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Market Women of Northern Ghana within Value Chain Development : The Cases of Chilli, Tomato and Maize

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Market Women of Northern Ghana within Value Chain Development – The Cases of Chilli, Tomato and Maize

Dissertation

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Abstract

Trade is a widespread occupation for women in West Africa; such as petty traders that are involved with informal trade mainly. The case in Ghana is different as most of these traders are facing hostile treatment and harassment from many sides. Nevertheless, in development cooperation projects, rural economic development and development of its population is often targeted; whereas solely rural development projects have become projects to support value chains and its stakeholders. These value chains start at agricultural production, further on to processing and altering the raw product until its final condition for sale to the end consumer. The entire value chain deals with many diverse actors in rural and urban areas and also diverse areas of economies, such as micro and small enterprises, and other in private sector or public sector. Therefore, development cooperation dealing with value chain enhancement would address all actors. In Ghana, mainly production side and post-harvest management are dealt with and trade or intermediary trade is circumvented. Some projects openly state that they leave out traders from their interventions in value chains.
Most prejudices of this type have derived from historical events and official institutions, also a lack of knowledge. Traders are by contrast those who are coordinating streams of goods from beyond borders to supply to domestic markets and vice versa, manage large quantities for export. The reason that women continue to work in trade is that they barely have alternatives.

Keywords: Traders, Value Chains, Rural Development, Ghana.

Zusammenfassung

Eine geringe Wertschätzung von Zwischenhändlern wie in vielen Entwicklungsländern ist auch in Ghana vorzufinden, was einerseits aus geschichtlichen Gründen aber auch aus Unwissenheit entsteht. Der Bereich der Zwischenhändler ist vorwiegend durch Frauen aus ruralen Gebieten betrieben, die Analphabeten und Autodidakten sind. Der Handel ist auf jeder Ebene organisiert, von den Kommunen über die Distriktstädte, die regionalen Hauptstädte und auch über die Grenzen des Landes hinaus. Die Händlerinnen organisieren damit den Warenfluss von den entlegenen Plätzen der Produktion oder aus dem Ausland, um es zu den Märkten mit der Nachfrage in den Ballungszentren und den großen städtischen Märkten zukommen zu lassen. Nichtsdestotrotz werden bei diversen Programmen der Entwicklungsorganisationen die Händler und vor allem Händlerinnen außen vor gelassen, die Konzentration und Aktivitäten wird auf die Produktion und teilweise auf die Handhabung nach der Ernte fokussiert. Der Wertschöpfungsketten-Ansatz verfolgt jedoch *per definitionem* alle Akteure in der *Kette* der Wertschöpfung, allein hierbei fehlen die Händler in der Umsetzung. Die Arbeit soll daher aufzeigen, welche Funktionen die Händlerinnen in den drei ausgewählten Fällen übernehmen und wie somit die Entwicklung von Wertschöpfungsketten optimiert werden und letztendlich die beteiligten Händlerinnen zu einer Verbesserung der Wertschöpfungskette beitragen können.

Schlagwörter: Händler, Wertschöpfungsketten, ländliche Entwicklung, Ghana.

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Abbreviations

ACP	African Caribbean and Pacific
ADB	African Development Bank
CIRAD	Centre de cooperation internationale en recherché agronomique pour le developpement
DCO	District Cooperatives Officer
DFID	Department for International Development
ECOWAS	Economic Community of West African States
EPA	European Partnership Agreement
ERP	Economic Recovery Program
FASDEP	Food and Agriculture Sector Development Policy
FAO	Food and Agriculture Organisation
GHC	Ghana Cedis
GIZ	Gesellschaft für Internationale Zusammenarbeit
GlobalGAP	Good Agricultural Practices, Global
GNAFF	Ghana National Association of Fishermen and Farmers
GPRTU	Ghana Private Roads and Transport Union
GTZ	Gesellschaft für Technische Zusammenarbeit
HACCP	Hazard Analysis and Critical Control Points
IAASTD	International Assessment of Agricultural Knowledge, Science and Technology for Development
IIED	International Institute of Environment and Development
IMF	International Monetary Fund
INRA	Institut national de la recherché agronomique
M4P	Making Markets Work for the Poor
MDG	Millennium Development Goals
MIC	Middle Income Country
MIDA	Millennium Development Authority
MOAP	Market Oriented Agriculture Programme
MoFA	Ministry of Food and Agriculture
MoTI	Ministry of Trade and Industry
NAFCO	National Food Buffer Stock Company

NCP	National Convention Party
NGO	Non-Governmental Organisation
NIE	New Institutional Economics
RADU	Regional Agricultural Development Unit
SAP	Structural Adjustment Program
SARI	Savannah Agricultural Research Institute
SDC	Swiss Development Cooperation
SDG	Sustainable Development Goals
SWOT	Strengths Weaknesses Opportunities Threats Analysis
TCE	Transaction Cost Economics
TOWS	Threats-Opportunities Weaknesses-Strengths Matrix
UNIDO	United Nations Industrial Development Organisation
VC	Value Chain
WFP	World Food Program
WHO	World Health Organisation
WIAD	Women in Agricultural Development (MoFA)
WTO	World Trade Organisation

Foreword

It is standard and typical for discussions of rural development policies and development approaches focus on producers and farmer-to-market-linkages. Despite policies and operations that seek market access for farmers or often also proclaimed “market access for the poor” must go hand in hand with - traditionally mistrusted - traders and middlemen. These are often the missing link for disadvantaged producers in remote rural areas to their so truly needed market access and cash income generation in agro-food value chains. With policies and rural development approaches that circumvent a group of stakeholders in each value chain respectively, success is questionable; additionally, actors should clarify whether to impede income-generating activities along agro-food value chains or rather to allow and create income possibilities. Such options for an optimised value chain development are analysed and illustrated in the following study.

1 Introduction

Ghana is a relatively wealthy country and has been declared MIC[1] recently, compared to its neighbouring countries like Burkina Faso, Togo or Côte d'Ivoire in West Africa. Nevertheless, a distinct discrepancy prevails in Ghana itself between Southern and Northern part of the country. Ghana has more than 70 different ethnic groups that are living together, with regionally different dominating ethnics. In South of Ghana, mainly inhabited by *Ashanti* and *Fante*, whereas in Northern areas, largely *Dagomba*, *Hausa* and *Gonja* are predominant groups. Ghana was colonised by the British and gained independence in 1957 as the first country in Sub-Saharan Africa. Income levels have officially increased nowadays; albeit no current recent Gini coefficient[2] being available, discrepancies between North and South and rural and urban areas in Ghana have increased, as no income increase in poorer regions for past four years occurred.

Since the declaration of Ghana's MIC status, some of the numerous development projects have had to end although not much of increase of improved living standard is perceivable in the country apart from its urban population. All over the country, many international organisations are involved with a diversity of projects in various sectors. Some projects are addressing rural economic development, such as the Market Oriented Agriculture Programme (MOAP) of GIZ (Gesellschaft für Internationale Zusammenarbeit) involved in value chain development as well as some others who deal with one or other supply chain approaches. Value chain approaches have gained popularity since such approaches target all aspects of rural economic development aspects: These include working on the improvement of agricultural production and productivity, processing and marketing and increasing marketing options eventually, addressing all actors along a value chain. But in known cases in Ghana, projects deal mainly with production and partially with post-harvest management or in specific cases with assistance in export advancement. All various sectors are addressed, such as private sector, public sector and naturally third sector. One special group of actors within value chains is nevertheless, circumvented. These are traders, in Ghana often called market women.

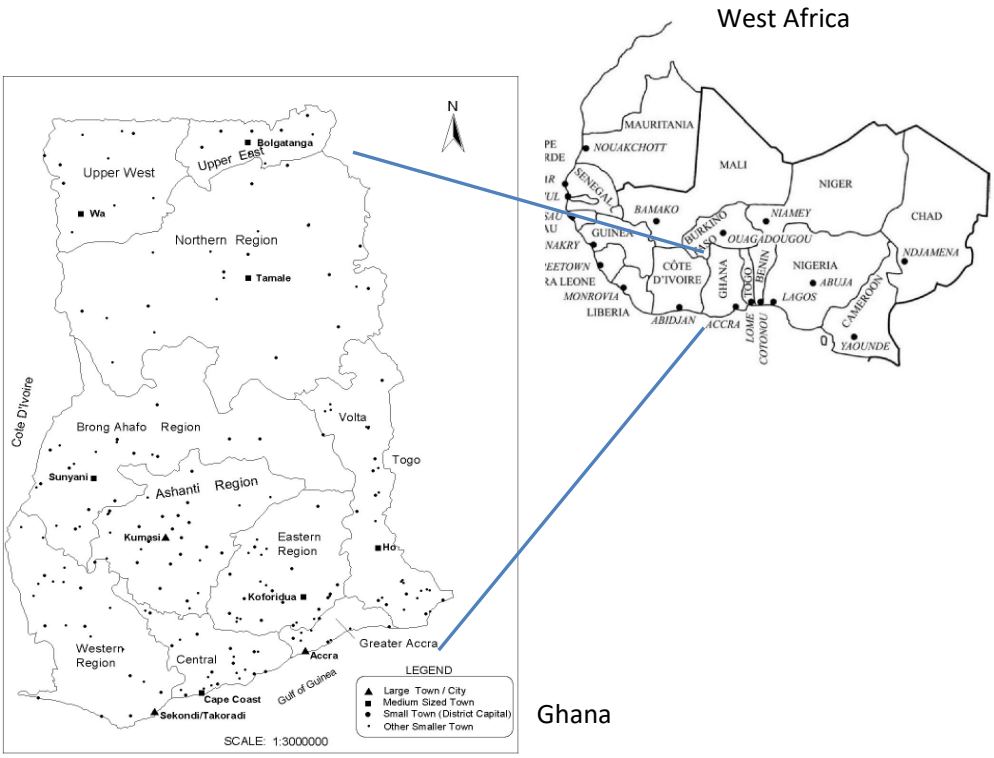
Therefore, the present study is looking at the role of market women in Northern Ghana with three study cases; two of vegetables, which are chilli and tomato; and for comparison reasons a grain commodity that is maize. It is envisaged to clarify the role of market women in the mentioned commodities' value chains and to explore their actors' relations among each other in order to create comprehension what kind of role market women and market queens take up in Northern Ghanaian markets.

[1] MIC (Middle Income Country), World Bank category for developing countries, according to World Bank indicators.
[2] Gini coefficient as of 2006 stated as 42.8 at e.g. UNDP webpage http://hdrstats.undp.org/en/indicators/67106.html

In comparison to other regions in Ghana, its Northern area is less densely populated, has less agricultural production and little rainfall, as it is a semi-arid area. The area covers about 40 percent of the country's total area and marks beginning of Sahel Belt, mainly savannah with typically semi-arid climate. The area is characterised by two seasons, so-called 'dry season' with droughts accompanied with (involuntarily or deliberately set) bushfires and a 'wet season' that brings short and massive floods. Climate changes are noticeable here, as onsets of e.g. rains have delayed increasingly, amounts of rainfall vary increasingly, and drought times expand. The rural areas of Northern Ghana have common characteristics of developing countries' rural aspects, such as comparatively lower income levels with less than 1.25 USD per day, poor infrastructure, subsistence farming, in addition to high child mortality, undernourishment and unemployment paired with rural-to-urban-migration. The urban centres in the North are three, according to the three Northern regions' capitals; Wa (Upper West), Bolgatanga (Upper East) and Tamale (Northern) with the latter being the largest city of approximately 0.5 million inhabitants but also being one of the fastest growing cities in West Africa. Tamale is functioning as a 'nodal' city in the North, serving as a commercial centre for all three Northern regions.

The diverse challenges within Northern part of Ghana bring in many international development organisations, governmental as well as NGO (Non Governmental Organisation) and other organisations. The variety and density of projects are high compared to Southern regions of Ghana where it is rich in resources, higher population density, industry, higher employment rates as well as a higher standard of living. The diversity of programmes, interventions and projects address stakeholders of different areas, have different approaches and sometimes clearly contradicting or diverging project philosophies. Most of the rural households can choose from a bunch of projects to take part in and are opportunistic to each of the organisations' advice and recommendation regarding farm management, household management and or cultivated crop. Projects normally last some years including financial support for rural households for activities carried out. Such project phase is determined by a selected approach and its focal commodity or crop. Therefore, it is common that in some areas one particular crop may be cultivated whereas in others not and continuity is barely anywhere to find in Northern regions.

Figure 1.1.: Map of West Africa and Ghana with regional boundaries and regional capitals.



Source: Africa Studies Quarterly[3]

In addition to these influences, land rights and land issues do influence amongst other domestic agricultural production and productivity. Land disputes have created many conflicts in the past, especially in the North-Eastern area. Generally, for its North, men hold land titles and allocate some parts to their women.

The 'Gold Coast', as parts of Ghana were called in colonial times was colonised by the Portuguese, the Dutch, British, Danes and Swedes and Germans. The Portuguese are reported to be the first Europeans to have had contact with so-called Gold Coast and their inhabitants in the 15th century. The end of the 16th century marks the arrival of Dutch traders of gold. In the mid 17th century, other Europeans arrived on the Gold Coast, many English, Danes and Swedes; later also French and Prussians settled military strategic points in former Ghana. Until the late 19th century, new colonies were acquired as e.g. the Togoland by the Germans, which marked eastern Ghana and most of today's Togo national borders. In-depth studies for an orderly chronological explanation of colonies and historical analysis of the creation of protectorates other sources apply (DAVIDSON 1978, KI-ZERBO 1993). With British control, rule and law were imposed on to a variety of peoples with grown tribal hierarchies. The country's gold mining contracts date back to British rule as well as other arrangements and contracts that are still operative up to date. After achieving independence in 1957, the first

[3] http://www.africa.ufl.edu/asq/v8/v8i2a3.htm

president Kwame Nkrumah, a renowned advocate of Pan-Africanism, implemented a democratic and social policy.

These policies included strengthening of national domestic industrial progress and food industry (ARYEETEY and KANBUR 2005). Soon after, in middle of the 1960s, Ghana was struck by high inflation and although it had kept a stable and grounded foreign currency surplus it was suddenly facing severe crisis and succeeding debt. The country experienced a coup that overthrew Nkrumah, and the subsequent leader brought the World Bank and IMF's (International Monetary Fund) debt relief programs into place. The most severe changes were implemented through application of the Structural Adjustment Program (SAP) from 1983 until 1999 that is claimed to have been the most successful throughout African countries. The SAP conditions implemented were liberalisation, deregulation, privatisation and reduction of household expenditures (for education and health) (*cp*. DANAHER 1994, as well as APUSIGAH (2002), WEISSMANN (1990), ASIEDU-SAFORO (1989)).

The liberalisation targeted the domestic markets and included removal of any price manipulation. The authorities suspected traders to be affecting prices and thus, distrusted traders of threatening the SAP conditions. As a consequence, the success of implementing conditions for receiving the IMF (International Monetary Fund) would have been at risk. Therefore, local authorities such as police were quick in identifying traders as a source of the threat. Traders were thus, easy to locate and insulted, as well as subject to police violence, flogged in public, their stands and goods destroyed. Until date, animosity persists against traders, the market women.

Ghana's recent population figures according to provisional census data from 2010 were a total population of 24,223,431 with 48.7% male and 51.3% female. The Northern Region comprises 2,468,557 in total, Upper West with 702,110 persons and Upper East with 1,046,545 (GHANA STATISTICAL SERVICE 2012). The literacy rate is (for age 15 and above) 65%, for women, it is 74% in Northern Region and men 55% (GHANA STATISTICAL SERVICE 2009).

1.1 Research Field

In general, value chain development is addressing all various aspects of production of agro-food products. In Northern Ghana, value chain focus lies on food products that are for national, domestic markets. The value chain approach addresses the increase of value in the chains stages especially through changing specific steps in processing e.g. improved processing standards to improve produce hence, increase its value eventually and its price. Value chain development thus means improvement in various singular stages and the related actors; be it producer, trader, processor, seller or vendor. Such approach addresses all actors being a part of a value chain.

In practice, nevertheless value chain projects focus chiefly on production and post-harvest issues. One central area, which is trading of goods, is left out of the value chain enhancement and its actors are circumvented. Traders and organisations of traders have existed for many hundred years in West Africa and beyond; some of the ethnic groups living in Ghana involved in commerce like the *Soninke* people from the 8th century onwards (MASSING 2000) who influenced trade commerce and brought Islamic scholarship into northern parts of Ghana. In the 12th century their trade and religion also strongly influenced other ethnic groups like the *Dagomba* that are related to the *Mossi*, who also live in parts of Burkina Faso. Other traders similarly organised according to their affiliation to ethnic groups or tribes operate in other countries all over Northern West Africa; being active cross borders and or at national, domestic markets.

The field of research undoubtedly is also a field in which Ghanaian nationals from other regions, namely from Southern Ghana work in Northern regions and bring in different cultural and traditional patterns and structures. A high variety of traditions and cultures is characteristic for Ghana and are one reason that contributes to its markets so colourful and vivid.

Nevertheless, knowledge about markets in general and Ghanaian markets specifically is faint and interwoven with prejudices. Knowledge of economics and trade exists and is yet barely applied to reality markets although a relatively well functioning education system exists. The field of research is the traders' and those known as 'market women' or 'intermediaries' respectively, who are encumbered with accusations and mistrust. Not only in Ghana but also in other countries of the developing world. Therefore, it is not uncommon that traders and intermediaries are regarded as distorting or impeding and exploiting poor producers. In any case, such traders and market women are not part of any development programme let alone addressed by any national programme related to e.g. rural population or rural development (*cp*. ZEZZA et al. 2007).

1.2 Objectives of Study

Agricultural and horticultural food value chains in Ghana are poorly developed compared to other countries with MIC status. Therefore, rural economic development interventions were set up to address value chain development. Such intervention would target improvement of production, processing, and post-harvest management, as well as value chain linkages and value chain upgrading amongst other issues. To look at linkages in value chains means dealing with communication of partners or stakeholders along the chain.

One assumption would be considering the stakeholders as knowledgeable in their various places, bringing in their acquired know-how and skills. Development interventions look at capacity building regarding value chain improvement, e.g. increasing group communication, assistance in setting up standards for quality, compliance with standards, or support of agreements and conflict mediation. Albeit existences of many projects in the field of rural

economic development and thus, value chain development, still only producers are addressed, and relevant actors that are relevant for inputs, increase of production or productivity. For such reasons, often it is the governmental staffs of ministries that is among those who benefit from such development projects. Trade and other post-harvest management such as storage facilities have not been a priority on the agendas. None of the recent and current projects is addressing those actors transferring produce to markets; those who are notably those actors taking care of crop supply and markets.

Subsequently, it can be stated that development interventions and their partners are circumventing traders. Although such traders in Ghana seem to smoothly and successfully coordinate demand and supply, trader-groups are well connected and strictly organised. Therefore, this study's objective is to describe and analyse functions of market women groups; market women. The examination is within individually selected commodities' value chains that seem suitable for research and able to produce tangible results.

Despite a widely met ignorance by programmes and projects of these women traders, market women perform as a renowned known authority supervising market courses. For that reason, this study seeks to identify market women's positions and functions in value chains. Since trader-groups act similar as local authorities would, it is to examine whether the term of institutions may be applicable in these cases. Subsequently, the business environment requires to investigation and options for integration of market women or trader-groups into development interventions are identified.

As markets in Ghana are being increasingly deregulated over time and it is questionable whether local and inherited systems with institutional settings can be included or their related actors would be progressively left out. It is intended for analysing market women groups and their functions and positions in value chains, whether it is recommendable to support an integration of market women in value chains or not. Eventually, opportunities and recommendations should be presented for value chain improvement or upgrading if possible and thus, to subsequently allow sustainable value chain development.

For this study, the central objective is:
A description and analysis of functions and roles of market women groups; with the following subordinated objectives that are:

i. Identifying market women's roles and functions in value chains;
ii. Analysing market women's contribution to value chains;
iii. Exploring impacts of integrating market women groups;
iv. Determining opportunities and defining recommendations for value chain upgrading through integration (or exclusion) of traders.

1.3 Research Questions

This study is focussing on creating knowledge according to the above-formulated objectives. Since literature is scarce and lack of knowledge persists in the field as well, the creation of understanding about market women groups' function is a target. To aim at analysing their functions, the main research question is formulated as follows:

What are the specific roles of traders and what actions determine their existence as traders?

