes 11 actors. The size of the circle representing each actor reflects the perceived power of each to influence the regulatory framework for soybean (the larger in size the more powerful the actor) and their colour reflects their position on trade policy reform: i.e., supportive, opposed, conflicted, or undecided.

The network structure depicts a highly centralized and top-down government decisionmaking structure. This network structure, with few in-flows of influence to top decisionmakers, agrees with the qualitative interview data in that it indicates that policy reforms are more likely to be determined according to political concerns, rather than technical concerns. Technical advisors within the ministries are not likely to risk pushing for reforms that are not favoured by the political leadership, even if they are technically sound. The centralized network also gives the impression, supported by the qualitative data collected and previous research, that the key ministries—MoIT and MoAIWD—are not undertaking their own technical analysis to inform policy decisions. Rather, such policy advice is received by these Ministries largely from external stakeholders.

This results are not uncommon in policy networks in Africa. Other policy research in Malawi describes the leader-centric and clientelist nature the political system (Aberman et al., 2012; Resnick, 2012; Said & Singini, 2014). Said and Singini (2014) describe Malawi’s historical tendency toward centralized governance that prioritized rentseeking over economic growth. Interviewees also described how past presidential administrations in Malawi did not tolerate dissenting views, such that technical staff within the MoIT refrained from passing pro-reform technical advice up to the senior

**Figure 4: Trade policy network: policy pressure links, power scores and policy positions**



Source: Authors’ calculations with UCINET from interview data.

Notes: MoF: Ministry of Finance. dev\_partners: development partners. MoAIWD: Ministry of Agriculture, Irrigation and Water Development. MCCC: Malawi Confederation of Chambers of Commerce and Industry. NASFAM: National Association of Smallholder Farmers. Actors are sized according to power scores. Policy position legend is at the top left.

leadership under previous administrations, reflecting the top-down structure of the policy network.

This top-down governance reflects a culture of strong leaders and highly controlled policy environments that is more likely to add layers of regulation to agricultural export processes rather than to rely on market forces, in spite of low enforcement capacity.

### 5.5 Actor power and policy positions

Various characteristics of the actors involved in soybean exports from Malawi and related policy development will determine the institutional landscape. There are just a handful of firms consistently exporting soybean from Malawi. These firms are all prominent medium to large-scale firms in Malawi. We were unable to locate any smaller firms or farmers’ cooperatives engaged in formal soybean exports. In spite of the small size, the sector is not well coordinated, as evidenced by lobbying

or policy engagement taking place by individual first rather than collectively, and the lack of a coordinating body.

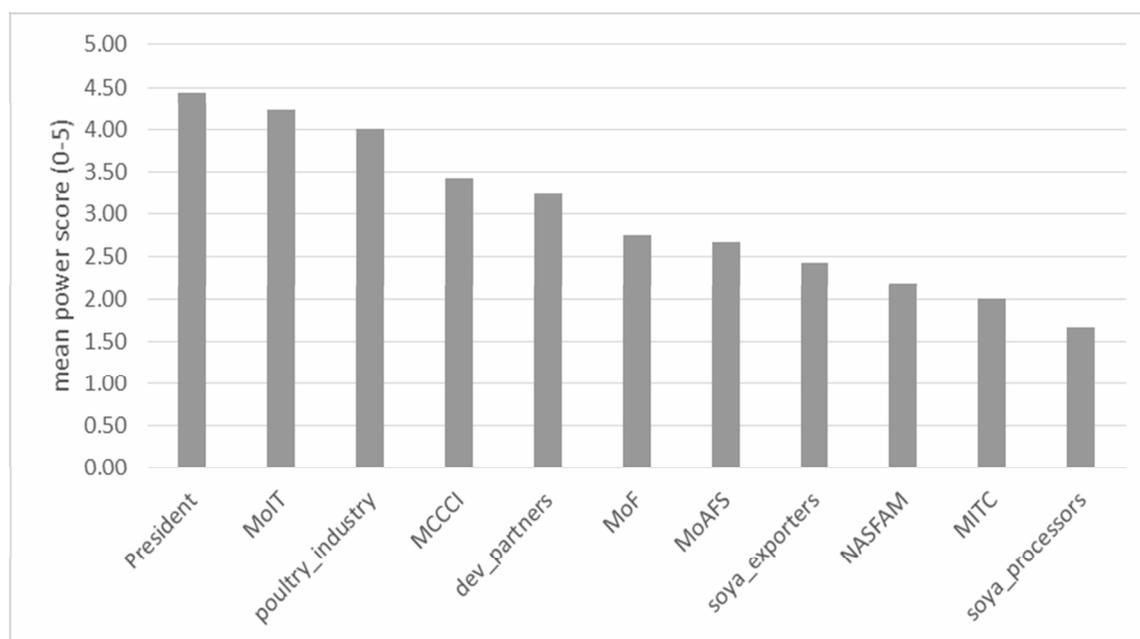
MoIT is the focal government body for the promotion and regulation of exports. MoAIWD is also relevant to the soybean export sector as the Ministry regulates domestic marketing of agricultural products and plays a role in the approval process for firms who want to export soybean. Other relevant regulatory bodies are the Reserve Bank of Malawi, which works with a firm's commercial bank to issue a Currency Declaration form, the Plant Protective Services, and the Malawi Revenue Authority, the main authority for ensuring that fees are paid for all imports and exports.