The following sub-questions emerge from the main research question:

i. What factors are enabling market women and market queens to perform their roles?
ii. Which specific contributions realise market women in value chains?
iii. What are impacts of integration of market women to value chains and beyond?
iv. Which options of value chain upgrading through integration of market women accrue?

According to these research questions derived from the earlier stated study objectives, chapters and sections will evolve the necessary steps of examining theory and practise; to bring all relevant issues forward and result in answers and an outlook.

1.4 Purpose and Significance

The purpose of this study emerged through the researcher's practical work in development cooperation in Northern Ghana. Two years of development cooperation with a utilisation of value chain approach; as value chain analysis have become increasingly accepted as an analytical tool as well to aspired tool for "value addition used by governments with the support of different cooperation and development agencies" (RICHTER 2006: 7).

Many studies were conducted for production aspects and or producers within value chains at different times were also analysed. On the contrary, organisations in the area have barely any knowledge about a specific group of actors such as traders and market women or market queens, not to mention markets or trader roles in general. Following systemic approaches in development cooperation to assist in developing value chains, which marked an understanding that there are other relevant stages than production. Albeit the trend in development cooperation projects of systemic approaches and understanding still, the general focus lies in productivity, production and producers. None of the projects targets traders in rural development as relevant actors or integral part of the whole chain. It needs to be emphasised nevertheless, without taking traders into account, a thorough value chain approach is barely able to implement.

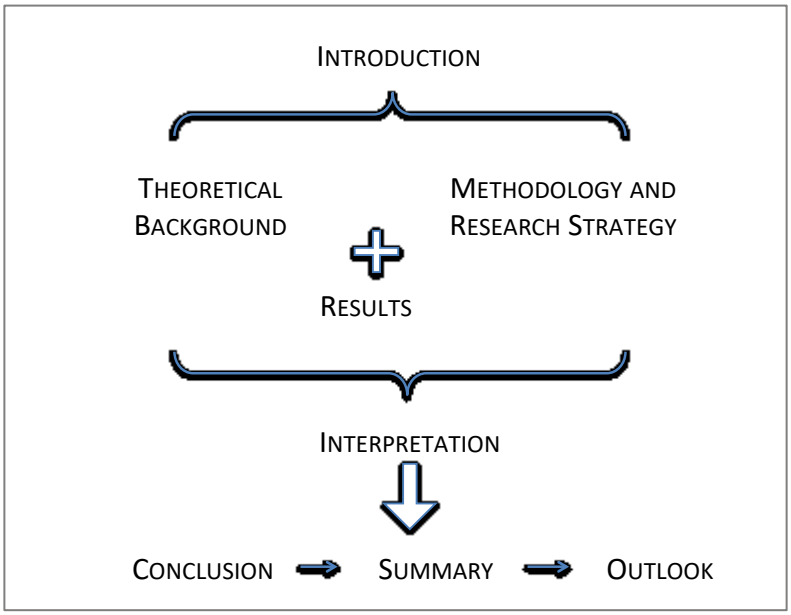
The above circumstances and lack of understanding in combination with prejudices corroborated the need and researcher's interest to study traders, aka market women and to analyse reasons for this knowledge gap. Literature regarding producers and production or

productivity, though, a large quantity of diverse literature and studies can be found, but barely any for traders. The majority of the research is done for traditional topics or popular niche topics and fields that are operationalisable; such work is manageable regarding data organisation and other information. It remains an assumption that other areas such as trade are permanently under-researched. Therefore, a clear research need was identified to provide information and analysis regarding such value chain actor group.

1.5 Organisation of Study

The study is organised in six chapters. In the first chapter that is the introduction of the topic area and the study, subsequently five chapters follow. The second chapter is dedicated to a description of theoretical background, looking at three main areas: (i) Value Chain Analysis and ValueLinks Approach, (ii) Institutional Economics in organisations, and (iii) Social Network/ Social Capital Theory. These are followed by the third chapter which presents a methodology and research strategy; a detailed description of research methods and tools and choice of methods, including pointing out limitations of this study. The then following fourth chapter is for the presentation of results: Findings regarding market women and market queens, specific commodity value chains and relevant stakeholder analysis. The fifth is the interpretation of findings and correlated stated detailed interpretation of specific value chains and trade, the function and roles' interpretation regarding market women organisations, the three cases' relevant stakeholder analysis' interpretation for integration of traders and options of value chains upgrading. The remainder of the study is encompassing summarising analysis' results and interpretations and depicting conclusion.

Figure 1.2.: Organisation of Study



Source: Own elaboration

2 Theoretical Background

The chapter of theoretical background is a selection of various theories that are associated to trade in African Sub-Saharan countries, as well as related to informal institutions, and interrelated with sociological economics. However, the challenge is to narrow down theories and their postulates as far as suitable and appropriate but to broaden the view through combining theoretical frameworks. In this regard, some more practice-oriented approaches will be included that are constructive for understanding market women's organisation in northern Ghana.

It begins with a description of trade and Ghana's economic situation from independence onward with a focus on agricultural trade-related matters. The description is not limited to the Northern area, although particular attention will be drawn to sources explaining issues of the country's North. The next step is the theoretical background to value chain analysis and the ValueLinks approach. The value chain concept is a concept for a conceptualization of complex processes, so as the ValueLinks approach. Therefore, ValueLinks is a practice-oriented set of tools and a hands-on tool to project, understand and analyse value chains and their environments. The third and last subchapter is dedicated to theories of economics and of sociology and those approaches in economic sociology, namely New Institutional Economics, Embeddedness Argument, Social Capital Theory, and Institutions and Institutional Settings.

The aim is to bring light to the topic of trade and traders in Northern Ghana under the present circumstances of specific economic policies and regulations. The focus lies on de facto actions of traders in those value chains in question; beforehand theoretical approaches and concepts will be depicted to frame or to contrast the study's findings.

2.1 Trade, Traders and Ghana's Economy

Searching for literature on topics of West Africa or Sub-Saharan countries and their markets, and related aspects such as trade, traders and structures of such organisations, it seems only very few authors reveal tangible findings. Astonishingly, only one author out of the many is looking at markets in the region in question with a different and unadulterated angle.

As FAFCHAMPS (2004: 3) there explains felicitously:

> "While most economists now acknowledge that ownership rights must be clearly defined for markets to exist, few go beyond the idea that an efficient court system is necessary and sufficient for market transaction to take place. Much of economics continues to rest on the assumption that economic transactions are anonymous and economic agents perfectly interchangeable, even though other social scientists have often insisted on the personalized nature of much market exchange. (…) The time is not far when Africa was widely thought to escape the rule of the market. Pre-colonial realities were idealized as gift economies or pre-capitalist collectivism, while many post-independence rulers were declaring their attachment to pan-African socialism. As a result, the massive development of market activity that

> accompanied urbanisation and (relative) modernisation over the last four decades has gone largely unnoticed. Ironically, one could argue that sub-Saharan Africa today is more market oriented than many advanced countries. (…) market arrangements and institutions take many forms, and it would be misleading to lump them together into a single "informal sector". Studying markets in Africa forces us to rethink the very nature of markets." (FAFCHAMPS 2004).

As many economies of developing countries that were colonised, also Ghana has not notably altered from their economic orientation in colonial time. It is that ancient constellations and contracts or agreements through new policies may be renewed or changed, but such old inherited structures are still intact. Opportunities to benefit from trade exist, and advocates of trade liberalisation would argue that it would lead to economic growth and development. The difficulty is to combine theories and empirical aspects of policies that intend to benefit one partner more than the other. These "Structural Adjustment Programs were conceived outside Africa by the industrialised countries whose primary interests lay in expanding their markets, increasing their exports and securing debt payments through a carrot and stick policy of providing loans to a fiscally bankrupt Third World governments in exchange for fundamental reforms in their political economy." (OULD-MEY (1992) in ADDO and MARSHALL (2000: 367)).

The policies that had to be implemented for fulfilling of IMF's development loan conditions meant privatisation, deregulation of markets, reduction of trade barriers, and reduction of governmental budget for health and education, but increase military expenditures. Considering such policies, it does barely astonish that food security, agricultural sector, domestic market structures, and institutions lack support (ISSAH 2007) until date. Nevertheless, a detailed and thorough exploration should commence.

It seems an easy affirmation that traders were simply one group of the obvious obstacles that were impeding Ghana's implementation of policies and regulations of the IMF's SAP (ARYEETEY and KANBUR 2005). Therefore, traders had to be abolished, to be abandoned until SAP would have free way and bring economic growth, health and prosperity. BRITWUM points out that CLARK (2010) explored scapegoating of traders by colonial authorities already in the aftermath of World War II. Mainly in the late 1970s the persistent blame of traders resulted in "violent harassment of women traders by soldiers of the ruling junta" (CLARK and MANUH in BRITWUM 2013: 53). If traders were already subject to accusations before the IMF's SAP conditions, it is necessary to clarify the reasons why traders were impeding the SAP and or hampering other business activities and partners; or other reasons.

2.1.1 Trade in West Africa and Regional Markets

Questions about assessing trade in Africa, or in specific regions as Sub-Sahara Africa are many. Therefore, an overview of trade in this region will be provided. MEILLASSOUX (1971) points at the different perspective or approach that is required to assess development of trade

and markets in West African countries. In one research publication from 1964 where authors cited MEILLASSOUX that he "urged future researchers to remember that sources must be assessed not with reference to the principles which apply to the Western market economy... but with reference to the character of pre-industrial economies"[4] he underlines in his Indigenous Trade and Markets (MEILLASSOUX 1971) that Eurocentric approaches still dominate literature.

The twenty-something papers investigated on evidence collected concerning long-distance trade in West Africa; and exploring "their integrity, continuity and flexibility of that regional trading network"[5] at the end of the nineteenth century. One of the significant studies of economic assessment of employment is HART'S anthropological study (HART 1973) with which he increased the informal sector's academic and politic attention. Through claiming that informal employment is often misconceived as 'low productivity', 'underemployed' or called 'traditional sector', it also requires differentiation regarding legitimate and illegitimate activities (1973: 68). Whereas informal solely means that there is not such employment as a "regular or permanent work on fixed rewards" (1973: *ibid*.) and he explicitly explores employment forms of *Frafra*[6] traders that migrated to Accra. According to HART, *Frafra* traders specialized in specific commodities and he assumes their choices depend "on supply sources, (…) information control, trust and co-operation" (HART 1973: 71). Their engagement also is varying much; as full-time traders or traders who bring goods to "the South and return immediately" or as traders who come in periodic visits or wholesalers – or such traders that collaborate with other colleagues to combine all activities (*ibid.*).

Nevertheless, dispute and discussions still continue to date as publications like NDIAYE (2008)[7], which present a serious need for economic reconsideration of informal activities. The study explores a crucial role to cushioning economic crisis effects through informal cross-border trade. The contribution of informal trade is considered as Africa's Real Economy as reports estimate "an average value of informal cross-border trade in Southern African Development Community (SADC) region of USD 17.6 billion per year" (NDIAYE 2008: 2). The report emphasises that trade is the "most important source of employment among self-employed women of Sub-Saharan Africa providing 60 percent of non-agricultural self-employment" (*ibid*.). A similar conclusion draw a group of authors of an OECD study that explain that informal trade contributes a significant part in economic development in African countries (LESSER and MOISÉ-LEEMAN 2009).

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[4] A review by PERINBAM in Journal of Economic History (1972) citing parts of introduction in "The Historian in Tropical Africa" from 1964.

[5] On the same publication, a review by MANNING in The International Journal of African Historical Studies in 1973.

[6] *Frafra* is an ethnic group that inhabits southern Burkina Faso and northern Ghana.

[7] A UNIFEM paper, Africa Section in collaboration with International Trade Centre.

Some sources perceive a positive contribution by trader associations such as PEPPELENBOS (2005) who offers a brief yet interesting study on commodity-based trader associations. These have flexible network organisations of independent micro-entrepreneurs who cooperate on the basis of interpersonal trust. Long-term customer relationships with retailers are crucial for the traders' operations. According to PEPPELENBOS, the food marketing system is characterised by "a large numbers of micro-enterprises" (PEPPELENBOS 2005: 5) operating under rapidly changing trading conditions in a "high-risk environment with hardly any support from formal legal or financial institutions. In this context of uncertainty, networks of interpersonal relationships are the most effective form of chain organisation" (PEPPELENBOS 2005: 8) as he concludes. There are also sources that favour combating informal trade, as STECK (2007) or AWO (2010) that claim traders are cheating and exploiting producers or presume formal trade being legal and thus, assume informal trade as illegal trade (ELLIS and MCGAFFEY 1996). Other authors even perceive traders as distorting agents in so-called crucial (food) markets (NINNIN-MASSENET and RIBIER 1998).

The following presented theories and approaches are to bring forward historical aspects, previous developments and explanatory approaches and theories to evolve a better understanding of traders and their organisation within their business environment in Northern Ghana. Apart from historical evidence of traders that were located near the coast e.g. *Ashanti* that caught and sold slaves to colonial powers, sources are few. The very few sources that depict traders travelling through Mauretania, Algeria or Niger and Mali to today's Ghana are rare, e.g. MCKIM (1972) compared to some anthropologic scientists' records. These narrate of various tribal structures that divided trading of particular goods amongst them; trading these from north-western Africa to areas like the formerly called 'Gold Coast'.

Furthermore, FAFCHAMPS postulates that research "… has failed to identify a separate role for the *economic agent par excellence*, namely the trader" (FAFCHAMPS 2004: 12 italics by author). Some sources in literature could suggest a kind of historical norm that in the region, indigenous structures were already neglected or even destroyed in colonial and post-colonial eras (VON OPPEN 1993). Keeping in mind that historical issues undoubtedly play a significant role, it is to look at present characteristics of economy and trade or bilateral trade agreements, with the EU e.g., and other factors that may limit or support present efforts of actors in e.g. the Ghanaian private sector.

2.1.2 Ghana's Economic Development since Independence

The first step after an introduction to trade, Ghana's historic background and economic development is explored. Being one of the first countries to gain independence in 1957, Kwame Nkrumah implemented a social model of economic development. His ambitions were those of equality and prosperous developed communities, a self-sufficient national economy that pushed the domestic industry and agriculture sector.

According to various authors (cp. APUSIGAH 2002, BRITWUM 2008, 2012, ASIEDU-SAFORO 1989) Ghana's development situation was prosperous in beginning of the 1960s years. Intermediary trade was reportedly vivid, trading activities from the North from e.g. Mali and Niger and also with neighbouring countries only until 1965. The formerly grand foreign currency reserve had decreased and debts appeared which lead to signs of beginning of a crisis. Nevertheless, continuous obstacles occurred through persisting culture of corruption, which complicated circumstances. Then the first coup was in the year 1966 while Nkrumah being abroad on a visit to China. The then interim government took up negotiations with the International Monetary Fund (IMF) and within a short time, the fist loan agreements were made; not without strict conditions entailed. Ghana is rich in gold sources and is today the second largest producer of gold and runs mines for bauxite, manganese and diamonds. In addition to other resources e.g. salt, silver and petroleum, all revenues of minerals make scarce 35 % of income sources with gold contributing 90% to all mineral exports although gold supplies are large (ADDO et al. (2010), APUSIGAH (2002), WEISSMAN (1990)).

The development from 1966 until 1972 (*cp*. ADDO et al. 2010) was an overall declining phase nevertheless, and poverty and inequality were increasing, inflation rates high and the currency devaluated. Conditions aggravated and people's patience were ebbing. Until the NCP (National Convention Party) government rejected the IMF and reversed the devaluation of the Ghana Cedi, and most of the development went well especially in the years 1972-1974. But later another coup occurred and the IMF (International Monetary Fund) was back on track with an Economic Recovery Program. Other implications of a Structural Adjustment Program (SAP) conditionality were noticeable in the decrease of child mortality, food security, and population's educational level, increase of poverty (HUTCHFUL 1987). So that not long after a first attempted coup d'état by Rawlings, he succeeded with the second coup and gained power. His initial idea to improve the economic situation by taking loans from the World Bank was hampered by the very conditions attached.

The World Bank's and IMF implied adjustments of conditionality of loans could be concentrated to the four-pillar consensus, which is also called the Washington Consensus. The consensus states that an IMF loan is only granted if the debtor agrees to implement devaluation of local currency, liberalize domestic market and reduce tariffs and other barriers, privatise governmental run companies or agencies and last but not least, strict discipline with household expenditures in health and education. The theoretical backbone of the bank's lending policy is a neo-classical economic perspective that had to be applied to the young post-colonial states in combination with a strong military apparatus (ASIEDU-SAFORO 1989). Removal of the subsidies on petrol has greatly affected the activities of private traders because of the associated rise in transportation costs. Private traders have had to restrict their business operations to readily accessible areas because of the high prices charged by transport owners. There have at that time been reported cases of food rotting in farming areas because of the absence of storage facilities and particularly delays in access to transportation options. The high cost involved in transporting food from the producing areas

to urban market centres has also led to a relative lowering of prices offered by traders to farmers for their produce, a disincentive to increased output. Subsequently, exchange rate policies have (also) raised the price of non-food consumer items faster than the increase in food prices, effectively turning the terms of trade dramatically against the agricultural sector." (*sic*! ASIEDU-SAFORO 1989: 366 f).

Admittedly, the mentioned credit institutions may not have ambitions to assist a country in achieving paths to an economic stable, prosperous, and wealthy future. An autonomous country rich in natural resources that does not give away benefits and monies from these would not be an attractive economic partner. That might be not in the intent of banks business. To understand the evaluations and why a country failed to apply regulations and so-called "corrective measures" of the bank's economic recovery program or the structural adjustment programmes and has to ask for new loans repeatedly, the simple rhetorical counter question would be "*cui bono?*" and delivers simultaneously an answer. The next historical step illustrates such an effect.

In 1983 a development loan was given under condition of liberalisation of markets and reducing tariffs, deregulation of domestic markets, privatisation of state-owned companies as well as reduction of household budget and reduction of expenditures for education and health but an increase of military budget. With these conditions implemented, some sources claimed that social costs of the reform process were in no relation to positive economic effects in some parts of the country but rather increased deprivation and degradation of the poorer population (APUSIGAH 2002).

ALDERMAN (1996) explores the Economic Recovery Plan (ERP) with intend to describe price fluctuations in Ghana. But ALDERMAN'S explanations rather direct to SHIVELY'S outcomes regarding northern Ghanaian markets. ALDERMAN sees "modest" correlation between SAP measures and food prices. It is not clear, how ALDERMAN has derived the data; including terms as "wage" for the mainly rural population that does not have typical labour contracts. Subsequently, he concludes that "monopsony purchases and tied transactions are not widespread and that market traders are not contributing to price volatility" (ALDERMAN 1996: 531). SHIVELY (1996) argues that price volatility exists and cannot clearly be correlated to SAP and ERP respectively.

WEISSMAN recommends that Ghana (and Senegal, in his study results) should allow "the establishment of a consultative process in which indigenous private and voluntary organisations, trade unions and similar groups could contribute to the development of more equitable and politically sustainable reforms" (WEISSMANN 1990: 1622). Such voluntary groups would get a consultation from the World Bank and IMF and further other organisations on how to include better adjustment programmes. The renewed ACP (Africa Caribbean Partnership) agreement, nowadays after amendments called European Partnership

Agreement (EPA) goes conform to such recommendations; albeit with issues undermining the country's ability to protect the agricultural sector even further (ISSAH 2007: 9).

The intention of the WTO is that Ghana should phase out tariffs on imports for "substantially all trade" and thus, open its market wide for European products. The implicit consequence of policies as those of EPA is that Ghanaian government is not able to initiate pro-poor development strategies and policies to compensate rural population for negative impacts of EPA.

2.1.3 Informal Sector and Trade

After exploration of Ghana's historical context and economic background, the informal sector and its trade is now illustrated. Issues prevail with formal and non-formal trade; one is operationalisable, the other difficult to assess. Some authors describe the informal sector simply as informal because it cannot be explained with Western models and theories (FAFCHAMPS 2001, 2004 and 2005, MEAGHER 2003, NEE 2005, LITTLE 1999). Regarding informal trade, LESSER and MOISÉ-LEEMAN (2009) describe that reasons for informal trade are that enterprises choose consciously not to operate formal due to higher transaction costs. Taking into account that most of informal trade is conducted by female individual traders that knowingly operate outside formal economy. (LESSER and MOISÉ-LEEMAN 2009: 5) These authors put the blame on "complex, non-transparent or divergent regulatory requirements (…) that contribute to increasing transaction costs (…) obstructed entry or exit of certain commodities" (*ibid*).