The actor power measure, depicted in Figure 5, reflects influence over the soybean regulatory system. The measure is based on interviewee perceptions of actors to influence changes in soybean trade policy and takes the average of scores from across interviews. The most powerful actors in terms of influencing soybean export policy are the President, followed by MoIT and the poultry industry within the private sector. Interviewees pointed to the highly top-down nature of government to explain the power of the President and MoIT. MoAIWD, in contrast, is less engaged in these issues and so has a lower power score, even though they are generally a highly influential ministry, and one would expect them to play a central role in soybean promotion. But their emphasis on food security as a core goal leaves agricultural exports or value addition largely outside of their area of interest (although that is slowly changing).

The poultry industry, which is made up of a handful of companies who are the primary domestic consumers of soybean in Malawi, have a high power score. Poultry is largely a luxury good in Malawi with only wealthier Malawians consuming it regularly. With very little industry in the country, the commercial poultry firms are among the few successful, and thus influential, businesses in Malawi. Soybean processors largely produce soybean oil and use the by-product, soybean cake, to produce feed for poultry companies. These two industries, thus, are closely related and, in some cases, even jointly owned, although interviewees perceived the poultry industry to be the more powerful influencer of policy. This grouping of industries appears to be well-coordinated, as evidenced by joint lobbying efforts and two coordinating bodies: the Poultry Association of Malawi (PAM) and the recently developed Soya Association of Malawi (SOYAMA), which does not include exporters. Both the poultry industry and soybean processors were described both by themselves and by other stakeholders as opposed to reforming the soybean export regulation to increase exports, although one firm noted that it had changed its position based on development partner information and pressure.

Exporters, not surprisingly, were in favour of reforming the soybean export regulations to make it easier to export. Development partners and the MoIT were both in favour of policy reform as a mechanism for improving the business environment and spurring private sector development.

**Figure 5: Actor power in trade policy reform**



Source: Authors' calculations from interview data.

Note: MoF: Ministry of Finance. dev\_partners: development partners. MoIT: Ministry of Industry and Trade. MITC: Malawi Investment and Trade Centre. MoAIWD: Ministry of Agriculture, Irrigation and Water Development. MCCI: Malawi Confederation of Chambers of Commerce and Industry. NASFAM: National Association of Smallholder Farmers.

The Bingu wa Mutharika Presidential administration from 2004 to 2012 was opposed to reforming the soybean export policy to facilitate exports, while the technical leadership within MoIT at the time was conflicted about the policy reform. These policy positions have since changed. President Joyce Banda, who succeeded President Bingu wa Mutharika, was vocal about her reform agenda to improve the business environment. However, the interviewees considered President Banda to be conflicted over these reforms, as they thought she likely had important constituents advocating both for and against reform.

The MoIT was considered to be supportive of reforms during her administration. The policy position of President Peter Mutharika, who took office in May 2014, and his cabinet on soybean export policy were not investigated in the study but current policy discussion are centred around increasing restrictions on soybean exports.

The Ministry of Agriculture had been perceived as undecided on the issue of soybean export policy reform, reflecting that agriculture policy in Malawi has been largely concerned with food security and the Ministry is only recently beginning to see trade as relevant to its mission and scope of work. This change in outlook is indicated by the formation in 2014 of a MoAIWD Technical Working Group on Commercialization and engagement in a new private sector-focused policy framework—the New Alliance Framework for Food Security and Nutrition—that is increasingly guiding policy action by MoAIWD.

Finally, the Public Private Dialogue Forum (PPDF), facilitated by the MCCI plays an important—if inconsistent—role in convening the private sector and communicating their requests and opinions to government decisionmakers. However, at the time of writing it was considered defunct by most interviewees, as it had not met in many months, and has been actively sidelined by President Mutharika (Said & Sangini, 2014). Rodrik (2004) highlights the importance of such a body in facilitating sectoral coordination among firms and pinpointing opportunities to decrease transaction costs. However, he specified the need for democratic processes and legitimacy in the administration of such a body, both of which need are lacking in the PPDF. Smaller sub-sector coordinating bodies do exist

### 5.6 Navigating the institutional set-up: actor responses

Central to the importance of the study of institutions is understanding how they affect the behaviours of economic actors. As mentioned above, institutional weakness and inconsistency can increase transaction costs for economic actors. In order to avoid the commercial risks associated with an inconsistent and weakly enforced institutional environment, exporters may decide not to engage in the sector—to stop exporting or decide not to enter the sector—or to find ways to cope with or bypass the institutional challenges, all of which may carry implicit costs. Institutional weaknesses may also provide opportunities for bureaucrats to benefit from patronistic or rent-seeking behaviours.