Another group of authors, MANFRE et al. (2012) recognise the important contribution that women traders make to rural population's households situation. The authors acknowledge traders in informal trade as supplying to food security and "agriculture-led growth". And it states that discussions on informal trade or informal cross-border trade overlook the know-how and Social Capital that is created and further developed through brokering, freight forwarding, and negotiations. The term informal though is distinguished here as "a spectrum made up of a number of different qualities, including unlicensed business status and inability or unwillingness to follow official trade procedures (…)" (MANFRE et al. 2012: 2). The weight of mentioned arguments lies in the figures that present women are handling between 60 to 90 percent of domestic produce production and delivery from harvest to consumption (…) (*ibid*). A reason why such figures are not present in literature and research sources could be the lack of gender-disaggregated statistics.

A recent publication by UNWomen states in its core message, women traders are the ones that keep regional markets going (UNWomen 2010); with data and survey outcomes clearly pointing at the vast potential that lies within both domestic and cross-border trade. MEAGHER (2003) describes the SAP as a contraction of parts of an informal economy; the overall effect

is rather "a significant *expansion* of transborder trade" (*sic*; MEAGHER 2003: 57) and that organisation of informal trade has gone through changes and adjusted its form.

Furthermore, MEAGHER explains that

> "transborder trading networks are (…) historically grounded economic systems, involving actors and institutions capable of responding to new incentives and defending their interests. Their survival and growth of the trade into contemporary times has benefited from its long institutional history, but has depended as much, if not more, on the capacity of trading networks to adapt to changes in political organisation, transport and communication technology, trends in the world economy, and the constraints and opportunities created by shifts in monetary and fiscal policies among the countries of the West African sub-region." (Meagher 2003: 59).

Trans-border trade is described as a result of actors forming an "economic organisation uniquely adapted to the context of globalisation" and eventually concentrates the issue of cross-border trade and globalised West African markets into questioning whether informal economic activities should be criminalised or incorporated through appropriate policies and incentives. The clear answer is that cros
s-border trade as such is "by far the most efficient, organised and institutionally deep-rooted system of trade in the West African sub-region." (MEAGHER 2003: 72). What MEAGHER also shows is a flexible reaction to a market necessity that is filled by traders who fulfil demand and supply requests and neglecting borders.

Figure 2.1.: Traders at the Ghanaian-Burkinabe border



Source: own

Interesting to note is the overwhelming partition of women involved in trade in general (MANFRE et al. 2012). Therefore, as most of traders Ghana and elsewhere in West Africa are

women and these women operate in informal structures, it is not astonishing that no exact figures can be derived. For women from rural areas, with no formal education, the informal trade is the most suitable employment. As mentioned earlier by LESSER and MOISÉ-LEEMAN (2009), NDIAYE (2008) can be confirmed by a UN study that informal cross-border trade "features prominently among women's individual strategies for self-employment" (UN Women 2010) and helps to improve food-security in their households and additionally, helps women in the creation of savings which contribute to their families ultimately.

2.1.4 Rural Economic Development and Gender Contribution

In this following sequence, the background to rural economic development and contribution of gender issues will be explored. Despite its importance to the study object, gender is one important topic among others. Subsistence has an enormous influence as well as exchange transactions, especially in remote and rural areas. A central characteristic of Ghana's third sector is that female contribution to agricultural and horticultural production is high; women are estimated to provide 70 to 80 percent of labour – unpaid family labour in general – and produce some 60 percent of rural household consumed food (FARNWORTH 2011, JIGGINS 1989). This is a common phenomenon in many West African countries, women contributing to rural income generating activities but being unpaid as a family member or underpaid as operating in informal operations as illustrated earlier.

In the patrilineal culture of Ghana's North, women are allocated land by their husbands and do not own the returns and income from harvested crops. Female and male household members although being married, hide their individual incomes from each other; with official obligations of men having to provide for their family but in many cases reported[8], women pay for school fees, clothing, food, medical treatment and else, eventually. DOSS (2002) explores patterns of male and female crops in Ghana, and interestingly concludes, "women are involved in the production and *sales* of all of the major crops in Ghana" (DOSS 2002: 1999, italics by the researcher).

Many studies and research papers can be found underlining that women's role in rural economic development is not negligible and plays an even crucial and important role concerning food security and rural economic growth (World Bank 2008 and 2010, UN Women 2010, UN Women 2011, NDIAYE 2008, KIRATU (2010) e.g.). Such described traders' activities present a colourful picture of a prosperous sector that is capable of cushioning crises effects and moreover, contribute to economic development (MANFRE et al. 2012, BARRIENTOS 2013). In practice, agricultural services are provided first to men, then provided to women due to traditional structures that foresee women supporting their men first. And then it is only allowed to turn to their activities. Putting male first results in later ploughing of female owned land and later sowing of seed and as women have to attend to their men's

[8] Compare also in reports of e.g. by FARNWORTH (2011), BARRIENTOS (2013), PREMCHANDER & MÜLLER (2006).

farmland first, factors cumulate in a low harvest of female operated fields. Compared to their participation in rural activities, their own farming will be left with a vague percentage of 15 percent of the available time according to governmental officials (interview GOV1).

Concerning the Post-MDG (Millennium Development Goals) discussions and the current Sustainable Development Goals (SDG), trade gains a different and new dimension through its effects in rural areas. The goals address many aspects that are involved in post-harvest management and that are thus, also related to trade. Considering that nutrition, health and low food quality result in many issues with which market women are in contact or can even influence in their day-to-day business.

2.2 Value Chain Concepts, Approaches, and Frameworks

This partition is dedicated to value chain approaches and value chain concepts as well as different frameworks of value chains. Initially, the idea of value added/ value chains, or supply chains is not new; first origins in business management and business economics emerged with targets to improve processes and their overall outcome. But over time with different authors, various models were evolved in different contexts (national or global) and for diverse settings e.g. business, global firms, development cooperation. Some theorists may claim value chains being as old as human history of markets and trade. The perspectives vary from commodity chains to global value chains in a global economy. It is here to explore their diverse schools of thought and to understand the variety of approaches. Or, to start with a robust idea of value chains according to HOPKINS and WALLERSTEIN a chain is "a network of labor and production processes whose end-result is a finished commodity." (HOPKINS and WALLERSTEIN (1986: 159) in BAIR (2009: 2).

2.2.1 Value Chain Concepts

An important role in defining concepts of value chains are early works by A. O. HIRSCHMAN in 1958 as "Strategy of Economic Development" in which he explores "backward and forward linkages". These linkages he intends to show neither tangible items (as products) nor intangible items (know-how, skills) flows between organisations. In his work, HIRSCHMAN explores the effects of demand e.g. of inputs for agricultural production as such linkages (HIRSCHMAN 1958: 100-119, in STAMM 2004: 11). According to HIRSCHMAN, it is not unusual that outcomes of industrial enterprises lead to 'forward' linkages, as outcomes of one firm would stimulate investments of another. The 'backward' linkages are effects of suppliers delivering inputs that are required to bring on more inputs. In such a way, input demands can motivate more backward linkages and those create other forward linkages. Describing this iteration of backward and forward linkages, HIRSCHMAN described the creation of an unbalanced growth. HIRSCHMAN explains his idea of a 'strategy' as a critique of - at that time dominating - ideology of equal growth as a "big push" (*ibid*).

The other concept to be illuminated is the *filière* concept of value chains. The *filière* (French for thread or chain) concept was evolved by the Institut National de la Recherche Agronomique and the Centre de Coopération Internationale en Recherche Agronomique pour le Développement (*ibid*) for analysing countries' value chains that were in French colonies system. The concept was set up to explore mainly the linkages from production in developing countries and processing industry or export. Typical products of interest were cocoa, rubber, coffee or cotton (VAN DEN BERG 2008). On the contrary, the *filière* approach is "defined as a system of agents for producing and distributing goods and services" (RUBEN et al. 2006: 6) and explores rather interconnections of activities in commodity chains or flows with a basically linear concept of value chain analysis (RAIKES et al. 2000 in RUBEN et al. 2006). But two strands of this idea evolved; one is the economic and financial evaluation of filières (by DURUFLÉ et al. 1988 in TSCHUMI and HAGAN (2008)) and second is the strategy-focused analysis of filière, (especially by CIRAD[9] and INRA[10] cp. TSCHUMI and HAGAN (2008)).

One first comprehensive concept was presented with MICHAEL PORTER'S renowned 1985 book[11] on competitive advantages. The perspective of PORTER'S work is to establish a firm in a market with diverse aspects of a business environment; such as relationships with other firms, or e.g. suppliers. PORTER developed his concept mainly to illustrate the variety of production steps to managers of companies to enable identification of a product's value. PORTER suggests that a distinction between primary activities and support activities is required which are necessary to identify sources of competitive advantages. Strict business application – no product transformation – applicability of such concept is limited to enterprises and firms, although the idea may resemble value chain concept that is used by organisations nowadays.
Another publication already from 1977 influenced value chain concept development; with HOPKINS and WALLERSTEIN and their article on commodity chains a differentiated understanding of value chains began (HOPKINS and WALLERSTEIN in BAIR 2009: 7).

A global concept was later presented by GEREFFI and KORZENIEWICZ in 1994, a manuscript of several studies and received broad resonance from several research areas e.g. development theory, structural development economics and other (BAIR 2009: 8). But GEREFFI had identified three dimensions in particular, to whom he added a fourth a year later: 1) an input-output structure (transforming material), 2) a territoriality or geographical configuration and 3) a governance structure (processes how value chain actors use power or control others) and, 4) an institutional context that describe "the rule of the game" (BAIR *ibid*).

[9] CIRAD: Centre de Coopération Internationale en Recherche Agronomique pour le Développement
[10] INRA: Institut National de la Recherche Agronomique
[11] Competitive Advantage: Creating and Sustaining Superior Performance

One concept of value chain analysis was presented subsequently by KAPLINSKY & MORRIS (2000) in which the authors describe different concepts. Other authors bring in perspectives for global production networks or global commodity chains as GEREFFI starting from the mid-1990s (GEREFFI and KORZENIEWICZ 1994, KAPLINSKY and Morris 2000). As GEREFFI and KORZENIEWICZ (1994) analyse value chains from the global perspective, and e.g. why income disparities between developing world and Western markets prevail. According to the various forms of value chains the analysis need to address diverse aspects of such chains or networks (BESSANT 1991, SCHONBERGER 1986, HAMEL and PRALAHAD 1994, GIBBON 2001, BARRIENTOS and TALLONTIRE 2003). These forms of global production networks or value chains are ranging from highly specialised competitive value chains in industrialised countries, to fragmented chains that are split over various countries depending on labour and specialisation. It is highlighted that those value chains that are located in poorer countries with lean institutional setting or weak labour standards require specific analysis methods.

RUBEN et al. (2006) subsequently redirect the attention of global value chain approaches to much-required value chain approaches and "networks for development" that address issues of smallholder participation and market access for trade as development. RUBEN et al. (2006) explore the value chain approach from the perspective that small-scale producers are almost unable to participate in increasingly interconnected global markets. They refer to PORTER (1990) that states "three key dimensions: (a) organisational systems for the coordination amongst agents; (b) knowledge systems for combining information, skills and technologies; and (c) economic mechanisms for product and technology selection and for providing market access. RUBEN et al. claim that performance of value chains is measurable through parameters of transaction costs reduced, and e.g. specialisation according to comparative advantage (RUBEN et al. 2006: 5 f).

Such as MITCHELL and COLES (2011) undertake the innovation of a framework through integrating development concerns into value chain analysis; ranging from vertical and horizontal integrations, technical improvement to skills transfer ("inter-chain upgrading" (MITCHELL and COLES 2011: 209 ff)) and an "enabling external environment" (*ibid*). Their framework predicated on assumptions that upgrading is possible through various means and approaches; each depending on case-to-case research and evaluation.

For a better overview, a list of the above-mentioned concepts in various research areas is shown below.

Table 1: Value Chain Concepts

Period	Concepts	Major Disciplines			Level of Analysis
		Economics	Business	Engineering, Science	
'50s	Input/ Output Analysis	x		x	Meso

	Strategy of Econ Dev.	X	x		Meso
’60s and ‘70s	Commodity Systems concept	x			Micro and Meso
	French filière concept	x	x		Meso
‘80s	Porter’s value chain concept		x		Micro first, then Macro
	Supply chain management		x	x	Macro
‘90s	Agrifood chains	x	x	x	Meso
	Transaction theory	x			Meso
	Global commodity chains	x			Macro
2000s	Value chains updated	x	x	x	Micro and Meso
	Global production networks			x	Macro

Source: Based on FAO (2007) with own amendments

Summarising these, it is required for a reasonable value chain approach to neither neglect traders (farmers’ direct access to markets) actors nor providing a narrow or linear idea to a value chain concept. A successful approach implies a concept that is encompassing all actors that are involved with a commodity. Naturally, it brings a systemic approach into place for analysis and keeping attention to gendered aspects in the diverse production stages. The Dutch M4P[12] or the German ValueLinks approaches for instance, provide such concepts.

2.2.2 Value Chain Approaches and Analysis

Although many different concepts of value chains exist as illuminated in the above subchapter, definition of value chains or supply chains differ not so much.

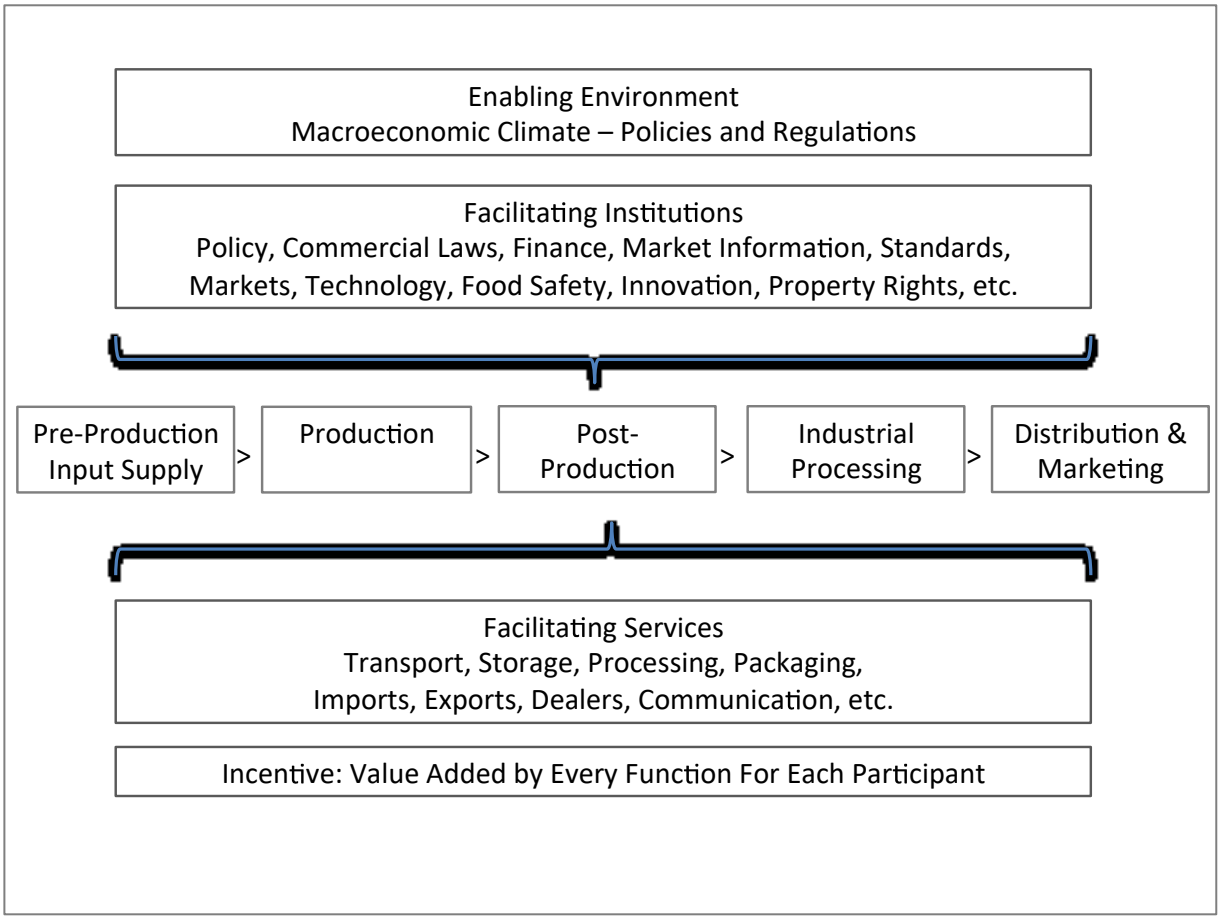
In the UNIDO publication for value chains it can be found as follows: “the entire range of activities required to bring a product from the initial input-supply stage, through various phases of production, to its final market destination” (UNIDO 2009: 10). The single step of production is a combination of different actions that include inputs and services but a value chain perspective will also include other aspects such as marketing, business environment of actors involved in production and last but not least, consumption of the product. In such a perspective, each stage of production and processing of a produce is equal to one stage or one phase. Broader aspects such as national policies, institutions and standards are also parts

[12] M4P (Making Markets Work for the Poor).

of value chains. However, in some cases, such issues need accurate illustration in value chain analysis.

For clarity reasons, a generic scheme of a value chain is presented below, as many organisations would describe it in similar ways.

Figure 2.2.: UNIDO Value Chain Scheme



Source: UNIDO (2009).

Approaches of value chains as a tool or as a policy instrument are manifold and utilised by not less than 78 organisations[13] of international development. The most important approaches will be illustrated in this partition. The course of events concerning the development of approaches of international value chains (or supply chains) that contributed to e.g. a Pro-Poor Growth approach. This development was due to intentions to "effectively and sustainably improving the lives of poor people by understanding and influencing market systems." (TSCHUMI and HAGAN 2008: 11). The Swiss (SDC) and British Organisations Development (DFID) with their M4P (Making Markets Work for the Poor) approach and

[13] The figure may be higher in present time, the number of 78 organisations is from a study in 2005, (the Value Chain Approach in Development Cooperation, GTZ, MERLIN, B. 2005: 2)

afterwards e.g. also the UNIDO (United Nations Industry Development Organisation) utilised preferably such a pro-poor value chain approach.

It is to be differentiated, though, value chain analysis approaches that seek to quickly establish market linkages of the poor *ergo* farmers to larger e.g. export markets are single-sided and do not seem to be suitable to analyse value chains as they exist in the study area. It must also be distinguished between company-driven value chain analyses that bring their own focal area. In this study however, solely approaches with a systemic idea may be suitable due to their applicability.

Other approaches are the IIED's approach of Inclusive Agrifood Market Development, which come from Wageningen University's International Institute for Environment and Development (IIED). They promote a guideline that "provides concepts and tools for working with actors along the entire value chain so that modern markets can be more inclusive of small-scale producers (…)" (VERMEULEN et al. 2008). The authors bring in four aspects to make markets "more inclusive" which are i) delivering drivers of change of modern agri-food markets, ii) providing a framework for value chain analysis, iii) assistance in the design of multi-stakeholder processes, and iv) offering practical ideas for workshops and dialogues.

The Food and Agriculture Organisation (FAO) presents its approach in a guideline for rapid appraisals (DA SILVA and DE SOUZA FILHO 2007) and looks at different aspects of value chain development that need attention, such as e.g. food security, equity considerations or profitability of chain actors (DA SILVA and DE SOUZA FILHO 2007: 10).

Last but not least, the GIZ's value chain approach that is ValueLinks that was generated after studies showed that most of the mentioned value chain approaches tend to a linear perspective (as the FAO e.g.) instead of a network view that is combining both horizontal and vertical connections in a value chain concept. To revisit value chains from the network point of view was intended by GTZ (STAMM 2004). That was mainly giving an initiation, a starting basis for the ValueLinks approach to be developed.

Commencing with an analysis of value chain, it depends on a series of factors that are a) horizontal linkages, b) vertical linkages, c) enabling environment, and d) the end market (KULA et al. (2006: 24). Most of value chains' characteristics can be analysed in a systematic *and* systemic dimension in such way. The horizontal linkages are understood as relations within the same hierarchical level, between different actors of the same profession or "among actors performing the same function in the chain" (MCCARTHY in NAPOLEON 2010: 26). The term 'actors' is typical in value chain terminology as a description of participants, or stakeholders in relation with each other in the value chain. These may be passive (as e. g. consumer) or active (as e. g. shop owner). Herein unions, cooperatives and other organisation

forms would be mentioned as a characteristic of a collaboration of actors within a value chain.