As described above, soybean exporters in Malawi tend to cope with the inconsistent and slow implementation of the requirements for exporting soybean through clientelism: making use of their personal connections. Exporters say that contacting people within the regulatory agencies with whom they have personal connections is an effective way to cut down on administrative delays. They also use their connections to bypass or simplify some of the requirements.

In addition, the soybean exporters interviewed have each developed their own distinct ways of fulfilling regulatory requirements: no two exporters follow exactly the same procedures. New entrants to the soybean export sector find it challenging to navigate the requirements even when seasoned exporters do not report major problems. This points to a lack of clarity about the regulations and how they are to be fulfilled that acts as a significant barrier to entry into the sector and facilitates corruption and clientelism. Those that have invested in learning the soybean export regulatory system generally are able to navigate it, though faced with high transaction costs, but new entrants are likely deterred from entering at all. Even those firms that have learned to effectively navigate the system have likely incorporated the cost of administrative delays into their prices, perhaps making them less competitive in the regional market, but more likely decreasing the price they pay to farmers.

In all of the regulatory bodies with oversight on soybean exports, unclear and inconsistent information about how an exporter fulfils the regulatory requirements was pervasive. This appears to be based on low government capacity to inform and enforce regulations. For instance, MRA staff rely on hard-copy memos entitled “MRA Circulars” for policy changes. At one border post, some MRA representatives were not aware of recent policy reforms because the relevant circular was lost. Furthermore, low government salaries likely add to the propensity for patronage and reinforce bureaucratic incentives to keep information vague.

Actions undertaken by the Banda administration to improve the business environment included freeing up the exchange rate, establishing the Malawi Investment and Trade Centre (MITC), and simplification of the soybean export regulatory system (Said & Singini, 2014). However, these actions did not mean a departure from the previous emphasis on rentseeking and corruption, as evident from the major corruption scandal, referred to as “Cash Gate” wherein bureaucrats at all levels of the government were found to have been stealing relatively small amount of government funds. Furthermore, the MITC is viewed as an ineffective toothless body that has not fulfilled its potential and the export process reforms were not formally legislated and so easily reversible, as discussed in the following section.

### 5.6.1 Soybean export bans

Domestic industrial consumers of soybean have actively opposed reforms to make soybean exports from Malawi easier in order to ensure an adequate supply of low-cost domestic soybean for their businesses. Of particular consequence to the soybean export sector, they have successfully lobbied government officials to ban the export of soybean in the past, keeping domestic prices low relative to the international price, but disrupting trade volume flows and distorting price signals from the global soybean market.

According to interviewees in government and the private sector, to implement a ban on soybean exports, the Minister of Industry and Trade exercises powers derived from the Control of Goods Act (Malawi Law Chapter 18:08) to (a) invalidate all previously issued export licenses that have not yet been exercised and (b) stop issuing new export licenses. The Government of Malawi then communicates the export ban through the media, including press and radio. Without an export license, MRA will refuse to issue the Customs Declaration document required for export and border officials will refuse to allow an export consignment to leave Malawi. Legally speaking, an export ban should also be printed in the Government Gazette as an official Government Notice. Up to now, however, we have not been able to find any of these press releases, records of radio announcements, or any official communications announcing the start and end of past soybean export bans. However, soybean exporters and MoIT representatives reported that the export of soybean was banned in June and July

2010, from June through October 2011, and from March through October 2012. The timing of exports bans can be inferred from the pattern of (lack of) exports presented in Figure 1.

The International Trade Centre (ITC 2012), UNECA (2013), and the World Bank (2014a) all highlight the export license requirement and the frequent imposition of export bans as critical obstacles to increasing exports of agricultural commodities from Malawi. A recent simulation of the economy wide costs of a soybean export ban estimates that the ban alone could cost Malawi 12 percent of the overall economic activity generated by the soybean sector and reduce soybean farmers' net revenue by 56 percent in a given year (USAID 2013).

In September 2013, the Government of Malawi took a major step towards addressing these non-tariff barriers by removing the export license requirement for soybean. It did so by amending the Third Schedule of the Control of Goods Act to remove soybean from the list of goods requiring an export license and, at least in theory, making it impossible to ban soybean exports (Malawi Government Printer 2013). It was a simple amendment to enact because, as it was an amendment to one schedule of the Act, rather than an amendment of the Act itself; it only required a letter from the Minister of Industry and Trade to the Minister of Justice to have the policy reform take effect. No Parliamentary approval was required. Because of the nature of how the amendment was enacted, however, it is an amendment that would be quite easy to reverse; all that would be required is a similar letter from the Minister of Industry and Trade to the Minister of Justice requesting that soybean be added back to the Third Schedule of the Control of Goods Act. In other words, the export license requirement could be resumed at any time, thus making it possible to put in place another export ban through the same mechanism as past bans. Furthermore, even if the export license requirement is not resumed, soybean could be banned under the powers granted to the Minister of Agriculture, Irrigation, and Water Development through the Special Crops Act (Malawi Law Chapter 65:01).