In the same way, vertical relations are characteristic for particular value chain types. The vertical linkage is thus if actors of different functions collaborate in a value chain. Mainly firms offer services and or input supplies, financial services for instance. In the case of large firms that offer various required services for performing the value chain from raw material until final product the vertical linkage is complete. Such cases show a high level of coordination. Along with the linkages' forms, it is decisive which organisational forms actually appear within different chain types.

Another relevant aspect is the enabling environment that is necessary for all kind of businesses. The term might be slightly misleading as value chains also operate in environments that are not favourable for business and e.g. barely existing legal framework. Nevertheless, the term refers to the set of "forces outside the organisation" (SAVEDOFF 1998, in LUSTHAUS et al. 2002: 24 in NAPOLEON 2010: 26). The various constellations cumulate through the combination of mainly four: legal framework, institutional setting, policies and infrastructure. Decisive are also norms and cultural aspects (POWELL and DIMAGGIO 1991) that influence traditions, authorities and hierarchies. Last but not least, physical aspects affecting processes and or the product can be climatic conditions, especially climate change effects in developing countries as well as infrastructure, roads e.g. affecting the safe and successful transport of goods.

The end market is yet another important aspect determining the type of value chain; it is the demand, and other signals received from the end market that influences a value chain. Concerning global value chains, GEREFFI et al. (2001: 4) underline that value chain governance plays an important role. As GEREFFI et al. refer to value chain governance, they define it as "non-market coordination of economic activity" (*ibid*). The authors highlight four factors contributing to value chain governance. Firstly, forms of coordination that can be inter-firm networks, quasi-hierarchical relationships or vertical integration within enterprises. Second, if influential companies are in place, these source their power from positioning in chain segments and their market power. Third, GEREFFI et al. (2001) describe that governance structures arise "in response to two distinct needs for coordination" (*ibid*.) with one being the need for appropriate supply and thus, monitoring of supplies as well as the need for specified production and thus, better coordination of supplies takes place. In his fourth point, GEREFFI et al. (2005) emphasise that governance "involves the ability of one firm" to determine all activities of others in the chain. It may include entry to the chain and exit from it, application of standards and or providing e.g. technical support to allow actors to perform required processes and produce the requested product (*ibid*).

It is nevertheless, criticised by GIBBON and PONTE (2005) that the framework as mentioned above, which was developed by GEREFFI et al. (2001) lacks a precise distinction between

"immediate forms of coordination and overall forms of governance". (GIBBON and PONTE 2005: 81ff). The latter suggest that there are three types of value chain governance and some five more options as a combination of these. Such are in brief 1) market type with low informational complexity, 2) modular type with more specialised suppliers and a higher informational complexity, 3) relational type that involves interdependencies and great capabilities of suppliers (*ibid*.).

The discussion presented above depicts the difficulty in determining the appropriate terms, descriptions and cases to derive assumptions for a basis for value chain analysis. It is not targeted to suggest a suitable or less appropriate terminology, though. The description above is the introduction to the chiefly action-oriented approach ValueLinks that was and is utilised for the programme in the various developing interventions.

2.2.3 Value Chain Approach of ValueLinks

The value chain model as presented by ValueLinks is intended as a 'set of tools'. A set of tools to provide a design for a value chain, its characteristics, and its upgrading options of a particular chain and its environment with relevant actors. The context chosen here for this study and with which ValueLinks works for mainly is the development intervention logic. The target explicitly formulated by ValueLinks is to provide an action-oriented tool that lives from the experiences in actual development programmes and their development.

The ValueLinks approach is structured into 12 modules that are based on the concept of a project cycle. According to ValueLinks, four phases exist in which modules are located: Setting project boundaries, chain analysis and strategy, implementation, and monitoring (ValueLinks Manual, GTZ 2008). The emphasises lies on an action-orientation and accumulates from development intervention and experiences gained with rural development programmes and private sector promotion supported by former GTZ (GTZ 2008: 12) since 2011[14] called GIZ. As mentioned above, ValueLinks approach is a praxis-oriented 'lessons learned' approach in development cooperation concerning private sector development and rural development and hence, the approach is structured according to a project cycle.

There are in total twelve modules within four phases as stated earlier. In its starting point, it is to decide whether promotion of a specific value chain should be initiated or not. Distinction between several types of a product is possibly necessary (example: dairy products in general, or milk, butter, yoghurt, ayran, or cottage cheese can be a range of products that need differentiation). That phase means drawing project boundaries and decisions of what can be addressed and what not.

[14] After merging three agencies in 2011, namely GTZ, InWent and DED the agency was called GIZ.

The following, second module is, in case the question at the starting point is answered positively, to conduct a value chain analysis and to formulate a precise chain upgrading strategy then. In the following module, "know-how for facilitators of value chain promotion" is presented (GTZ 2008: 12) and the next following modules are all dedicated to the implementation and processes. Module four thus is for "facilitating the chain development process" which then leads to the third phase of implementation. Here, integration of various modules that are not necessarily in a strict order - but can and should be utilised at any time when necessary while implementation of value chain development takes place. Such as strengthening private business linkages (module 5), engaging in public-private partnerships (module 6), strengthening services in value chains (module 7), financing value chains (module 8), introducing social, ecological and product quality standards (module 9), and improving the business environment of value chains (module 10). The last module, number 11, has to be understood as an iterative module, which is conducted always in a combination of another module implemented. ValueLinks approach advises to not only use the last module in the very final step but to monitor outcomes repeatedly and to manage impacts.

Table 2: Analytical and Decision-Making Tasks Preparing a Value Chain Promotion Project

ValueLinks Modules	**ValueLinks Tasks**
Module 0 Deciding whether to engage in chain promotion	0.1 Assessing potential and limits of value chain promotion 0.2 Combining chain promotion with other development approaches
Module 1 Selecting a value chain for promotion	1.1 Determining the scope of value chains to be promoted 1.2 Conducting and supporting market research 1.3 Setting priorities across alternative value chains
Module 2 Analysing a value chain	2.1 Value chain mapping 2.2 Quantifying and analysing value chains in detail 2.3 Economic analysis of value chains
Module 3 Determining the chain upgrading strategy	3.1 Agreeing on a vision and strategy for value chain upgrading 3.2 Analysing opportunities and constraints 3.3 Setting operational upgrading strategies 3.4 Identifying actors to implement the upgrading strategy 3.5 Anticipating the impact of chain upgrading
Module 4 Facilitating the chain development process	4.1 Clarifying public, private, and donor roles 4.2 Designing a process and setting entry and exit points 4.3 Organising the chain promotion project and scaling it up 4.4 institutionalising the collective action of chain actors
Module 5 Strengthening private business linkages	5.1 Brokering vertical collaboration: supplier – buyer contracting 5.2 Fostering horizontal collaboration of value chain operators 5.3 Business matchmaking
Module 6	6.1 Engaging private partners in development work

Engaging in public-private partnership	6.2 Concluding private-public partnership agreements
Module 7 Strengthening services in value chains	7.1 Assessing service needs and service markets 7.2 Strengthening private service markets and arrangements 7.3 Improving the responsiveness of public service providers 7.4 Strategic use of temporary support services
Module 8 Financing value chains	8.1 Brokering value chain financing arrangements 8.2 Publicly funding chain development
Module 9 Introducing social, ecological and product quality standards	9.1 Facilitating the development of standards 9.2 Accompanying the implementation of standards 9.3 Developing the capacity for the verification of standards
Module 10 Improving the business environment of value chains	10.1 Supporting private initiatives addressing macro-level constraints 10.2 Fostering a coherent value chain promotion policy
Module 11 Monitoring and managing impact	11.1 Formulating impact hypotheses of value chain promotion 11.2 Verifying impact hypotheses 11.3 Managing for development results

Source: ValueLinks Manual, GIZ 2008.

ValueLinks methodology differentiates nevertheless, between three major areas of intervention: business linkages, services, and the business environment including standards. The final module dedicates to impact monitoring and "managing development results" (GTZ 2008: 14). It is emphasised that modules are to be used in an iterative method to assure that implementation and analysis take both place as monitoring is ideally carried out continuously. As can be seen in the above table, each of the modules has also a detailed description of activities in each step.

The ValueLinks' approach has specific aspects that differentiate from other concepts, which are evolved by other organisations. The practicability is underlined by its visual elements and is easy to describe and understand by e.g. value chain actors or stakeholders. Another positive aspect of the approach is the promotion of close collaboration between the public sector and private companies as well as a dialogue between the various value chain actors (horizontal and vertical). Project facilitators needs to be distinguished from value chain actors. The target of ValueLinks is in most cases to enhance coordination along a value chain for improvement of a final produce and their actors' income situation, an objective that addresses private sector development as well as agricultural development. Value chain 'upgrading' means a qualitative improvement while a value chain 'upscaling' would be addressing rather quantitative aspects of value chain development. Value chain upgrading is

hence, improving the product's quality and final outcome, its handling and marketing resulting in a higher value of the end product. But upscaling a value chain targets the (increase of a) number of households involved, the (increase of a) number of workers in factories, the result in larger outcome figures.

The application of ValueLinks approach is not a terminated toolkit but rather an evolving concept. Additional information and improvements are continuously contributed by experts from projects on the ground; and subsequently fed into the manual. The ValueLinks Association is also seeking to create business opportunities and sector-specific versions of ValueLinks to address specific needs (GTZ 2008: 14). It is indeed a suitable discussion tool for round tables in value chain promotion workshops that allow broad participation. Facilitators present value chains in discussions as a map. These maps consist of boxes and arrows of connections; these are put in position in the form of cards on the map. Throughout a discussion or a meeting with stakeholders, these cards can be relocated, replaced by another. For value chain promotion workshops or round-table meetings such value chain maps can be substantial and interesting as perspectives of each participant presented or brought to light.

A fundamental aspect of ValueLinks is an inclusion of the pro-poor-growth definition that is not necessarily included by the private sector in a business promotion perspective. Therefore, the first ValueLinks Manual "introduces the value chain promotion development approach, locating it within the wider context of development strategies for poverty alleviation" (GTZ 2008: 17). The crucial strength of ValueLinks is its ability to create a dialogue between the different and sometimes not connected value chain actors. This element provides the necessary dynamic for an open and flexible coordination of value chain promotion activities that might not have been foreseeable beforehand. It is common that programme intervention steps are lined out years ahead of implementation and amongst objectives and indicators, specific actions and interventions are fixed long before activities actually take place.

The approach does meet its target of being very action-oriented, opting for participatory approaches and being a flexible tool for value chain promotion. Nevertheless, limitations exist which will be explained at this point. As ValueLinks is a flexible and open model mainly for practical utilisation, it does not claim that theoretical and scientific analysis is a goal.

Therefore, options for including in-depth information into value chain maps such as information asymmetries or relational power aspects are usually barely illustrated. Subsequently, such elements are described apart from the value chain map itself, as a 'frame' to provide more knowledge on specific issues. Other authors complain the lack of quantification options for analysis. This specific issue is related to its praxis-orientation, its implementation or converting into the ValueLinks Manual not intended. These issues address the monitoring and evaluation section, nevertheless.

2.2.4 Limitations of Value Chain Approaches

The selected explored approaches that utilise value chain logic in its various concept and models and in analysing and studying value chains is indeed helpful in illustrating value chains. The other issues as interpersonal relationships and power or imperfect information can barely be reflected, nonetheless. Other limitations target quantification of value chain map elements, which include an operationalizable monitoring of value chain promotion.

Limitations of this study can be, therefore, as mentioned earlier identified, concerning invisible issues such as power or information between value chain actors as groups (traders) or individual (Northern market queen versus market queen in Accra). The advantages are clear and therefore will be utilised as a tool for illustrating the three cases. To explore and analyse the quality of relationships as stated above, also other tools or theories will be required to set a frame.

2.3 Selected Theories of Economics and Sociology

The theories that will be required for displaying a theoretical basis to this study's framework have to be derived from economic theories and sociology. It is, in fact the nature of markets – location of goods exchange and human interaction – that create the need for sociologic approaches and research theories to complement economic models.

Although a diversity of research theories are based on a Western context, with functioning institutional and legal frameworks in place, these may barely suit to analyse questions of developing countries with a different setting concerning legal, institutional and cultural surrounding. A large range of literature from various research areas and perspectives that does not fit the very research topic of an informal group in Sub-Saharan context with the lack of data and a lack of framework as typical for common studies. The few remaining models, approaches and theoretical frameworks are depicted in the following section.

2.3.1 New Institutional Economics

Literature reviews concerning trader groups confirm that research on trader groups and marketing institutions are neglected (PORTER et al. 2007: 116, FAFCHAMPS 2004). As PORTER et al. put it, the neglect of "research into produce-market institutions is symptomatic of the emphasis on overly economistic views of development" (PORTER et al. 2007: *ibid*.) or also single-sided approaches toward common pro-poor growth issues. Research is focussing on producer and production related problems, e.g. standards of production, productivity development, or rural income generating opportunities.

The New Institutional Economic researchers as NEE (2005) claim, though, to integrate "a focus on social relations *and* institutions into a modern sociological approach" (NEE 2005: Loc 2090; emphasis by author). Admittedly, he states, "both old and new economic

institutionalisms argue that the mathematical formalism of neoclassical economics has contributed little to understanding real-world economic behaviour." (NEE 2005 *ibid*.). COASE'S[15] approach to using transaction cost as translating all economic action into transaction cost is appropriate for a starting point; yet not sufficient to explain complex constellations and challenges alike those of this study (*cp*. WILLIAMSON 1981).

Although that new institutional economists "have come to understand" (NEE 2005: Loc 2302) that society and its social processes are entangled with economic questions, some open questions remain. It is agreed hence, that understanding of institutions is strongly interrelated with "sociological variables – shared beliefs, norms, and social relationships" (NEE 2005 *ibid*). The main difference that is made with new institutional economic is the perspective that theories assume that actors are generally connected with each other (SMELSER & SWEDBERG 2005).

Addressing informal institutional elements needs to include the aspect of trustworthiness: An element that is essential for cohesion of the trader groups as in this study. NEE points at specific mechanisms that are intrinsic to social relationships and "develop and maintain cooperative behaviour" (NEE 2005: Loc 2376). Whether this is satisfactory for explaining women trader groups from Ghana's North cannot be answered positively at this stage. The theory displayed is lacking additional aspects and understanding of other contexts than those of industrialised economies.
DORWARD et al. (2003) stressed the need for development cooperation agencies to incorporate the institutional approach and application in practice, arguing that in less developed countries poor rural households will most of all face negative impacts of non-recognition of institutions. His rationale is that particularly those with low financial and little social capital have a high cost in accessing information and markets among other things (DORWARD et al. 2003: 323).

EATON et al. (2008) describe the NIE (New Institutional Economics) view identifying transaction cost as a primary influence on institutions, similar to HALLER (2007) who also detects transaction costs as the major driving force but stresses the importance of individualism simultaneously. Transaction Cost Economics and can deliver basic understanding how an institution is operating. On the other hand, transaction costs reflect only some single aspects for decision-making; the other elements are left out. Other factors influencing and crucial for decision-making are not illustrated in the view of NIE; therefore questions for assumptions for a non-Western context need exploration from another angle.

It is a functionalist view that institutions exist only to minimise transaction cost, especially in a case of a persisting and sustainable institution form as the trader groups are. But also

[15] Referring to "The nature of the Firm" 1937 book by RONALD COASE

those who allow a larger explanatory weight to institutions may not provide suitable explanations why they evolve, but rather why they failed (CHANG 2005). Also, POWELL and DIMAGGIO (1991) give a clear overview of theories, approaches, and frameworks that make clear that NIE (New Institutionalism Economics) provides some explanatory entry but rather for Western model organisations moreover, in North American or European countries' contexts.[16] Often neglected, a contribution to NIE that is nowadays rather declared a complementary approach to NIE is an article by female theorist ZUCKER (1977). In "The Role of Institutionalization in Cultural Persistence" two special aspects require attention; one is the cognitive change of social sciences. This is the relevance of perception patterns and information processing patterns for regulation of social action (HASSE and KRÜCKEN 1999: 28). Second, the importance of active adoption and transmission of social guidelines and or allowance is distinguished. Therefore, utilisation is decisive, and translation of such guidelines by individuals or small groups is crucial. That is termed by micro-sociology (or micro-based sociology) of NIE, allowing more consideration for the relevance of "social settings" that is in the context of institutions. ZUCKER uses a methodological approach to present that high institutionalisation brings resistance towards new inputs or guidelines, and low institutionalisation brings more acceptance towards new inputs (ZUCKER 1977: 742). The understanding is that a group with low degree of institutionalisation would show cultural persistence over time than a highly institutionalised body. In the same time, WILLIAMSON provides behaviouristic approaches to institutional patterns (WILLIAMSON 1975).

One additional approach also applicable for group constellation understanding is BONUS' work on cooperatives (BONUS 1988). Firmly attached to Transaction Cost Economics, he nevertheless, introduces sociological aspects to explore cohesion in cooperatives, which range from intimate knowledge about other members (BONUS 1988: 317) to interdependencies, and trust. The main constraint of new institutionalism seems that underlying assumptions lack aspects, which sociologic parameters provide, such as GRANOVETTER'S Embeddedness argument.

2.3.2 Embeddedness Argument

GRANOVETTER adds a significant aspect to understanding economic situations in other (e.g. developing countries') contexts through introducing the embeddedness factor. Through the introduction of the "concrete personal relations and structures (or "networks") of such relations in generating trust and discouraging malfeasance" (GRANOVETTER 1985: 490) a particular attention is brought to a) personal and b) network aspects. Furthermore, the embeddedness argument states that "most behaviour is carefully embedded in networks of interpersonal relations" (GRANOVETTER 1985: 504) which is an important aspect of creating

[16] Understanding institutions and organisations as explained by MAX WEBER'S *Die Protestantische Ethik und der Geist des Kapitalsimus* surely is a decisive work for Western economies and societies but might be simply not applicable to other, e.g. Oriental, Asian, and African contexts.

better-approaching trader organisations, as many sources agree meanwhile (WILLIAMSON 1993, LYON 2003, DORWARD et al. 2003, SMELSER & SWEDBERG 2005).

Later, GRANOVETTER illuminates his research on business groups that "can be invisible" and it states, that such groups seldom have a "name recognition" and actually the "idea of corporation as an autonomous unit, and rarely recognises the reality of complex network relationships within groups of corporation" (GRANOVETTER 2005: Loc16962). Which is a reason, he states that regulation of such groups is difficult if not inefficient. And further, it seems to him, institutional traditions and constraints shape the very form of organisations. He finds arguments that such groups may "result from the need to compensate for market failures and citing LEFF (1978: 666 in GRANOVETTER 2005: *ibid*) "that group pattern of industrial organisation is readily understood as a microeconomic response to well-known conditions of market failure in the less developed countries". His description of the very characteristics resembles trader groups in many aspects; name recognition is symptomatic for the various names "market women", "women traders", "intermediaries" or "female traders". Also, typical aspect is the ability to change visibility of the group. These characteristics will be explained later in detail.

The attractive theoretical idea to explain the traders' groups leads to the question of proof for traders' to be a response to a market "failure". As it cannot be found evidence in the study's context, this theory can be only vaguely applied. However, he argues that such groups' services can barely be available at lower cost as the market is forcing these to minimise costs. The issue to minimise cost could be an argument on behalf of the traders' groups and be reason why they survived even throughout the years of hostile adjustment programme phase and its aftermath. LYON underlines that it is necessary to examine reasons and motives for creating such groups and to explain "the processes by which these (…) sustain cooperation." LYON 2003: 13).

In this regard, LEIPOLD describes the various contexts that would need to be considered for studying with an embeddedness perspective. The institutions in different cultural contexts are explained and one of the many refers to African cultural context in which institutions in Africa would have to be looked at. Admittedly, a generalized view, but a majority of the findings can be taken as true for Ghana (LEIPOLD 2006: 153ff). LEIPOLD describes formerly colonised countries as governed rather arbitrarily; state and law are instrumentalised for a patrimonial and tribal patronage system, corruption is widespread at all levels of society, society is ethnically fragmented, and economically these countries can be labelled as underdeveloped. Such tribal-bound rules dominate even economic life, as these are apparently the most reliable ground for a trusting co-operation (LEIPOLD 2006: 150f). Additionally, he states that it was not possible in post-colonial Africa, to establish the state and its administration as an above-party-lines authority, standing above heterogeneous communities.