Exporters and traders of soybean found this unpredictability in the regulation of the Malawi soybean market to be a significant hardship to their business. One multinational agricultural commodity trader and exporter noted that his firm has largely divested its activities on soybean in Malawi due to the impact of the soybean export bans on their business. Furthermore, MoIT officials and soybean sector stakeholders have been actively debating the reinstatement of some type of export control, such as an export levy or ban, in spite of continued strong pressure by development partners to the contrary.

## 5.7 Contrasting with other export sectors

To what extent are these results universal across all export sectors in Malawi or exclusive to the soybean export sector? To support our interpretations of the results of this study and highlight the implications of the distinctive characteristics of the soybean sector's institutional environment, we contrast this with two other promising export commodities: tobacco and groundnuts.

Tobacco has dominated Malawi's exports and played a central role in its economy for decades. Previously, the sector was dominated by large estates who sold directly to international buyers, and smallholders were highly restricted in their involvement in the sector (Jaffee, 2003). In the 1980's and 90's policy reforms allowed mini estates and eventually small-farmer "clubs" to grow tobacco and sell directly to exporters in a well-organized open auction, described further below.

A detailed study of the tobacco sector by Otañez, Mamudu, and Glantz (2007) describes a well-organized sector, if skewed to favour the two multi-national exporters, wherein the market and mechanism for selling one's consignment is mandated by law. The sector is regulated by the Tobacco Control Commission (TCC), which is the one-stop-shop for registration and licensing for all actors in the tobacco sector. Member of its board include representatives of the Limbe Leaf and Alliance One, the companies that, in 2008, held 95% of the tobacco market in Malawi. They purchased almost all the tobacco produced in the country, and thus were able to maintain favourable trade regulations and prices. Auction Holdings Limited is the designated tobacco trading platform, where farmers and aggregators all go to auction off their tobacco. While Auction Holdings, and another recent entrant in this sector the Agricultural Commodity Exchange, had tried to engage in trading of soybean and other crops, these have been slow to pick up. Thus, while the heavy engagement of private sector in the tobacco sector had managed to keep prices low for producers, it has also streamlined the export process making it no surprise that tobacco has dominated Malawian exports. In fact, a review of trade policy in Malawi by the International Trade Centre (2012: xv) described the tobacco sector as an example of best practice, wherein an export license can be obtained from the TCC "in a matter of minutes".

The groundnut sector makes an interesting contrast. While also highlighted as a priority crop in the government's National Export Strategy and targeted for scale-up, this sector enjoys high market density both domestically and regionally, but has also suffered from the last decade of restrictions on aflatoxin levels, which has all but halted exports to high-enforcement high-value markets. Malawi groundnuts are in high demand domestically and are extremely competitive in the region. Formal export destinations include Kenya, Zimbabwe, Tanzania and Zambia. There is also a large informal export market and very porous borders, providing groundnut traders with alternatives if the formal export process becomes too cumbersome (Edelman & Aberman, 2015).

According to a similar case study by Edelman and Aberman (2015) the export process for groundnuts is almost the same as for soybean, with one critical difference that there are no large industrial players influencing policy to periodically impose export bans. The combination of more predictability and a much denser market-with many options for buyers and for offloading a consignment even if there are delays in the export process-produces a very different result with exports growing over the last decade even as some regional partners begin to put in place stricter aflatoxin restriction, putting this trade at risk in the future.

This comparison highlights the importance of a parallel governance system for the success of the tobacco export sector. Tobacco exports are not subject to the institutional challenges that other export sector in Malawi face. Groundnuts, on the other hand, face some similar challenges as the soybean sector in terms of the level of complication of the export process and lack of transparency. However, we surmise the deterrent effect of this is somewhat offset by the dense easy-to-access market—although there are questions about this future of this market due to aflatoxin contamination. Moreover, an additional factor may be that groundnut exporters are not subject to the high unpredictability associated with ad hoc export bans, as with the soybean sector, allowing the export sector to flourish relative to soybean.

## 5.8 Discussion and policy implications

This study assesses the institutional environment of the soybean export sector. Soybean is a high priority crop in Malawi, with the potential to promote agricultural growth, increased incomes for smallholders, improved soil quality, and lead to sectoral transformation through value addition and accessing export markets. However, in spite of steady increase in production and competitive prices, soybean export levels have been inconsistent. This study examines the institutional environment in the soybean sector to determine the critical barriers to promoting exports and development of the sector as a whole.