An interesting author in this regard, FAFCHAMPS provides an extensive set of coordinates and variables that are applicable to the theoretical analysis of an African context, such as contract enforcement issues and methods, or trust and relationships, and information sharing (FAFCHMAPS 2004). With explanations on hierarchies that rely on command and control (WILLIAMSON 1973) and FAFCHAMPS resumes that such systems require compliance and can become inefficient in permanently ensuring compliance. FAFCHAMPS also explains gift exchange that is necessary to consider, and typical for business operation contexts in Africa (FAFCHAMPS 2004: 7 ff).

2.3.3 Social Capital Theory

With BOURDIEU (1985) and COLEMAN (1988) giving path-breaking works for Social Capital, the term was long only theoretical discussion and being in contrast to e.g. economic capital. As COLEMAN stated, "Social Capital is defined *by its function*. It is not a single entity, but a variety of different entities having two characteristics in common: They all consist of some aspect of social structure, and they facilitate certain actions of individuals who are *within the structure*. Like other forms of capital, Social Capital is *productive*, making possible the achievement of certain ends that would not be attainable in its absence." (COLEMAN 1990: 302; emphasis by researcher). Later on, the working definition was created including "levels of trust, the extent of networks, the density of relationships within networks, knowledge of relationships, obligations and expectations about relationships, leading to reciprocity, forms of local knowledge, operating norms and existence and use of sanctions to punish free riding" (LYON 2000: 20).

GRANOVETTER nevertheless, complains that new institutionalism has an "atomized, *undersocialized* conception of man" (1985: 483 highlights by researcher), which leads to his Embeddedness argument and also prepares ground for a new perspective of economic sociology and theories of Social Capital or social network. Such networks refer to the interpersonal and most of all, multilateral linkages. These can be of strong ties or linkages and as GRANOVETTER examined, also weak ties within networks can be decisive for social or economic life (GRANOVETTER 1973). Networks are crucial for business contexts and are regarded as a key element for Social Capital. Complementing these statements, GRANOVETTER illustrates that firms or institutions should be analysed as social constructions to argue for "distinctive agenda for a new economic sociology" (GRANOVETTER 1992).

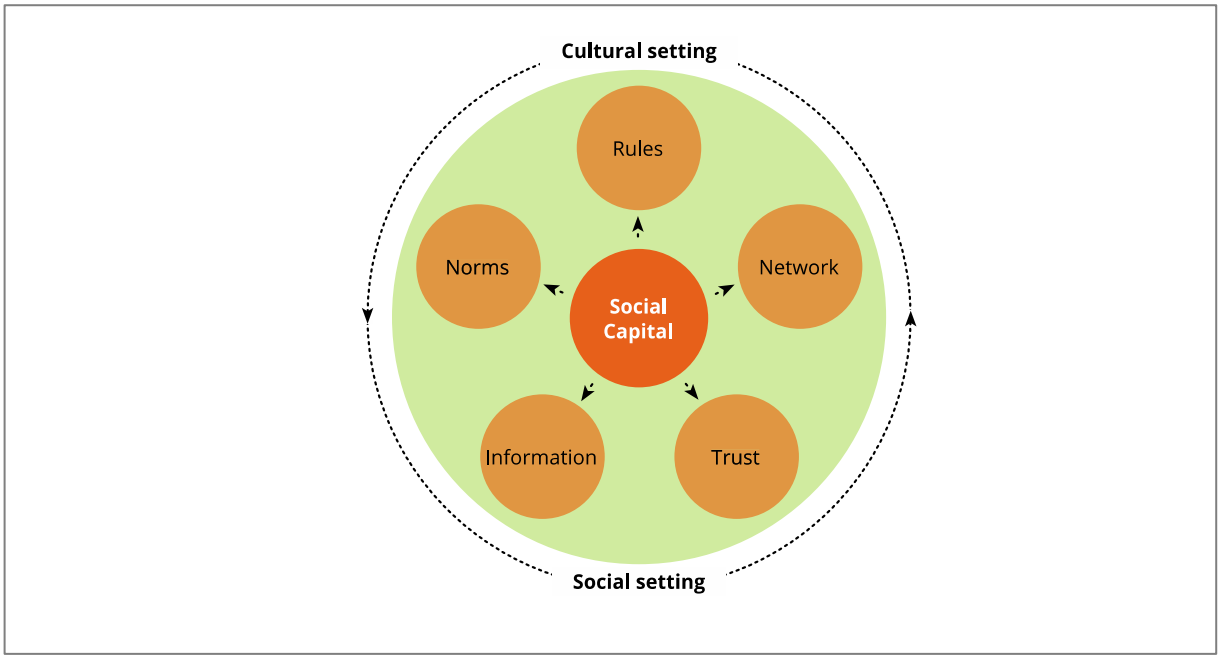
LYON argues that Social Capital and networks *combined* are the actual, real Social Capital, with which organisations coordinate and manage their businesses (LYON 2000). He differentiates three types of networks, which are a) information networks, b) exchange and c) influence networks (LYON 2000: 20) albeit these can also appear in overlapping with each other. Coleman mentions Social Capital just in combination with trust as essential for Social Capital; while characterising trust as a "conscious bet: you calculate what you can win and lose by trusting someone" (COLEMAN in: SMELSER and SWEDBERG 2005: Loc 734).

Relevant to the term trust is that it is an integral part of Social Capital and many theories and discussions about defining its creation and maintenance (LYON 2000: 664). Trust is existent when confidence in an actor prevails (e.g. GAMBETTA 2000: 218). Trust may be used to increase profit amongst actors or to minimise risks and uncertainties. Such is the case in environments with "very imperfect information and a lack of effective legal mechanisms" (DAVIS 1973 in LYON 2000: 664) and serve actors as reducing risks and cost to enhance business activities. There are forms of formalised trust and cooperative behaviour is contracted. Nevertheless, in such environments as mentioned above, formal and contractual agreements are not suitable or not applicable. Although they may be implemented but informal ties in the above-mentioned contexts are more reliable.

Another vital factor for social capital are norms; norms that restrict specific behaviour or that are habits that shape actions of a group. Norms should preferably be distinguished from 'trust', following LYON'S argument (LYON 2000: 666). As norms can typically not be created by will, norms are important for group cohesion and moreover, they are essential for building and maintaining of trust.
FAFCHAMPS (2001) points to the fact that data indicating very few court actions to solve disputes is caused by the small size of transactions and that especially market transactions are "beyond the reach of the law". Therefore, traders prefer organisational forms and trading practices that "will minimise the potential for breach" (FAFCHAMPS 2001: 116). The motivation to reduce breach or decrease costs is typical for institutional settings that will create rules specifically to reduce cost and risks.

It is a fundamental principle that through clusters e.g. such networks, which collate relationships and knowledge that can alleviate challenging situations. With such concepts, essence of localised clusters "of activity characterised by high-intensity interactions involving tangible and intangible elements" BOKELMANN 2009: 4) which could lead to optimised business solutions. Supposing this approach could be a suitable perspective to understanding traders in a highly fluctuating and changing business environment, such concepts would have to be implemented more into activities.

Figure 2.3.: Embeddedness and Social Capital



Source: Own elaboration

But GRANOVETTER'S article on the embeddedness problem addresses another aspect of institutions; that including their sociological and cultural setting is important for understanding institutions and decisions and institutional contexts. Adding embeddedness to NIE, including Social Capital leads the researcher to a socio-culturally appropriate institutional approach that incorporates relevance of indigenous structures and idiosyncratic knowledge in a different environment. A simplified graph is illustrated above in figure 2.3. to visualise such interwoven elements contributing to NIE through the Embeddedness argument.

2.3.4 Institutions and Institutional Setting

The term 'institution' or 'institutional economics'; whether in theories of old or new institutionalism, is difficult to clarify irrevocably, concerning a precise, proper applicable definition (MILLER 2012). The term was long not defined and mainly as the opposite to 'individual' within the economic discussion. An urgent clarification was argued by CHANG (2005: 3). Some authors attempted finding a definition but were not successful concerning broader acceptance, yet other descriptions were too vague (NORTH 1990) for a larger use, and some implicitly take a Western mind-set for granted and thus, overlooking aspects that differ from such non-Western context. The approach that NORTH applies though is interesting as he distinguishes between a purely economic theory and culture-related explanations. He later included necessary modifications that include a larger influence of a government on institutional development and the power and influence organisations can hold (NORTH 1995: 8). Nevertheless, his research concludes the establishment of efficient institutions is only

achieved within nations that create incentives to allow securing property rights (NORTH 1992: 167). His principal actors for institutional change are individuals that strive for common goals and thus, cooperate.

One definition is sticking out, that referring to SEARLE (2005) institutions are based on language and with which humans create rules and assign positions and statuses. It is the first definition of the term institution that makes clear: "an institution is any collectively accepted system of rules (…) that enable us to create institutional facts." (SEARLE 2005: 22).

A unique theoretical approach towards traders; at least what was found is addressing traders and trader groups as institutions. Whereas most of the literature implies an understanding of what an institution is, recognition of such trader groups as in this study needs detailed examination and explanation. SEARLE'S definition of institutions describes elements that can be identified as true for the research field in a Sub-Saharan region. In arguing that an institution is "composed of collective intentionality" (SEARLE 2005: 6), assignments of functions and existence of status functions, or collective assignments of status functions (SEARLE 2005: 7) these would also be correct for trader groups as the Ghanaian market women. Other authors like NORTH (1990) refer to an institution as "rules of the game" that are affecting people's behaviour and decisions or as DORWARD et al. (2003) depict it as "(…) the interaction of these [institutional environment and institutional arrangements] with property rights, information flows, transaction costs, transaction risks, and market participants" (DORWARD et al. 2003: 323). The rationale DORWARD *et al*. offer is a utilisation of this concept that reveals high transaction costs and high risks, especially in developing countries (*ibid*); however, some sources see institutions as an obstacle to development (CHANG 2005).

In this respect, it is interesting that BECKER and OSTROM (1995) emphasise "that so-called informal institutions embedded in a specific culture are as successful as formal ones, or even more successful" (BECKER and OSTROM 1995). Additionally, BECKER and OSTROM are in favour of recognising "local and indigenous knowledge of resource flows" for institutional structures and hence, deprive all impact of sources that declare informal institution as a distortion or negligible part of economies. It is hence, adding to FAFCHAMPS' approach to subsume traders, itinerant and part-time traders, and also market queens under the term market institution (FAFCHAMPS 2004).

In this light, discussion on "inefficient institutions" needs reflection; as it is highly subjective and dependent on ideological stance. GAMBETTA (2000: 214) points out that individuals perceive trust as beneficial when those with whom they cooperate do not hinder them (*cp.* LYON 2000: 665).

In this chapter an illumination of several theories was envisaged to contribute to the theoretical background, adding up to the traders' brief history in the region and with special

attention to a hostile environment that was created during the SAP era. Secondly, the chapter gave insights to value chain and their analysis with specific focus on the ValueLinks approach, which is an action-oriented approach used in development cooperation's interventions. The third point is the study's perspective at various theories that illuminate the intersection between economics and sociology. The theories chosen here for the study require an additional aspect to functionalist views of economic theories that are theories of interpersonal and collective behaviour. For this study's context, three theories were chosen to be decisive for understanding traders in Northern Ghana with i) the Embeddedness argument, ii) the Social Capital theory also termed Social Network theory as it builds upon trust, mechanisms of control, and network capabilities and lastly, iii) a clearly laid out definition of institution and institutional facts that allow describing traders as a market institution. With the theoretical background equipped from the three sides, it is necessary to illustrate the choice of methodology.

2.3.5 Limitations of Theories for Social Capital and Institutions

Theories and concepts, models and studies provide a broad overview of perspectives and concepts how to understand and explain events in real life. The selected theories of economics and sociology are specifically suitable for logical steps for this study. Nevertheless, it should not be belittled what scholars and theorists have accomplished with limited data, or with other constraints, who have created enormous models, concepts and frameworks. The issue may lie in the very nature of an understudied field, a niche that is beyond typical study fields and colloquial study areas. It may hence, be noted that the various concepts and theories are not sufficiently explaining events and correlations.

3 Methodology and Research Strategy

In the previous chapter two, theoretical concepts and approaches were explored, giving an overview of different theoretical perspectives to analyse the study's area. This third chapter will present the study's methodology and underlying logic principle for research strategy.

These are segmented in six sections regarding i) research strategy, ii) framework of research, iii) data collection methods, iv) choice of methods, v) data analysis, and vi) limitations of the study. The first explores the study's research strategy, as to which approach is most appropriate to tackle research questions, followed by an explanation of the framework of research. This section explains the physical in terms as well as the cultural and social frame of this study area. The then following section gives insight to data collection methods; how and why data is retrieved: through value chain mapping, through interviews, observation and study of documents, publications, and papers. Choice of methods section explains then at which stage what was carried out and why. Finally, all is combined in section of data analysis and its synthesis to explore how all the information makes sense. Last but not least,

limitations will be examined and argued as to how far results and analysis may be legitimate and defensible.

3.1 Research Strategy

The topic of research is an area of specific groups and individuals in the North of Ghana. Some actors that play a distinctive role within markets and value chains, their position at commodity markets and their particular role are the research area. To gain better knowledge about actors and relations within value chains, it is a qualitative approach to the research topic. Within qualitative research, a comparative study of three commodities was chosen to show commodity markets that market women operate in. A set of three cases was identified with market women dealing with specific commodities; as JANESICK (1994: 182) puts it "the value of a case study is its uniqueness" and will rather describe a specific case and its aspects than evaluating evidence or providing new elements to theory building.

To allow more informative value on trader groups, three cases and commodities were chosen as follows: a grain staple crop (maize), and two horticulture products (chilli) of which one is highly perishable (tomato). The nature of all three commodities and their value chains is relatively different which may provide insights into commodity markets handled by market women, or at least to better description of the market women's actions and organisation. This study fits in the description of STAKE'S "intrinsic study" (STAKE 1994: 237f)[17] as the study's main purpose is to understand the particularities of roles of market women better. The three-layered approach will illustrate in all three cases; one layer as to who is involved, second layer as to what is happening and third and the contextual when and where.

In general, case studies should illustrate detailed information of research area and actors. It is in this study with specific case studies to present the selected commodity's market and traders mainly. The case study will also provide description and analysis to understand the groups' rules and their environment better. In the research context, aspects are not directly communicated e.g. regarding typical standards and traditional patterns that can be self-evident for group insiders but not for the researcher. Case studies will also allow a clarification of cost that women traders and market queens are opposed to in conducting business. Most of the cost for trade are not known and have not been clarified up to date. Lack of transparency or operationalizable data adds to the negative reputation market queens are accused of; costs are not known and not communicated either.

It is clear that due to no reliable data existing to provide meaningful information on e.g. cost, a qualitative study is necessary. And as hard figures are not available, the study relies on data and information derived from interviews in the three study cases. The reason why qualitative methods are chosen is especially since non-quantifiable characteristics are involved. This is

[17] In Sage Handbook of Qualtitative Research.

mainly achieved through interviews in its variety of interview forms. Before describing the various interview forms, general aspects of interviews must be clarified for this context beforehand. One major distorting yet often neglected aspect is the researcher's presence in the research field. Clearly described by e.g. HELFFERICH (2009: 21f.), the researcher needs to be aware of the "bias" in information presence is created by a researcher in the field. This is plausible especially when the researcher is an outsider visible by skin colour, language and or other exterior characteristics. It is also the case when the researcher, as a non-member is observing a group, or e.g. a closed community. The field and its actors will not behave and talk as when unwatched, and 'undisturbed'.

On the other hand, interviews are the primary source of data for qualitative research in this work. Therefore, an interviewer should have the ability to let the interviewee freely express his or her views. The major principle is openness; meaning that independently from interview type an attitude that gives the interviewee enough space to unfold her or his points of view is critical.
In addition to interviews, qualitative data collection can also be gained with observational data collection, depending on whether e.g. the researcher is a participant or not. In Ghanaian context as it is for this study, the latter is the case. It will be described in the following paragraph nature of the context of research.

3.2 Framework of Research

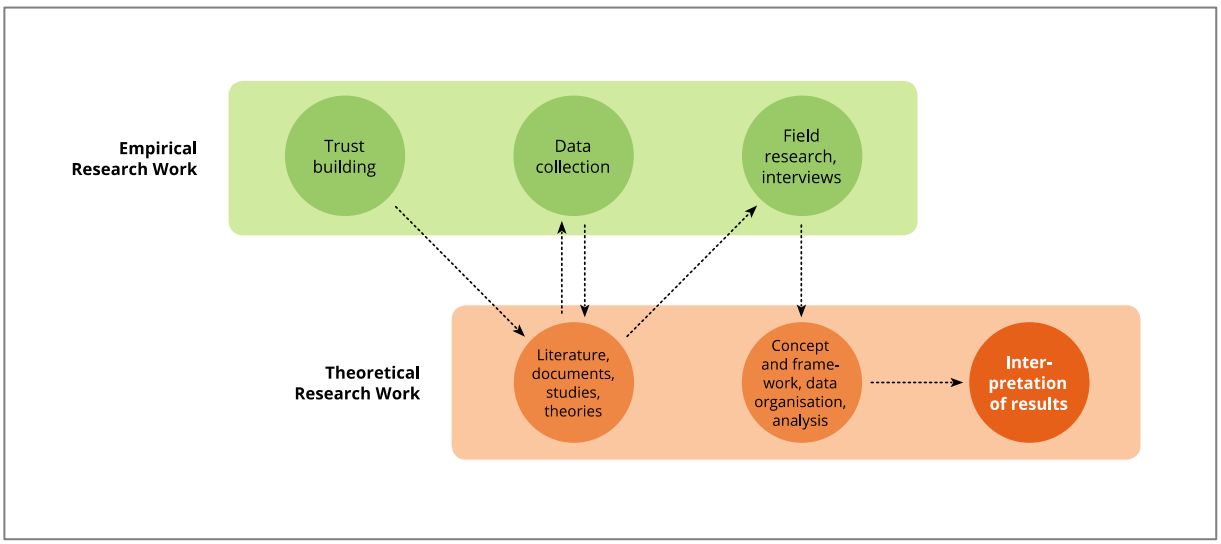
The main frame of research is a West African context with emotional bound and typical tribal rules[18] setting; a Ghanaian context with its particular traditional, cultural, and socio-economic settings. Moreover, a trustful relationship was important for gaining information regarding the research area, e.g. relational characteristics between actor groups or individual actors. In that regard, it was useful that time for establishing trustful collaboration which was possible before research started. The field is characterised by a strong influence of tradition and cultural patterns that shape business relations and business environment.

Data and figures are neither available at governmental institutions nor nongovernmental organisations. For this study, data collection of MOAP (Market Oriented Agriculture Programme) of GIZ (Gesellschaft für Internationale Zusammenarbeit) project was crucial as it is the single source of reliable data in this context; regarding data from some years before until to date. The data there lacks some minor aspects that were important for this research which was later collected in various observations and chiefly, in research inquiries.

The methods for data collection have to be understood according to the stages of research. There are four stages of research that work with individually selected methods.

[18] See LEIPOLD (2006: 149 ff)

Figure 3.1.: Stages of Research Work



Source: Own elaboration.

The first stage was in the field while working in a GIZ project the researcher was able to become familiar with various actors in value chains – and *vice versa* – and to achieve a trustful relationship with market women. Through project's daily business and interactions with actors in value chains, this stage marks the trust building phase and work with various actors in the area. Alongside trust building, a majority of detailed information was gathered regarding individual aspects of various actor groups.

The second stage is dedicated to literature, studying a diversity of documents and material, as well as search for sources to gain more knowledge on theories and about the cultural and historical background of actors; and simultaneously acquisition of literature secondary information referring to topics related to field and actors. The third stage is dedicated to empirical field research; carrying out data collection as in conduction of interviews and group discussions, appointments with governmental staff or experts in the area. The last and fourth stage is devoted to the composition of gained data and analytical research work.

3.3 Data Collection Methods

The research field of value chains handled by market women requires a qualitative analytical approach and case studies that allow comparison of commodity markets. Vegetable markets depend highly on seasonal fluctuations, and only a few of them are traded continuously per year. For comparison reason, a staple crop that is also a commodity traded the whole year was included for the research. To assure disaggregated data information is collected and utilisable for comparison, the approach was chosen as case studies. And although female participation of female traders is higher in these groups than male traders, a purposeful sampling method needs to be designed (cp. NAPOLEON 2010: 67).

Purposeful in this regard means to address those actors who are knowledgeable on the very specific matter; including those who should be in position, e.g. governmental and or NGO staff who are familiar with the area and its actors. It also means that the number of women traders involved is part of the sample, although the number of women is not high and hence, would not be suitable for any quantitative measures and analysis. Depicting individual persons as key informants derives from their knowledge that was communicated; whereas other contact persons in high-ranking positions were not. Therefore, a key informant can also be one of market women or an NGO staff. The research sample is a blend of the above mentioned, as the following table shows.

Table 3: Research Sample

Actors	Tomato	Chilli	Maize
Market queen	1	1	na
Market women	60	50	60
Ministry employees	na	na	2
Development Cooperation	na	2	4
NGO	1	-	3
Input dealers	2	2	2
Aggregators	na	na	3
Factory, SME	1	2	-

Source: Own elaboration

The criteria for picking these informants were as follows: The person has to have one of following characteristics being

a) female and part of a traders' group; or he or she is
b) making business with market women; or another case is
c) dealing in development interventions that get in touch with traders; or he or she is
d) staff or employee working on a related topic.

This sampling was carried out from the beginning of the year 2012 in the North of Ghana with mainly the capitals Bolgatanga and Tamale being locations for collection of data as mentioned above. Data collection from the year 2010 onwards was including the mentioned (as listed above) and other stakeholders. The specific chosen data collection methods are presented in the following step.

3.3.1 Value Chain Mapping

The usual method research project was started with mapping the commodities chains according to ValueLinks Manual[19]. Value chains describe a product's creation, its processing and changes until final marketing and sale for consumption; including all actors and linkages involved in various steps of a chain (SPRINGER-HEINZE 2007). It contains the real inputs required for production and its preparation such as seeds or seedlings, fertiliser and or equipment needed and the relevant actors in charge. Farming, cultivation of land and maintaining land and plants is comprised of production, also showing the specific actors that would be, generally speaking, and farmers. Harvesting, sorting or storing the yield is typical for agricultural and horticultural produce. The raw material would be then forwarded to a market or to a processor, which could be a big factory producing food from one or more raw products. It could also be a small or medium enterprise treating the produce in order to sell it to other markets, or restaurants or e.g. supermarkets. The end of a chain is the consumer or consumption that buys the final product from various places. Visualising this whole chain from start to finish is hence, termed as mapping a value chain.

For the ValueLinks approach, the matrix used is a vertical one; from inputs for production until consumption, the stages shown in arrows on the left side form a line from top to bottom. The value chain map describes each stage of product handling depending on the various specific processing steps, and its actors. Actors are understood as individuals, as groups, institutions, and companies or else. They all are shown according to which stage and what activity they are involved. In many cases, for instance, farmers handle production and thus a box is placed at production stage. In some cases, actors take over other steps such as a company could have a contract with producers and provides inputs, looks after harvested goods, processes it and sells its final product to special markets. In such cases, a box stretching from production until marketing would be seen.

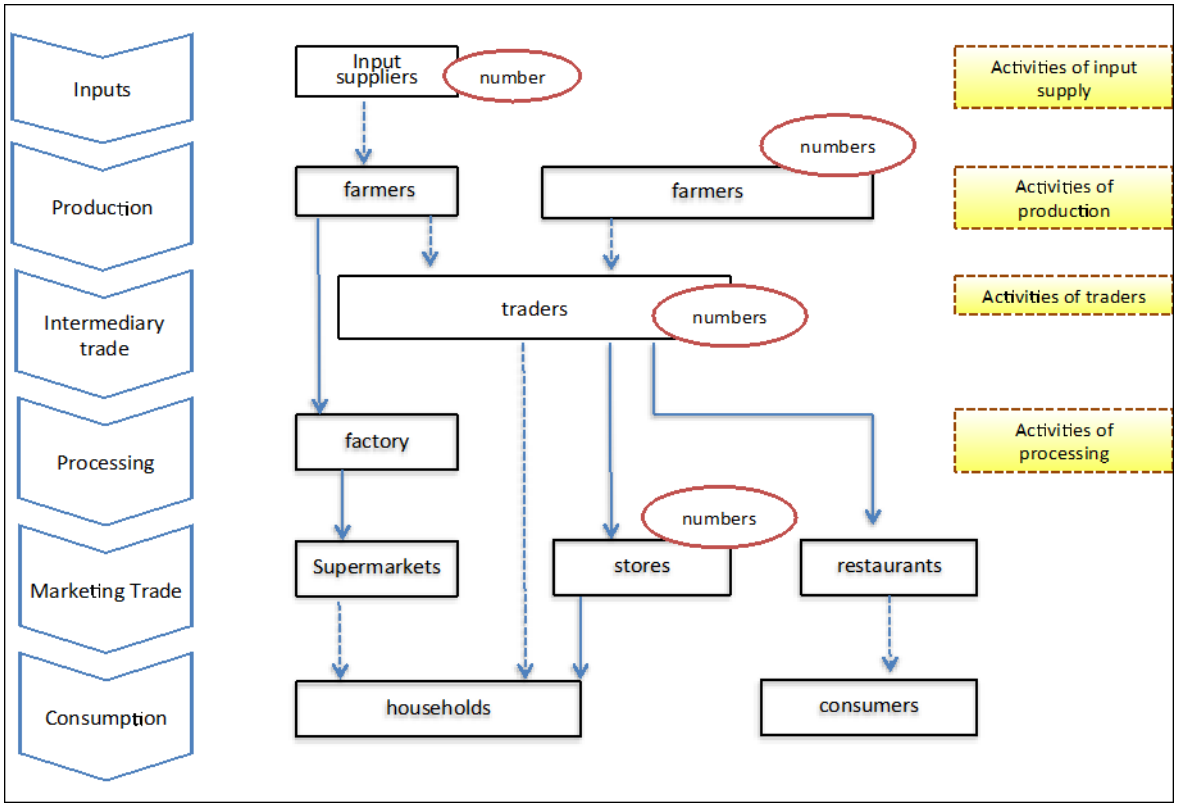
The value chain map could also show additional information in respect of how many actors are involved, quantities of produce handled and prices, and price margins. Maps are suitable for visualising bottlenecks within the chain, clarifying crucial steps e.g.. For clarification of the mentioned above, an example of value chain map will be introduced here that serves as a model for further elaborations; see figure 6.

Regarding changes in this system thus, changes in a value chain, various parties involved are considered, specific actors and their interactions and relations. Additionally, supply and demand situation are important, as well as price fluctuation, interest changes or other financial criteria. Changes can also take place with regard to new sales positions, new actors or new markets e.g. in export markets. Differentiation has to be made for this context, concerning relevance of change, as there are always minor or natural fluctuations of prices,

[19] Guideline composed by International ValueLinks Association e.V.: ValueLinks Manual for GTZ

actors or the like. Hence, when looking at prices and their changes regarding value chain, seasonality and its price changes are not to taken into account here. There is also a change of actors related to seasonality, and due to same reasons hence, it will not be referred to that.

Figure 3.2.: Value Chain Map Example



Source: own elaboration according to ValueLinks guidelines

Minor fluctuations occur when some actors step out of the chain and leave the business; decisive is their relevance of position in the respective chain. Relevance is signified if a specific actor is known to most of the other actors in the chain or if she or he occupies a significant position. Additionally, change in value chain shall be mentioned in the case of change being realisable in time, e.g. change occurring within two or more years. Such reduction relates to the issue that a year comprises at least one farming season and for most of the produce in Northern Ghana, only one farming season is possible. Hence, changes are identified here in case more than one farming season has shown a different trend or change.

In other cases e.g. visualisation of power relations between parties would be necessary but it is only through underlining or highlighting boxes (parties) and to provide additional explanation. The map itself is not for presentation of power relations or hierarchies as it is meant to show solely a product's development and value addition.

3.3.2 Interviews

In general, an interview is carried out to receive answers to the research questions[20]; hence to gather information from the diverse actors of the chosen area and to learn about environments and influences affecting actors' behaviour.

The qualitative research questionnaire reflects what the actor constructs as questions to relevant topics and is influenced by researchers' views. In any scientific work, these views should be open and allow alteration and other opinions for consideration. In that regard, qualitative research method as the interview is a suitable tool (HELFFERICH 2009: 28 ff). The specific design of interview can provide clarification of understanding and to gain additional information. The interview structure needs to be using the interviewees' language, and terms to assure a clear understanding of the topic, especially choice of right terms in accordance to interviewee (as individual or group) is necessary to avoid misunderstanding or in the worst case, wrong information (PATTON 1980: 336). For avoiding mistakes made in cross-cultural interviews (*cp*. PATTON 1980: 337), involvement of Ghanaian assistants was crucial in formulating questions and formulating questions in their local language (*Dagbani*) with answers translated by the same.

However, several aspects have to be taken into account for successful interview methods. These are researchers' motivation and ability to conduct interviews appropriately. In this study, semi-structured and narrative interview designs will be utilised. In the first place, a semi-structured design is suitable to gather information and getting familiar with the research field actors. When interviewees are adding comments or additional data that was not asked in the first place, semi-structured interviews admit these additional inputs and continue the conversation at any suitable point. The sequence of questions is not fixed and alteration can take place according to the answers and narration by the interviewee. The narrative design is used at a later stage, as this interview design requires a certain level of confidence in the interviewer. It is important to understand how to proceed with the design, as a willingness of narration and sharing information might not be as high as expected, if not a certain individual confidence is established beforehand.

Accordingly, specific questionnaires were composed for different groups of respondents. There are different interview contexts to be chosen for each of the groups. As for the market women and the queen, the market place is their normal environment of events but is not suitable for conducting the interviews as gathering of people with a person being obviously an outsider (and in this very field considered to have a large budget for their activities) would attract other market actors who would hence, interfere and disturb in an interview. As for other actors such as development agencies, the set of their offices is also an appropriate

[20] Unpublished comment by K. N. FARRELL (2011).

setting for conducting the interview. Or in another case, factory office would as well be suitable.

For market women, the most suitable interview form is the focus group interview; a type of interview that participants of a homogenous group hear what another participant is responding and can add their comments to it (PATTON 1980: 335). This seems specifically convenient for the groups of market women as they typically speak as a group to outsiders. On the other hand, this way of interviewing is very effective as some ten persons can be interviewed at a time instead of one individual.

The interviews composed for this study were dealing with following main categories: a) general aspects of business, b) horizontal relations, c) internal and external group aspects, d) vertical linkages, e) past problems and successes, and f) quality of relations. Additionally, LYON'S (1994) "people oriented research" approaches the field with an aspect relevant for both interviewed community and researcher. The "property right" of the information gathered is important to be respected. The ownership of information and related issues must be "used to help the village, group or wider community" (KAPILA and LYON 1994: 3) and researchers should show interest in local traditions and community knowledge, but most of all participation of local people is important.

Moreover, interviews were designed to not purport a specific topic and to push interview partners in one direction. It was anticipated to let interviewees speak freely about general topics of their all-day-life and to just ask few questions. After some introductory questions, most of the interviewees talked some at length. In some cases, they seemed to feel uncomfortable, hesitating in their narration, and it required the researcher to accompany the talks with encouraging sounds; as to assure the interviewee that the researcher is neither bored nor distracted, nor annoyed. Such were the worries when commencing interviews, but such was communicated between researcher and translators beforehand. The issue was also that it might look as much information was taken from interviewees – market women especially – and researcher does not "give" anything back. Therefore, it was repeatedly assured (over time) that all information would be treated confidentially. And all statements and evidence were proofread before publication.

3.3.3 Observation

Observation is a complementing tool to data collection regarding collecting information that might not be communicated by actors in the field. The researcher is thus, at the specific place and only observes what is happening. In some cases, agents in the area of research are not conscious about certain issues and do not talk about it; due to perceiving issues as normal or given, agents would unconsciously not mention them. The researcher's task is to find out ways to let interviewees narrate more.

Another aspect of observation mentioned by e.g. WOLCOTT (1929)[21] as data collection is that researcher is influencing its research field and leaves a bias through his or her presence. It is on one side the bias created through what the researchers mind-set and what he or she will perceive. What is perceived though is, therefore, depending much on openness, or ability to be open to any information may it be contradicting to researcher's point of view. This need not be understood as negative, as WOLCOTT cites "Karl Popper who argues that 'preconceived theories or working hypotheses must always be involved in scientific observation to enable the scientist to decide what is to count as a fact of relevance to his investigation' (p. 94)" (*sic,* WOLCOTT 1929: 164).

On the other hand, bias emanates from the fields altered action, which is observed and more or less, feels watched. This influence of actors feeling observed and thus behaving differently, could possibly be reduced when ideally the researcher's role is trusted. The observation of confidential aspects of actors' behaviour in the field or the allowance of the researcher into a private, quiet area, e.g. business details, business negotiations are depending on trust.

Observation as a method is to gather regularly and repeatedly impressions about the environmental context in which the different actors interact, being reserved and careful not to disturb the natural flow of events (ADLER and ADLER 1994: 377[22]). Therefore, visits to the decisive market-places were part of research, supplemented by the explanations of local advisors who are familiar with cultural and traditional patterns and behaviour. To be observed are the following: roads condition to market, market-place situation, and utilities for traders (e.g. scales, bowls, other measures) as for the physical environment. Additionally, the market women's environment is to be observed and in communication with other market women, market queens and buyers. Communication in this case means situations such as how price negotiations are conducted, including determination of market prices. This very aspect is crucial for analysis but solely possibility of carrying out the conscious observation was not accessible for a long time but was allowed eventually.

3.3.4 Literature

The literature and publication analysis was initially an unsatisfying and wretched collection of some few papers and semi-scientific publications. It started as a lack of literature, and a brief desktop study, with little studies to find and rare publications related to the research field. Beginning of rewarding, after several months other publications and more interesting studies to similar or related topics appeared and were documented and integrated.

[21] WOLCOTT (1929) citing also Popper.
[22] Sage Handbook for Qualitative Research (online book).

One appropriate citation from a non-scientific source[23] is "you end up where you look", and it seemed the odds were settled after some months of research later, different and eventually serious and more appropriate publications and book-length studies could be identified. The issue was that the field of research was similar but utilised other terms and different wording.

Luckily, it seems at least some of literature is useful and appropriate for the researcher's undertaking and apparently a policy related issue that the very research field is understudied and often overlooked. Additionally, it is a niche topic as it deals with women in trade in rural areas, a combination of rather uninteresting (regarding feasible and tangible project results of development cooperation) and intimidating (concerning accepted programmes by governmental institutions) aspects in a culturally and socially difficult setting. Left now is only the private sector, and such has completely different mechanisms whose decision-making and enterprises are not based on publications or study findings. The approach and investigation in this area was through interviews again as illustrated earlier above.

3.4 Choice of Methods

To appropriately address the research area of market traders in value chains in Northern Ghana, choice of methods for research are decisive to reveal information. Suitable seems the three-layered approach to providing an in-depth study with - as mentioned - three layers. These are 1) who is involved, 2) what is done and 3) in which context. Onwards, tools and methods are embedded and included in the three-layer approach. Like in the beginning already explored, the value chain can be 'mapped' with various aspects; in this case, the ValueLinks approach that was used to draw maps. The map shows all actors and groups, actors relations, quantification of production flows and can comprise its financial implications e.g. value addition and or margins. Other scenarios can include demarcation of problems, challenges, or opportunities, which is valuable for visualisation and emphasis of a chain's characteristics.

Investigation on the respective data of value chains was carried out while field research and interviews were conducted. It comprises key informant interviews to tap experts' knowledge on actors' numbers and situation, followed by semi-structured interviews and focus group interviews.

For investigation of group dynamics, organisational aspects and organisational development, institutional roles of market women, were to inquire from the various relevant stakeholders. Access to crucial and confidential information, especially from the focal group was possible mainly through establishing trust long before in-depth interviews began. The choice here was making clear statements of researcher's tasks in the first place and to addressing focus group

[23] BILL WATTERSON (1991).

and the key informant with appreciation. The favourable attitude was always communicated to focus groups' and other related actors, and also stated as a high priority for local staff and assistants. Therefore, researcher's choice of methods might be accused of being biased; which has to be admitted, as any researcher would have an individual bias: it is rather questionable whether bias might bring positive or negative effects. For the focus group of market women and market queens who have largely been circumvented and ignored, attacked and accused of cheating, etc. it seems an appreciative bias would not cause damage.

Other sources used for data collection (figures, national or regional data) lack reliability, and in the case mentioned, will be held against the MOAP project's data and own elaborations. Therefore, comparability is barely achievable and results questionable, which will have to be embedded in actors' own descriptions and statements. After explaining the methodology used here, cases will be laid out to portray particular situations. It will be described in detail as to who is doing what and in which context, simultaneously focussing on the mentioned leading research question.

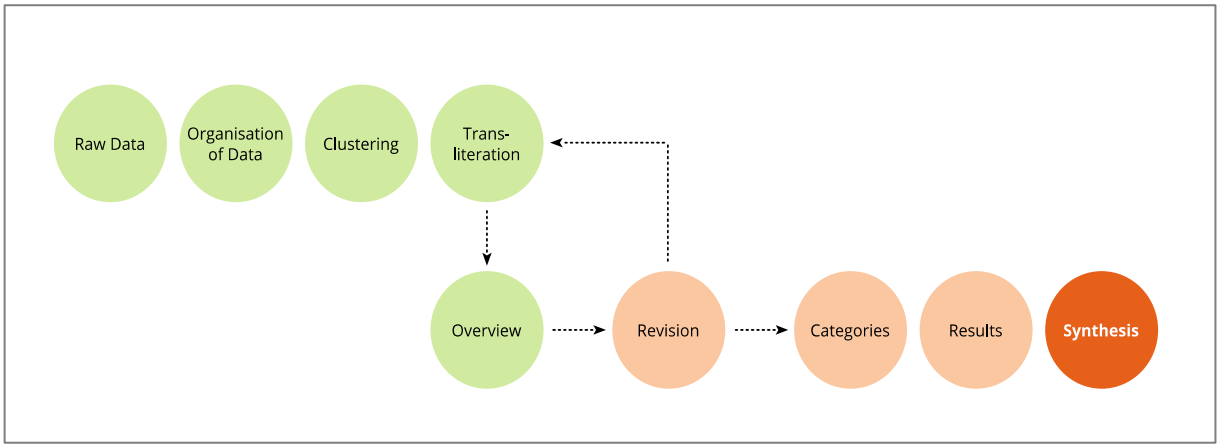
3.5 Data Analysis and Synthesis

The data analysis in this qualitative study requires the researcher to clarify objective of study early; to establish systematic filing with the numerous documents and data gathered[24]. This analysis started with transliteration of all notes and interviews; interviews with diverse actors or groups were arranged in clusters and notes were allocated to related interviews. Transliterating allowed repeated reading of all interviews, comments and memos and thus, thorough overview and revision of data were enabled. Mostly all these were categorised then and used for preparing lists of highlighted comments and terms that recur mentioned by various actors.

Additional attention is drawn to researcher's own emphasised terms that were not explicitly mentioned by actors but rather talked about in-between lines. These categories were summarised and highlighted, in such way preparation of data decoding was carried out. From these, results were carved out and synthesis derived. An alternating process was required to revise the overview established so far, and then another transliteration took place. The process of data for this study's organisation is illustrated in the following figure.

[24] (*cp.* e.g. BLOOMBERG and VOLPE).

Figure 3.3.: Process of Data Organisation



Source: Adapted from NAPOLEON (2010).

The stage of raw data included all transcripted interviews, data sheets and information on observations and also assumingly minor matters gathered in different documents. The bulky data and interviews were organised and clustered, sorted and rearranged for being grouped and sorted again. Due to many implicit declarations 'in-between the lines' it was only in the later steps that made the second sorting and clustering necessary. Often, the interviewed person would express in a few words what brought more information along. These additional data and information required the then following transliteration; with attention to do as much as necessary to provide insights for the study's readers but to alter as less as possible to keep the original statement intact.

The next step of overview was then necessary to conceptualise the study's context and to clarify at which part relevant evidence and conclusion are appropriate and defensible. That was the revision that was carried out several times, as in the above graph illustrated as a loop. After revising work several times, the study developed and subsequently, categories have analysed that lead to clearer results. For such analysis, no computer-based research tools were applicable or used. Thus, the complete analysis was conducted according to a qualitative approach. Combining these results than in one concerted work was the synthesis of the study.