Guided by a framework for institutional analysis in African agriculture, we assess the regulatory framework and the policy environment, and how they influence actor behaviour and incentives (Dorward & Omamo, 2009). Our analysis of the soybean export process finds a cumbersome and time consuming process that takes 21 calendar days (median), 15 supporting pieces of documentation, 11 separate office visits, interactions with eight institutions, and costs USD 95 to satisfy the administrative requirements for a one-time, formal export of a 30 metric ton consignment of soybean. To put these results in context, they are comparable to the World Bank's Doing Business "Trading Across Borders" indicator for Malawi, which ranks the country as 172 out of 189 countries ranked, and lowest among its neighbours and regional trading partners. Beyond the costs of complying with the official requirements, the degree of variation in terms of the time required and the inconsistent enforcement of rules and regulations creates considerable uncertainty for exporters, increasing their risk and associated transaction costs. Our analysis shows that the minimum time required to complete the official requirements for an export consignment is 14 days, while the maximum is 61 days.

Furthermore, a lack of clarity about how official regulatory requirements are supposed to be met, and a leader-centric governance environment, create opportunities for patronage and rentseeking behaviour. Exporters often rely on personal connections or their substantial stature in the community to have their export requirements attended to efficiently and to engage in lobbying. Regulatory bodies apply their discretionary power in the export process in a biased manner, further weighting the system

in favour of well- connected actors. Finally, some regulations governing the export of soybean were enforced either inconsistently or not at all.

According to Harstad and Svensson (2011), the “red tape” regulations described above that do not serve any substantive oversight purpose are kept in place because of the associated rents and bribes received by bureaucrats. Theoretically, as exporters’ capital grows, they should eventually price themselves out of paying rents and rather begin to lobby to change the regulations for the whole sector. However, there appear to be three impediments to this evolution in the soybean sector in Malawi:

First, the *renty* relationship between bureaucrats and exporter keeps risks and transaction costs high and decreases profitability. It can also decrease incentives to invest as bureaucrats cannot commit to not asking for higher bribes once the firm is larger (Harstad & Svensson, 2011). In addition to making soybean trading and exporting less profitable and less competitive, it is likely that these costs are largely passed on to the smallholder farmers who produce soybean and are considered “price takers” with few market options for their commodity.

Second, the population of soybean exporters is small and not well coordinated. Their engagement with bureaucrats and politicians is ad hoc, informal and individual. While the Public Private Dialogue Forum is supposed to support coordination, it is largely defunct and lacking in legitimacy in terms of ability to inform policymakers’ decisions. Furthermore, the poultry industry opposes reforms of soybean export regulations, they have closer connection to high level decision makers, and have their own coordination body, The Poultry Association of Malawi (PAM). Thus interests of decision makers are more likely to align with the poultry sector, against the interests of the soybean sector.

Third, the business environment in Malawi is impeded by pervasive institutional weaknesses, characterized by low capacity, corruption and rentseeking. This environment can be partially explained by very low civil servant salaries. Furthermore, post vacancies and poor training and communication further exacerbate the effectiveness of the civil service to regulate the sector. Finally, clientelism and rentseeking is normalized in relationships between exporter and bureaucrats, as exporters describe these activities as the only way of getting around inefficient bureaucratic systems.

These combined factors create a perfect storm wherein investment is disincentivised, pressure to decrease institutional barriers to exporting are countered by a stronger poultry industry, and poor government capacity masks a culture of pervasive rentseeking behaviour. Perhaps only a major shift in the policy and governance environment would break this cycle. For instance, efforts to increase cohesiveness of the sector actors could increase their policy influence. Renewed emphasis on the Public Private Development Forum could help in this regard. However, this strategy will only be effective if the forum’s legitimacy is greatly increased, through high level attendance by decisionmakers, and perhaps— to help shift the current balance of powers—by development partners indenting to support agricultural development and a more favourable business environment.

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## 5.10 Appendix 1—Net-Map actor abbreviations, attributes, and centrality scores

<b>Actor</b>	<b>Complete Name</b>	<b>Power</b>	<b>Position</b>	<b>Type</b>	<b>Out-degree</b>	<b>In-degree</b>
dev_partners	Development Partners	3.25	supportive	development partner	18	0
FMoIT	Former Ministry of Industry and Trade	3.00	undecided	government	0	3
FPresident	Former President	4.33	opposed	government	1	5
FUM	Farmers Union of Malawi	2.25	supportive	civil society	3	0
MCCCI	Malawi Confederation of Chambers of Commerce and Industry	3.43	supportive	private sector	18	15
MITC	Malawi Investment Trade Centre	2.00	supportive	government	3	0
MoAIWD	Ministry of Agriculture, Irrigation and Water Development	2.67	undecided	government	5	21
MoF	Ministry of Finance	2.75	undecided	government	2	4
MoIT	Ministry of Industry and Trade	4.22	supportive	government	10	46
NASFAM	National Smallholder Farmers Association of Malawi	2.20	supportive	civil society	9	0
poultry_industry	Poultry producers and Poultry Industry Association of Malawi	4.00	opposed	private sector	7	0
President	President of Malawi	4.44	conflicted	government	4	19
soybean_exporters	Soybean exporters	2.43	supportive	private sector	13	0
soybean_processors	Soybean processors, including soybean oil and poultry feed	1.67	opposed	private sector	15	0
SOYBEANMA	Soybean Association of Malawi (incorporates soybean processors and users, e.g., poultry industry)	2.50	opposed	private sector	0	2

## 6 Discussion and Conclusions

As discussed in chapter one, the core objective of this work is to explore the informal and formal institutions related to problems of agricultural development. Furthermore, this research applies novel methodological approaches and thus expands the toolkit for analysis in this field. Chapter one laid the basis both for understanding the importance of an institutional focus and for the application of a set of participatory tools that allow for both subjective and rigorous research. The subsequent chapters 2-5 presented empirical studies that applied these approaches, with an aim to tangibly demonstrate the value that they can contribute to the field of agricultural development studies. This final chapter discusses the methodological contributions of this work and then it identifies some of the common themes resulting from the four institutional studies. Finally, the chapter lays out the policy implications that can be inferred from the combined results.

### 6.1 Summary of Study Conclusions and Lessons

Across the four studies, the evidence supports the premise laid out by intuitional theorists that the rules-in-play, determined largely by social norms, have a significant effect on the behaviour of economic actors (Hodgson, 2006; Ostrom, Gardner, & Walker, 1994). Formal rules and laws may have little effect on the behaviour of economic actors if they are constrained by social aspects of the institutional environment.

Chapter 2 examines socially-constructed and articulated definitions of power and decision-making for men and women in rural Kenyan households. The household is an institution central to structuring and reinforcing gender norms and gendered interactions. This research approach allows for examination of the gendered power dynamics played out within households, allowing for a deeper understanding of the level 1 institutions to inform gender policies and programs. Economic models of household bargaining promote focus on drivers of power, emphasizing transfers of resources to women as a key driver. Distinctly, this research examines how power shifts happen and the implications for the institutional environment, in this case the household and the community.

The research adds detail and complexity to the common economic understanding of household bargaining and power. It provides a community-based definition of power that is conceptualized largely as power over others; a zero-one conceptualization that by definition requires the man to lose power if the woman gains power. This result provides an explanation for why resource shifts to women have been known to produce unintended consequences and backlash (de Brauw, Gilligan, Hoddinott, & Roy, 2014; Roy, Ara, Das, & Quisumbing, 2015). However it also reveals a policy-relevant situation in which this conceptualization of power relaxes. The results indicated that when a man sees empowerment or asset growth of his wife as “family development”, allowing the family as a unit to increase in power relative to others in the community, he is more amenable to it. Thus suggesting that

family-centred interventions that engage husband and wife, though challenging to implement, are less likely to be met with resistance.

Chapter 3 similarly examines gender and power in Kenya, this time assessing the governance mechanisms of community self-help groups that impact women's effective participation. The study examines the rules-in-play and the effect of the social context in shaping and interpreting those rules. The results echo previous empirical work to show that participation alone is not sufficient to ensure that women have decision-making power (Kabeer, 1999). Groups must take responsibility for ensuring decision-making power of women members, not just *de jure* power. Also, pro-gender governance structures explicitly favouring women increase their feeling of legitimacy and thus group engagement. Finally, enhancing women's political experience and groups' understanding of pro-gender governance mechanisms are effective ways of improving women's participation.

Chapter 4 moves on to consider issues of agricultural policy and agricultural water management wherein reforms have devolved power from federal to local levels in Pakistan through a constitutional devolution process and an Irrigation Management Transfer (IMT). These types of transfers of responsibility seek to empower local authorities to advocate for local priorities (Mitchinson, 2003). Much of the institutional research on this topic examines the effectiveness of the transfer of responsibility for managing resources. And it examines the design elements or rules that objectively increase effectiveness.

In chapter 4, we consider the identities and interests of reformed agencies, as well as the other stakeholders that could influence the implementation, by mapping the complete network of actors, their perceived formal and informal linkages and influence. Once again with an emphasis on the rules-in-play, as perceived by experts and professionals in the sector, the chapter sheds light on potential barriers to the formal reform implementation by determining their shared beliefs about the reforms processes. The network maps indicated a lack of fit with the IMT structures as designed and the structures described by stakeholders. Adoption of IMT processes were likely impeded by weak perceptions of its importance among participants in the water management sector. Whereas the institutional structures for the constitutional devolution process, in spite of being in an early stage, were well-reflected in the network maps.