3.6 Limitations of Study

The presented study is analysing market women's role in value chains; it cannot provide information on commodities' value chains that are not described here. It is also not possible to deliver quantified analysis of value chains due to lack of figures at institutional and organisational level; also governmental offices will have data which is not reliable, and actor groups are not able to provide quantitative data as illiteracy is widespread. Neither can this study be delivering analytical approaches for other West African countries, nor will it be able to explain market women and their inherited socio-cultural background, nor examine market traders in Southern Ghana. Informal cross-border trade is often mentioned in combination

with market queens and their traders and presents a significant section of informal economy as well as the contribution to food security. Albeit being a substantial contribution, such investigations would require data regarding cross-border trade and national data which is, unfortunately, not available.

This previous chapter has provided information on methodology and choice of methods and tools as well as their justification. Choosing specific approaches and methods to examine the field and explore actors' motivations and actions, should enable the research to deliver meaningful results. Thus, results and findings shall be presented in the following chapter.

4 Presentation of Results

In this chapter, results will be presented with regard to traders in each commodity respectively. The market women roles differ in each of the value chains; which is reason for displaying results per value chain and commodity. It is envisaged to demonstrate a comparison of the three value chains' traders' roles and functions to allow a detailed and accurate description.

The first crop is chilli, followed by tomatoes and third maize which are all presented as a) general information on the crop, then b) about the value chain and cumulating in c) traders roles and functions.

4.1 Market Women – Trade in Northern Ghana

The comparison of the three study cases begins with their traders as stated above. The three commodities chosen in this study are intentionally picked due to diversify value chain aspects and illustrate market women's activities. In the general setting of value chain environment the market women's business environment, relations, power and gender aspects are relevant. The selected three crops are examined from a regional point of view; which is the northern part of Ghana. The three cases are all involving market women, also termed women traders or female traders.

The setting also equally includes agricultural activities as market women are dealing with farmers for purchases. Agriculture in Ghana's North faces harsh production conditions and with consequences of climate change, traditional patterns are disturbed as climate change brings a tendency to late onset of rains. The droughts are longer and drier; the rains are heavier leading to more floods. The reasons for decrease in production volume and or quality losses could easily be found in these altered and unfavourable production conditions. On the other hand, neighbouring countries, landlocked countries like Burkina Faso or Mali show high yields nevertheless, and export agrifood produce in large volumes to Ghana.

When looking at Northern Ghana, motivation to grow crops is low compared to southern parts of the country. Especially in the dry season, when dust storms from the desert in Sahel zone have their season (colloquial name *Harmattan*), only scarce bushes, shrubs and trees remain. This very sharp line between dry and humid season marks the production in the North of the country. Agricultural production conditions will be described for each of the chosen crops.

4.1.1 Market Women in the Chilli Value Chain

In this partition, first the commodity chilli will be presented, followed by a description of results regarding the value chain of chilli in northern area of Ghana are depicted and thirdly, findings concerning market women dealing in chilli value chain specifically are provided.

4.1.1.1 Chilli Commodity

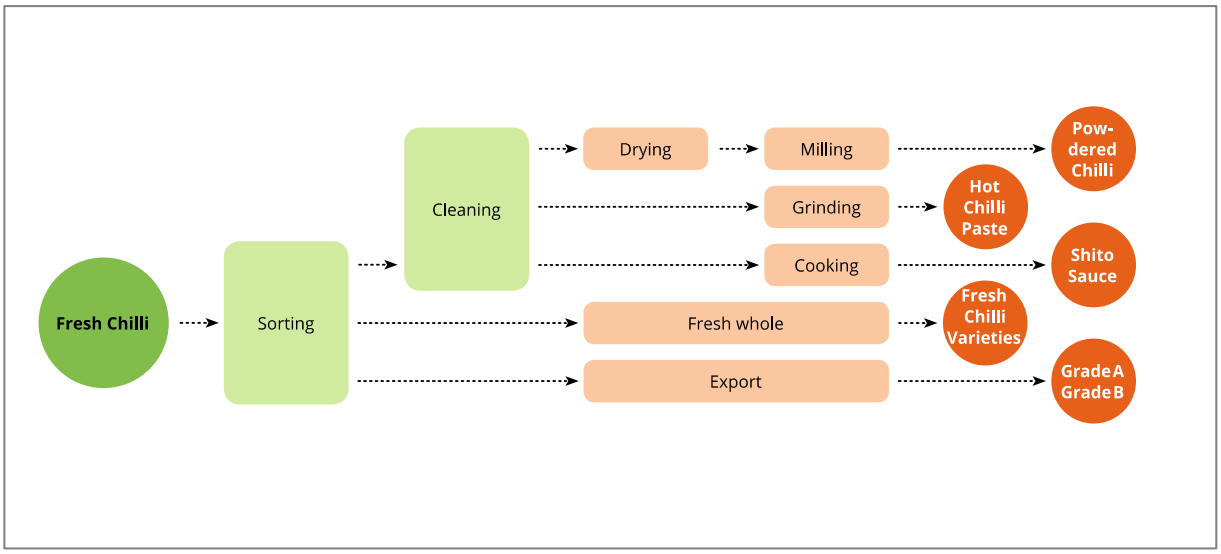
Chilli peppers are consumed on a daily basis in fresh or dried and or ground form. Before the years 2008/ 2009 approximately, only three varieties were cultivated which nowadays are some ten different varieties. Chilli peppers are *capsicum* species of *Solanaceae* family, whose products are used as vegetable and spices.

In northern Ghana, chilli is primarily produced on small-scale and as non-exportable varieties. The crop is grown in the area to supply rather small domestic markets. Mainly, five types of hot peppers are cultivated and consumed in the area. These are the (i) very spicy pepper which is a local variety and popularly called bird's eye chilli (African bird's eye, *capsicum frutescens*), (ii) the heart-shaped (round) variety Scotch bonnet (*Capsicum chinense Jacq*), locally referred to as "Konfiem", and (iii) "Legon 18" a hybrid variety developed by Ghana University Legon specifically for Ghanaian climate and soil, also including (iv) other local varieties like "Tiger" which is very spicy and (v) "Shito adope" which is preferably produced for the local "shito" sauce. Northern Ghana has a mono-modal rainfall pattern; thus, most of the peppers are cultivated during the rainy season. A small percentage, however, is cultivated under irrigation during the dry season. Also, export opportunities have increased in recent years. After introducing Legon 18, which was also developed under criterion for characteristics allowing export, figures have visibly increased.

Referring to the Millennium Development Authority (MIDA)[25] Ghana has become the fifth largest exporter of chilli to the European Union (MIDA 2012 a). Two grades are suited for exporting the product, which are an "A" grade and a "B" grade. Chilli is not only used as food but also in pepper spray as illustrated in a scheme in the following figure.

[25] mcc.gov/documents/investmentopps/bom-ghana-english-chili.pdf (retrieved 20 Sept. 2013).

Figure 4.1.: Different Processing Options for Chilli

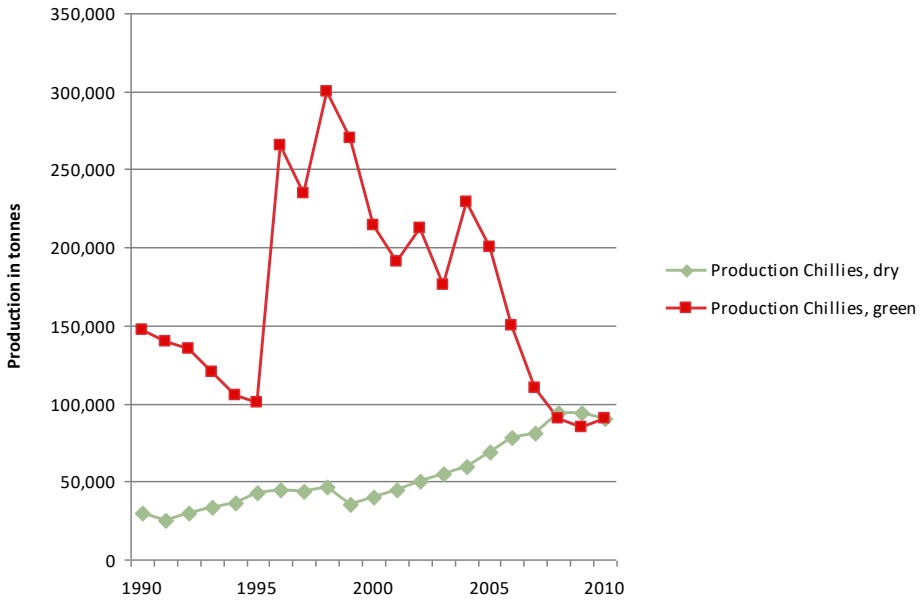


Source: Own elaboration

Produce of chilli is diverse not only as fresh produce. The varieties differ in such way that some need to be maintained fresh until consumption (e.g. "Konfiem"), and some are recommendable to consume in processed form. Processing carried out in forms as grinding, boiling out, cooking, drying e.g. as to which product is requested. In spices, dried and ground chilli will be used, for "Shito" sauce (typical sauce like tomato sauce) the produce will be cooked. For some cases, produce needs to be boiled out to clean and prepare for the next processing step. Such steps are necessary for e.g. fresh chilli sauce.

The chilli production data listed in FAO statistics (FAOSTAT 2013) is divided into solely two categories, the green chilli and dry chilli. The dried chilli is in average a fourth of the fresh chilli fruits' weight (repeated tests let assume that fresh produce is in average four times the amount of dried produce). To demonstrate development of chilli production and yield, time frame of twenty years was selected. For the time between the 1990s and 2010 data was retrieved from FAOSTAT that shows increasing yields per acreage and growing production, see graph as follows:

Figure 4.2.: Total Production of Chilli in Ghana 1990 until 2010

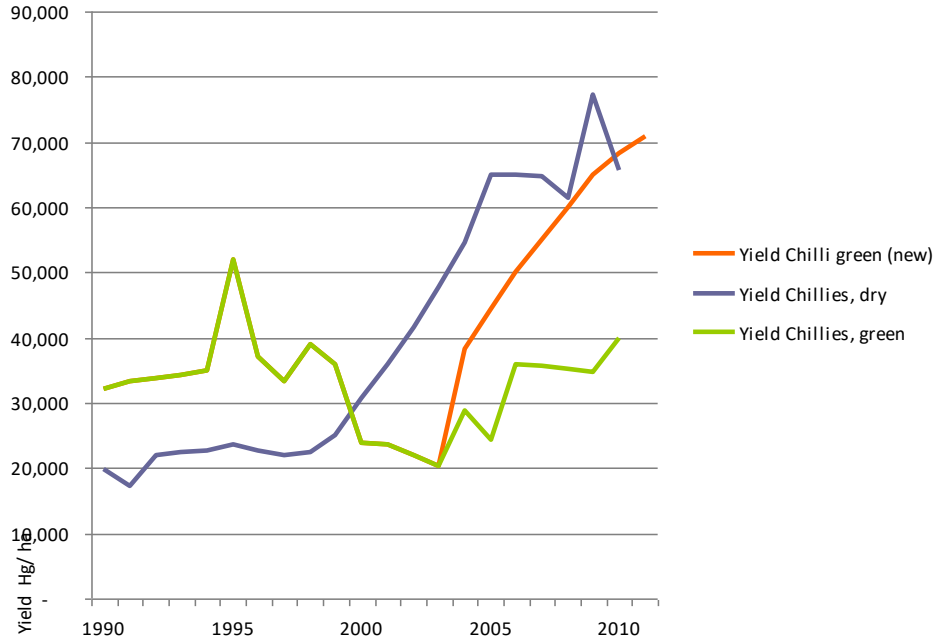


Source: Own elaboration based on FAOSTAT (retrieved January 13, 2013).

This graph shows a relatively stable curve of production of dry chilli; whereas the production of green chilli pepper increases by up to 200,000 tonnes and then drops dramatically. Nevertheless, production increase could result from utilising more area, or a productivity increase has occurred that was not registered (the data is mainly estimated by FAO). Another possibility is climate change impacts that result in lower yields or even harvest losses. It could not be clarified which sources of error could be responsible nor what reason a production increase of that dimension would be possible.

Regarding yields per acreage of chilli, data was retrieved from FAO database (2013) cumulated in the following graph. Yields are fluctuating but are increasing over time, in this case from 1990 until 2010.

Figure 4.3.: Yields per hectare of chilli in Ghana 1990 until 2010



Source: FAOSTAT with own calculation (retrieved 20th and 21st September 2013).

This graph is a suitable example of lack of reliable data. The data regarding yields per hectare gained before 21st September showed a relatively low and unstable productivity. But data set was obviously altered after that date as the red line suggests a new yield increase, with an ideal and straight increase rate for yields[26]. Another question is how dried chilli can be measured per yield, as no ready-made dried chilli varieties exist. Visible clearly in both graphs is a peak in 1995[27]. Therefore, it needs to be questioned what these data sets provide, but a rough idea, it is only useful concerning chilli production and their yields have been increasing.

For further thorough assumptions and statements, more reliable data is required; but as mentioned earlier lack of quality data is an issue. On the other hand, market queen for chilli states that overall

> "The supply [of produce] is good, as well as the market and pricing; [but] the supply is not stable and thus, price is also not stable. Only demand is high everywhere." MQbt3

Later she confirmed that with chilli "market shows a price" (MQbt3) through a permanently high demand and an unstable supply. Self-explanatory that although not having had school education, the market queen is well informed about price mechanisms.

[26] Yields are given in hectogram per hectare, e.g. 1 hg equals 0.1 kg.
[27] In that year, a curfew was imposed due to tribal conflicts in the Northern Region, clashes that left thousands killed and more than 150 thousand displaced.

Regarding her sales from North to South, the produce is paid after three days that is only when all is sold. If not, she admits that re-bargaining is necessary and the price is thus, to be changed.

> "We talk with Kumasi, Techiman, Accra [market queens] on the phone. Before we had phones, we had to travel; on a weekly basis. Selling and going round until our bags were empty of produce." MQat3

In cases of an insecure payment source the market queen would be travelling to that place; a reason why business relations with other sellers are preferred more when trustful relations exist. Also, this their approach to reducing transaction cost. And to underline the risk aspect of this business, the market queen asserts that selling is "*not done on a credit basis anymore*" ($MQbt_1$).

Even in cases when sellers do know each other well and trust exists, some certain and unavoidable losses may occur. Transport of produce is risky as roads are full of pot-holes, et cetera and lorries have worn-out tires and defunct engines or hit other vehicles that are standing broken-down and unilluminated at night on the road. It is not unusual that a truck loses its whole load and the driver his life. For traders and market queens, this is one worst-case scenario and amounts to several hundred GHC that are simply lost. There is no insurance covering these issues such as accidents on the road.

Regarding chilli as a crop, it is typically found in each backyard and taken care of by women who usually work all day in and around their houses[28]. Chilli used to be a negligible crop, tiny portions that were planted and slowly harvested daily for food preparation. Since the year 2010 onwards chilli has received a major push, making it attractive for men as an income source, to also allocate time and space for the cultivation of chilli sorts. Later it was explored that such push was perceived through GIZ MOAP's interventions. Programmes were addressing producers of chilli (and other crops), and as Northern Ghanaian women generally not show or speak up in public, their men came in producing chilli pepper and who eventually took their place.

Turning to the crop and its processes until final products as powdered chilli, fresh export, or pepper sauce, a diversity of actors is involved. This is value addition through refinement, developing and changing the raw product. Thus, next step is to explore the characteristics of the value chain of chilli.

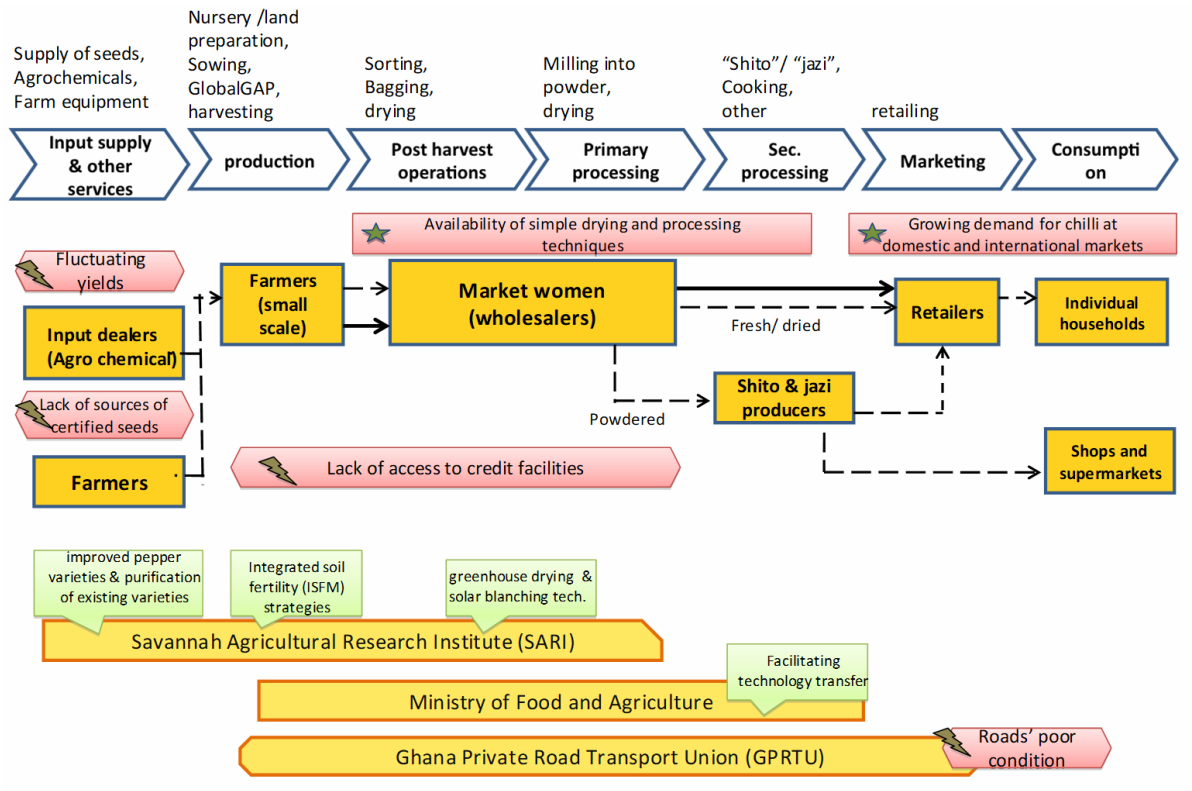
[28] In Ghana's North, a household consists of the grandparents and their sons with wives as well as their children. The daughters move away to their husband's house respectively. The "household" is an aggregation of several houses, for each couple one. These are build from clay mainly and thus, easy to adapt and build a new house for a grown-up child that gets married but will stay in the same "household".

4.1.1.2 The Value Chain of Chilli

To introduce a value chain perspective for the commodity of chilli pepper, it is a relatively "young" chain as cultivation was rather marginal and quantities were negligible, as mentioned earlier. The structure of chilli value chain since its increase of volumes and meaning as a source of income shows a division of labour and gender. Meanwhile, men have their own plots of chilli cultivation, sometimes even diligent carpentered elevated seed-beds. These are elevated to avoid farm animals to stomp through the seed-bed with little seedlings. It is common in Ghana's North for men to show off their results, women do not indicate theirs or their crops let alone to ask questions or to speak up. Therefore, in some areas of chilli value chain women do not show although they actively take part.

The value chain of chilli can be described in many ways, depending on the perspective of the researcher. Therefore, it is not solely one that will fit all views; rather a few maps that will be represented to show different angles. One map is a cumulated map, combining quantification, opportunities and threats in one map. The second will be presenting a gendered view of the value chain and which actor and which group is male or female. The third is an alternative way to visualise market women in the value chain better. All of the maps have in common that different chilli varieties are handled within the chain; resulting from actors dealing with produce are the same for green, red or fresh, dried and ground chilli peppers.

Figure 4.4.: Value Chain Map Chilli in Northern Ghana – a conflated view.



Source: Own elaboration based on MOAP data (2012).