A number of studies explore and confirm the relationship between institutional weaknesses—in particular corruption and red tape—and challenges in business and trade facilitation. However, these have rarely taken place within the agriculture sector in terms of promoting agri-business development. Furthermore, because institutional dynamics are context specific, the quantitative approaches taken by most studies are not able to illuminate the distinct social and political realities underlying the institutional outcomes and incentives for economic actors.

Thus chapter 5 explores the policy and regulatory environment related to agricultural exports. Contrasting the formal regulations and the rules-in-play, the study explores the shared beliefs about

policy reform dynamics that determine the regulatory environment. Results show that, in Malawi, exporters are able to openly and systematically bypass cumbersome rules and regulations through patronage. Furthermore, most of the rules and regulations are only implemented bureaucratically, such as requiring permits. They typically are not implemented to the extent that they have broader social benefit other than generating a small amount of government revenue. Thus, decreasing complexity and opaqueness of the export requirements would likely have significant broad positive effects for supply chain actors and cost little to implement.

## 6.2 Cross-Study Lessons

This section presents lessons that can be derived from a comparative analysis of the different case studies presented in this thesis.

### 6.2.1 Understanding and Harnessing Shifting Norms

As discussed in Chapter 1, social embeddedness has significant and long-lasting impacts on economic activity. Related institutions—such as the household, the community, and associated social norms—are slow to change and the drivers of change are not well understood. The results described in this thesis provide some insights into mechanisms that may drive such change related to gender norms.

To begin with, the results suggest that social norms in the Kenyan study population for Chapters 2 and 3 are already slowly shifting. Specifically, social norms are in the initial stages of shifting from a paradigm wherein power is male dominated and occurs in terms of power over another person, towards a view of power with that is inclusive of women and requires unity within the family. Other empirical studies have found similar results throughout the world (Boudet, Petesch, & Turk, 2013), supporting this result and also indicating that gender norms are to some extent being globalized.

These results also confirm the role that programs and policies can potentially play in advancing this shift in social norms. Firstly, as discussed above, policies and programs can harness and reinforce households' views that traditional gendered power hierarchies can be overlooked in order to support development and advancement of the family as a unit. Secondly, women's participation in mixed-sex self-help groups was successfully promoted by national policies and development partner programs. While participation in groups does not necessarily shift social norms, we do find that self-help groups serve as a distinct parallel institution to that of the home—governed by constitutions and by-laws. Thus women's group participation does enable (though not ensure) women to push the boundaries of community gender norms. This opportunity is enhanced by policies and programs that support pro-gender group governance mechanisms and governance training for group members, especially women.

### 6.2.2 Socio-centric policymaking

The results from Chapters 4 and 5 indicate that in a developing country context the quality of the rules and laws as written do not determine their effectiveness. Across both case studies, government policy is developed from a government-centric perspective, not considering a number of critical unconsidered institutional factors. The unconsidered factors include, a) the capacity of the government to enforce rules and laws; b) social norms dictating rule-following; and c) the impact on transaction costs of additional rules. For instance, a common characteristic of regulations in the Malawi soybean sector is that they are bureaucratically enforced (for instance, an exporter is required to pay a fee and obtain the proper paperwork) but not substantively enforced in that the desired social impact is lost, as discussed above. Lessons from this work indicate that for policy to be effective in terms of guiding social and economic behaviour it must take a realistic and socio-centric view, understanding the behaviours, incentives and norms that guide economic actors, particularly in a context of low enforcement capacity.

### 6.3 Methodological insights and limitations

In addition to the thematic contributions discussed in the previous section, a major aim of the thesis was to make methodological contributions: Firstly in terms of the rigorous application of a new set of research methods—Net-Map and its family of associated tool. Secondly, in terms of the application of a research paradigm, to which these tools are well suited, that is rarely applied in agricultural economics. The combined body of work in the preceding chapters demonstrates that broadening the methodological toolkit of agricultural economists, in terms of what questions are asked and how they are answered, has the potential explain social phenomena critical to the well-being of the rural poor and promote progress in the field towards a more realistic and theoretical approaches.

While these methods and research approaches, applied to agricultural development, begin to fill important knowledge gaps, they also come with challenges and limitations. Firstly, it is important to note that Net-Map and related tools are methods of data collection, not a methodology. That is, they do not require a particular epistemological approach, nor do they provide a body of theory by which to assess the results. These and other aspects of the research design must be determined by the researchers depending on their discipline and the specific application. Furthermore, validated analytical and data collection approaches can be borrowed from other research approaches.

For instance, an individual Net-Map interview can be viewed as a semi-structured qualitative interview and a group Net-Map interview can be approached like a focus group, to which standard qualitative analytic and data collection techniques can be applied. It is more difficult to determine an appropriate analytical approach for power data. And while network data can be analysed with network analysis, multiplex networks are not common in SNA. Finally, the layering of different types of data associated with different research approaches, makes it more challenging to determine a valid sampling approach.

However, the innovations associated with Net-Map tools, while raising some methodological changes, are also part of what makes them unique and valuable.

Net-Map uses social network data to reflect the structure of a complex situation in which many actors engage. Net-Map explicitly allows for and promotes the use of multiple links overlain on the same network of actors. However, a more common approach to Social Network Analysis (SNA) is to choose a single link depicting exchanges among actors for a given study. In particular, Net-Map emphasized combining both formal and informal links. Schiffer and Hauk (2010) illuminate the relationship between links and power towers in a Net-Map (the elements of Net-Map are described in detail in Chapter 1), explaining that the different links relate to the different ways that actors exert power in a network.

However network analysis techniques do not differentiate between different links. Thus to analyse the network data one must either combine all the links as though they are the same, or at least equal to each other, or analyse each link separately, thus losing the value of the combined links and perhaps missing characteristics of the complete structure. To address this, we typically analyse and show a complete combined network as well as networks of the individual links. The complete network allows for general analysis of characteristics of the network. However, this assumes that each type of links is the same in terms of depicting the structure of the network. For instance, it assumes that informal and formal ties can be equated, and that different types of informal interactions are equally reflective of the network structure. Thus it is common, as demonstrated in Chapter 4, to also analyse each link separately and discuss the implications related to that particular type of interaction, in which case we are able to be more specific about the interpretation of the data but lose the value of having multiple links.

Relatedly, the interpretation of power scores is not straightforward. Power is a nebulous concept that evades precise and universal definitions. However, applications of power mapping in a focus group are relatively easier to interpret as the group (if well-sampled and well-facilitated) can come to consensus both on the definition of power and on the relative scores of each actor in the network (Smithson, 2000). However, when individual interviews are used, the researcher must determine how to synthesize the power scores attributed to each actor by each interviewee. This can be done by taking the mean score for each actor, although this approach obfuscates the discrepancies across responses, which may be interesting. For instance, an actor with some very high scores and some very low may be very different from one who has all medium scores. Alternatively, one could weight certain actors' responses as more important than others. For instance, an actor with direct ties to another may have better information about their power.

Finally, in SNA, one typically defines a population (a classroom of students, a network of companies in a particular sector, or the employees of an organization) from which a researcher will collect data (Hanneman & Riddle, 2005). However, multi-actor governance and policy networks do not have clearly

defined boundaries. There will typically be actors peripheral to the network but still involved in some ways, and the researcher must determine whether or not to include them, usually through an actor generation exercise in advance of or in the process of data collection. If the process of generating actors can be aligned with a typical purposive sampling approach for qualitative analysis, then the sample can be viewed as valid both for network analysis and for qualitative textual analysis.

Furthermore, determining at what scale to define actors is also challenging. For instance, typical network data will define the scale across actors (all individuals or all companies). However, networks to which Net-Map is typically applied usually require more flexibility. Sometimes a donor organization will be an important actor, as will a high level politician distinct from her organization. The process of determining the lowest scale necessary to demonstrate the different links, power, and goals of important actors is the job of the facilitator. An inability to do so will yield either a chaotic crowded map or a map devoid of interesting detail.

The challenging aspects of undertaking research with Net-Map must be counteracted with a heavy reliance on the textual data. The in-depth discussions that necessarily come out of the interview process can be relied upon to both triangulate and interpret the other aspects of the data.

#### 6.4 Prospects for further research

There are a number areas of research that would benefit similar approaches to those laid out in this thesis examining the interplay of formal and informal institutions. The following two areas follow on the research laid out in this thesis and are areas wherein examination for formal and informal institutions is particularly important. .

Firstly, the rent-seeking and patronage uncovered in Chapter 5 are significant sources of transaction costs in the developing country context. Addressing these issues will require a better understanding of the drivers of social norms: what makes corruption in any form socially acceptable to most people in a particular society. In a historical review, Uberti (2015) determines that the current body of theory on corruption fails to capture to social determinants of corruption and thus fall short in their effectiveness. Thus, dedicating more effort to understanding social aspects of corruption in Malawi will allow us to design programs and policies that actually work and drive change in intractable areas.

In addition, in the area of gendered group participation, direct observations of group bargaining would add to our understanding of the power of gendered approaches to group governance, as described in Chapter 3. Furthermore, experimental games that take into consideration gendered priorities and perceptions and then determine repeated bargaining outcomes—in groups and in the household—would provide valuable insights on top of the outcomes of Chapters 2 and 3, as show in related studies (Cochard, Helene, & Hopfensitz, 2009; Doss, 2012).

In general, the application of qualitative and mixed-methods approaches to the examination of formal and informal institutions have the potential to significantly improve our understanding of institutions for agricultural development. In addition, there is potential to better understand the social barriers to development policy and push for change in previously intractable policy areas.

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