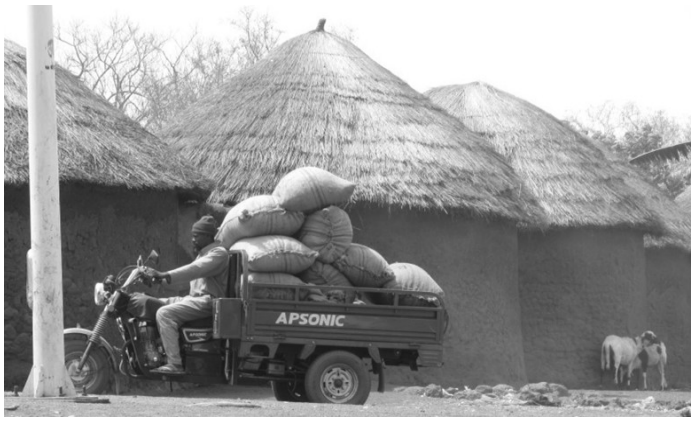
First, the conflated map shows various actors; mostly representing the view of development intervention implementers. Beliefs are influenced by these views, which shows small-scale farmers needing support and intermediaries - or in this case, market women - are not an explicitly bad actor but an *insignificant* one. Nonetheless, significant changes occurred in the years from 2008 onward, the VC maps show only certain stages and can barely portray the processes, the relational or dynamic effects.

The yellow boxes are various actors, on the bottom yellow boxes are supporters (like MoFA) and enablers (octo-box like GPRTU) including constraints (with the arrow in the box) and opportunities (boxes with a star) interconnected to each other through lines that are either dashed for spontaneous and irregular contacts or lines are solid when contacts are regular or on a contract basis (according to legend by ValueLinks manual (GTZ 2008). To highlight one example in this value chain map, reality value chain development showed that appropriate seeds are necessary. The project brought in sources for certified seeds, and are worked on in a project to enable farmers to produce seed that is of high quality and at the same time, the research institute SARI is assisting farmers in that aspect but also prepares for their seed certification.

The University of Ghana in Legon made a similar process possible for appropriate seeds in the South of Ghana. There had been series of experiments to bring adequate seeds forward, when scientists created a hybrid seed variety called “Legon 18”. Another factor that can be seen in an opportunity box is the availability of drying facilities and other processing techniques. It was made available through MOAP programme, a simple solar dryer for vegetables and fruits. Other devices were made available through small enterprises that received foreign financial support. Providing simple and affordable equipment is especially helpful for those actors who lack the necessary starting capital; most of them are women.

With regard to market women as an actor in the value chain of chilli that consists of only women, a different perspective seems necessary and appropriate. The other agents or actor groups also show gender roles segregation. In interviews with market women, it was reported that they have helpers; young men who own a tricycle and who are called “transporters”. These vehicles are most suitable for transporting heavy items, yet stability on muddy roads or roads with pot-holes is weak and minor accidents occur frequently. A tricycle vehicle is seen in the below picture. The mentioned transporters are a group that indirectly assist market women and support the value chain transactions but are not recognised by any of the intervention organisations.

Figure 4.5.: Tricycle in Northern Region

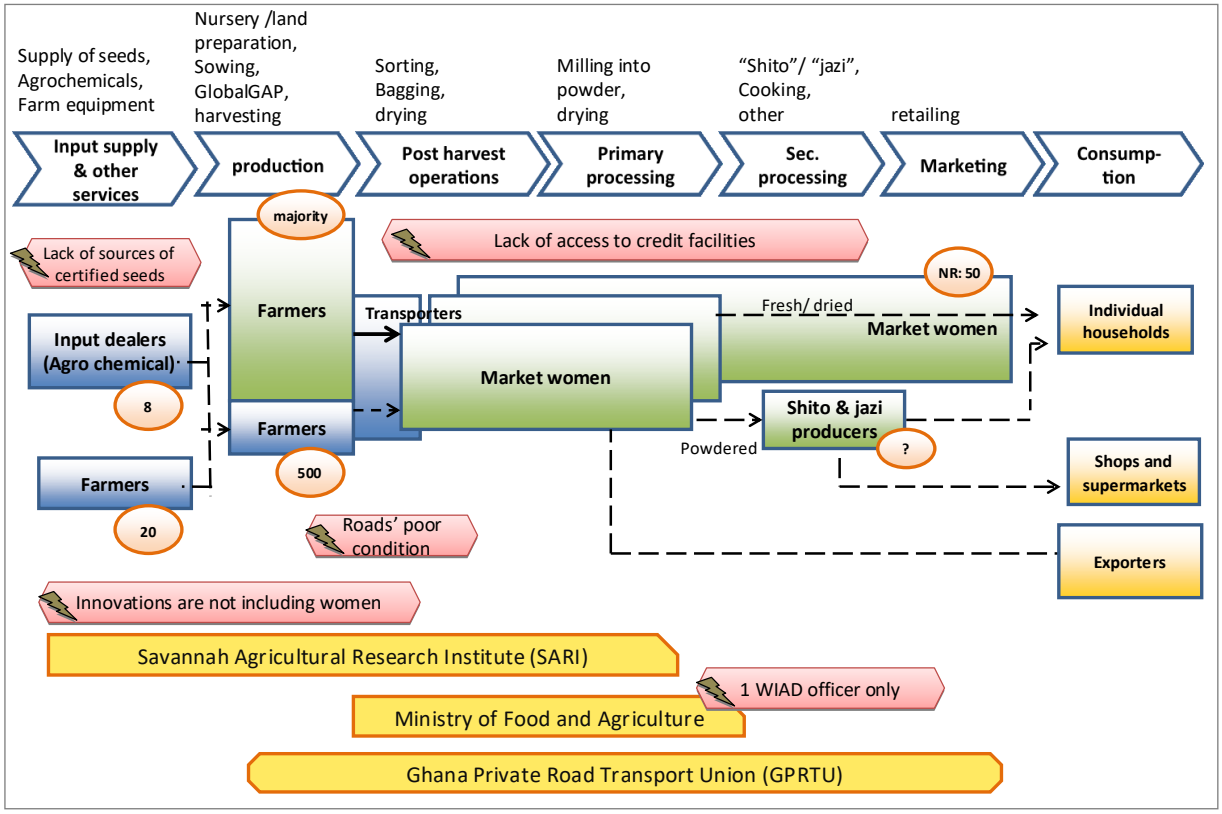


Source: Photo by dasibatamale.wordpress.com through Google images (22 July 2013).

Important part in their task is that handling the load with care, which means to care for reducing losses and thus, better business for the market women. This aspect of relation between market women and transporters will be described later in detail. The market women group seems to be all female, transporters all male, processors all female, but producers are mixed; although this group used to be mainly female until years 2008 or 2009. Therefore, findings concerning market women in chilli need to be differentiated. At this stage, a gendered perspective value chain map should be drawn; as presented in the next figure.

Taking into account that some groups are solely female or male it could be assumed that groups have organised their part of value chains accordingly, presumably with assistance of development organisations. Women would require less heavy equipment, training scheduling that respect women's caretaking time and household work. Nevertheless, with WIAD, the MoFA's Women in Agricultural Development officer is solely one single person with no funds for e.g. transportation. The research institutions develop purified seed varieties, present soil fertilization techniques, but mainly to men. Trainings that include women and address women's needs are scarce.

Figure 4.6.: Value Chain Map of Chilli Northern Ghana, gendered perspective.



Source: MOAP data with own elaboration.

In the above displayed value chain map quantification is introduced, concerning how many of an actor are in a cluster; with one aspect is that here, male actor groups are shaded in blue, female groups are shaded in green, and mixed gender actor groups are yellow boxes. This makes a minority, male farmers visible. The majority of them are women, producing chilli in their home gardens or on little plots (0.1 -0.3 ha) approximately.

A major part of the map is occupied by traders, the market women who take care of purchasing raw chilli from production places or farm-houses in peri-urban or (mostly remote and) rural sites. There are three boxes for market women layered after another, indicating findings that each municipality, each district and region has their distinct group of market women. For simplification reasons, the three northern regions are presented with three boxes. The location of the boxes also describes the flexibility with which this group operates in the chain, one trader is not stationary in one place but can take up tasks of another in her group. But further details will follow in the upcoming section.

A decisive issue in this altered map is that women deal with the lack of access to credit possibilities. It was found out that this group does not have opportunities to obtain credit. The common and popular option is to take part in typical local saving group systems. But amounts derived that way are relatively small and generally it is carried out to save for school books, clothes and e.g. medicine for their children – not for purchasing fresh chilli from a

large number of producers. Rural banks that should be capable of addressing this group's needs are reportedly unwilling as they need collaterals or any form of security to provide.

Another important aspect of this value chain that should be made visible is the social, relational factor. Power and other relations are crucial for understanding the value chain and its actors and therefore, a specific subchapter will look into relational and power in value chains. In the next part results concerning market women and their head, the queen will be laid out.

4.1.1.3 Traders and Market Queen of Chilli

From the mentioned circumstances, their presence in large parts of the value chain yet is that these traders are difficult to identify as such. The individuals of this group are known to those inside their group, appearance is that of rural women and normally not identifiable as traders. To contrast other groups or individual businessmen or businesswomen, traders will not expose any luxury or wealth. Despite a modest or poor appearance, the market women coordinate supply transfer from inputs provision and production until sales; market queen even determines prices in specific cycles and coordinates supply and demand streams as many different governmental and non-governmental personnel reported independently. These different persons described the position itself that being market queen implies a sort of "caretaking" of the market place and its circumstances.

This position of price determination cannot stem from an individual; it requires support in the form of respect from other actors in the form of approval and acceptance. This form of respect was not reported at any time, though. It is then by coercion; assuming that traders hence must be threatening others to comply? Findings regarding market women as a group and market queen as a singular, individual leader. In this case, the chilli market queen especially has experienced change; when chilli as a commodity was unimportant and thus, its queen until chilli gained importance and increased volumes of production and its varieties and hence, export became an option as well.

The women group is having their own specific rules and "bylaws" as they call it. The traders, market women, report that it is of highest priority to stick together. Before the year 2009, these women had barely any comparable income source, which they now have through trading, only before that chilli produce was less relevant. The women would trade other crops as well when chilli is "off-season" and other crops are available to be traded. Women then easily switch to crops that are produced in their neighbourhoods, e.g. yam, groundnuts. It is not fixed about which crop is to be sold, and it can be almost any produce from their backyards, their friends and relatives. Issues sometimes arise due to producers that try to cheat or try to achieve a higher price.

> "Sometimes, the farmers go not according to what has been agreed. The produce can be of good quality, mixed with very low quality and we have to do sorting in the market. Then they complain about the price." MW4

On the other hand, other traders report that

> "the few communities close to the border; there are producers who make effort to sort and prepare the produce for us ready to pick up. They sort three quality grades and show us that they carefully put the produce in the box. And not spoiled fruits at the bottom (…) So we rather take the long road to Navrongo[29] to buy well-prepared produce" MW2

Traders narrate that farmers do not appreciate their advice regarding quality issues that arise from post-harvest handling such as packing and beforehand sorting of produce. It was reported to be the most time-consuming aspect of dealing with farmers. Market women complain that on the one hand, farmers demand better access to markets to achieve some cash-income. On the other hand, the same persons are not willing to spend some time to make their produce ready and easy to sell. Buying produce at farms from producers is, therefore, time-consuming and cumbersome and if farmers are "new" to market women, they may have to "invest" even more time for negotiations.

The next item to be described is the relationship with buyers. Here, some buyers are large quantities buyers. But they are reported to be only two or three. Additionally, there are many small ones, like restaurants or chop bars.
The transporters need to be mentioned as they play a decisive role, not only for the chilli women traders:

> "When we buy produce, the boys come to carry the sacks and put it on the Motoking [tricycle] to transport it to the [Central] market. They accompany the goods to unload it at the market again." (…) MW4

The queen states that she and her women traders,

> "we know these transporters from very long time. We have always had good experience with them to take care of handling the goods. They are aware that their payment also depends on safely transported produce." MQbt1

She is to decide on prices but narrates to have only a subtle range of what price is reasonable:

> "we don't want to bring too much produce, we will have gluts and the price decreases… the farmers and everybody else will be complaining." MQat1

According to the market place schedule, prices are set each week or each second week. The wish of many farmers to sell all their produce away, ripe or not ripe results simply from their need of cash. Whereas the queen orders her traders not to buy all produce that is offered, but to select. The traders buy from some farms and from some farms they promise to buy the

[29] Navrongo is a smaller town in the North of Ghana in Upper East, close to the Burkinabe border.

following week, for instance. Therefore, a market queen will hence, restrict quantities that reach the market in order to maintain a price level or moreover, to avoid a sudden price decrease. The market queen's relation with buyers is in some cases long-standing relation, and some are ad hoc. These relational aspects for various agents with each other, and along each value chain will be made visible in the following chapter after presenting each crop's value chain characteristics.

Subsequently, the market queen of chilli seems to be fully aware of mechanisms of markets albeit she is relatively new to the business, compared to her colleague e.g. market queen for tomato. She confirms a lot of discussions with her colleague, and trainings through her as well, tomato market queen in the North who is well experienced and respected for her knowledge. The crops may be distinctively different – regarding perishableness and importance – still market and price behaviour is applicable to the both of crops.

4.1.2 Market Women in the Tomato Value Chain

As it has been described how chilli value chain functions earlier, its main commodity aspects and traders dealing with chilli, this chapter now looks at the same characteristics of a related vegetable crop: the tomato value chain. Tomatoes, the second case of this study are vegetables but with perishableness being higher than many other vegetables and thus, creating pressure due to quick harvest losses, or e.g. damages through waiting. On the contrary, tomato prices are relatively low compared to other vegetables. Further aspects of tomatoes as a crop will be laid out in the first part. Afterwards, a part will look into the value chain's situation, opportunities and issues. The third and last part will propagate results on traders' function and tasks in the chain.

4.1.2.1 Tomato as a Crop

The varieties cultivated in Northern Ghana are: *Pectomech* V.F., *Tropimech* (CLOTTEY et al. 2009: 5 f), *Rio Grande*, *Wosowoso*, *Laurano 70*, *Roma* V.F. and *Nema* 5230 (YEBOAH 2011: 16), and *Lindo* and "*Coco*". Possibly these could be names that some varieties have their Ghanaian nickname instead; *viz*. *Ada Cocoa*. Therefore, one variety, which correct name is spelled *Pectomech* but may also be called "Petro" or "Pecco", and one variety called *Rio Grande* may be called "Grandy". Some other tomatoes could not be identified nor named accurately by the producers.

In many cases, the seedlings are derived from indistinctive sources (may be neighbours or friends) that have retrieved seed from tomato fruit themselves. Heirloom tomato varieties that allegedly cause difficulties and claimed to have a shorter shelf-life than other formerly cultivated varieties.

Some traders complained that varieties were introduced and spread for usage, which have a softer skin and it is damaged more easily. Such characteristics hamper appropriate handling

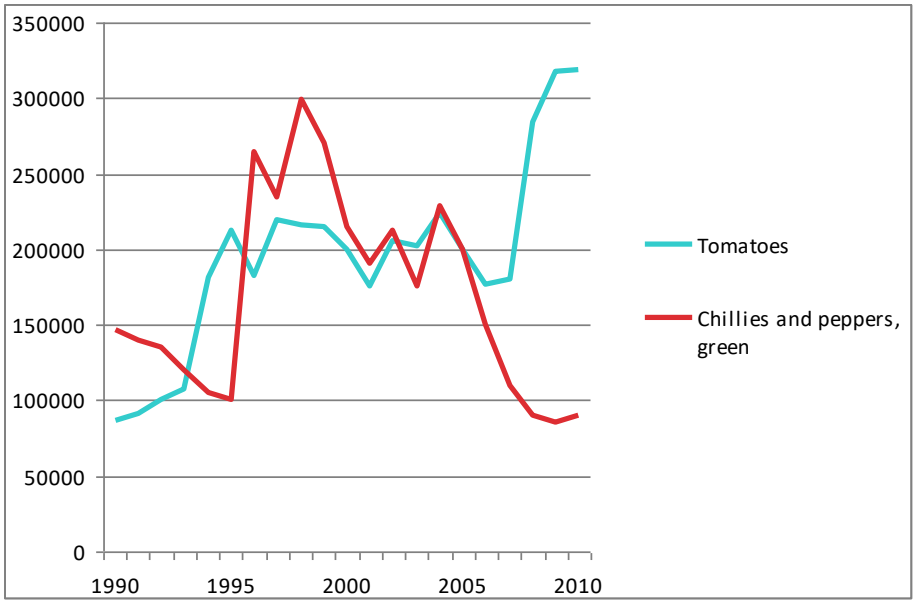
and complicate transport issues. Some varieties such as *Tropimech* are more suitable due to their tougher skin that would be less vulnerable to damages.

> "Normally we have "Petro" and "Rio Grandy", most producers use these varieties. In some cases, it is better with "Tropimech", and quality issues are less. But we also know farmers who plant "Roma" or "Lindo" and "Coco". MQbt2

Deriving seed and acquiring certified seed are critical issues in northern regions. All producers contacted were using mainly the "washed" and recycled seed from their family, from neighbours or friends. Input dealers my have seed, but it is rarely bought due to comparatively high cost. Nevertheless, such seed sourcing brings along diseases and other disadvantages that may increase with time and may not be suitable for all varieties but only for specific ones, *viz. Wosowoso* variety (YEBOAH 2011: 18).

With regard to the complete production data, total production of tomato is similar to other vegetables, with tomato production marking a jump from 1995 onward as can be seen in the below graph. In this figure, previous' crop data of chilli is included to add visualisation to developments of both crops.

Figure 4.7.: Total production of tomatoes (and chilli (green) for comparison)



Source: FAOSTAT (data retrieved 21st September 2013).

As depicted in the graph above (figure 12), tomato production has increased, compared to chilli. According to FAOSTAT data, production has doubled roughly in the last twenty years – but increased drastically in 2008 and 2009. Nevertheless, the reliability of data set is of doubt as mentioned before concerning such data. Literature suggests a decline of tomato production rather and no increase as indicated for years 2008 and 2009 (ROBINSON 2010a).

Tomato production is also a highly seasonal business that reflects rainfall patterns as well as water access. Ghana's North produces, thus, from January until April when rainfalls have set in. Similar, Burkina Faso produces from February until May; under similar climatic conditions of semi-arid savannah area. Referring to Robinson, yields strongly vary with many of farmers reporting yields below ten tons per hectare (ROBINSON 2010b: 3). In correspondence to this, in interviews the Northern Region's tomato market queen stated that supply in 2012 was comparably small and hence,

> "as a result of low supply this year, the price is high. (…) It was at 35 to 40 GH₵ but later 100 to 150 GH₵ this year." MQat3

Fluctuations are typical for rainfed produce as tomatoes; drastic shortcomings are worth to mention as the tomato market queen did. Apart from these complications, other issues such as shelf-life and other quality aspects are relevant. Seed is one particularly important issue as mentioned above. Nevertheless, most of tomato seed used is heirloom and called "washed seed" that is generated from ripe tomatoes' seeds, which are removed, washed and dried. This operation comprises transmission of diseases as well, especially fungal diseases and inbreeding. Handling of produce is another crucial aspect. Tomatoes are handled in big wooden crates before they are sold; standard measures are specific bowls and buckets to replace weighing with scales. A typical container is the crate, with a content that can range between 50 and 60 kg (BRITWUM 2013, ROBINSON 2010b: 4).

Shelf life has decreased though, according to women traders; it used to be up to six days (approximately in years 2005/ 2006), and it has reduced to roughly two days. Transportation is sometimes critical part in handling procedures; the produce transported in large containers or crates easily gets damaged, as pictured in below figure.

Figure 4.8.: Tomato Crates at a Northern Market



Source: google images (Sept 2013).

Since tomato sauce is one of the major ingredients for Ghanaian meals, cheap substitutes – as imported tinned paste – are sold in large quantities and at a price below Ghanaian produce.

Ghanaian tomato paste factories and e.g. the National Vegetable Growers Association made a campaign to re-strengthen the domestic tomato paste production (ROBINSON 2010a).

Also consumer protection boards have made attempts in creating awareness that the imported paste is mainly consisting of starch and colorant; to raise awareness for quality food and domestically produced goods. But tomatoes are not processed to paste only; due to its high perishableness women traders sometimes sun dry tomato-halves in a simple way, let alone hygienic conditions are not questioned. If sold fresh, almost all of distributed fruits are infected with mould. An awareness creation of mould-infected food produce is another topic that cannot be discussed further at this point. Other agents in research see an urgency to initiate discussions on tomato markets and its issues as the aspects mentioned above. One of these is a group of researchers from universities in southern Ghana, which are convinced that government should address "the complex of biotic, abiotic and institutional challenges" (BABA et al. 2013), through solely support production and assist them with market access. The findings of this study persuade different evidence leading to different recommendations. As the following sections will show.

4.1.2.2 The Value Chain of Tomatoes

Describing the tomato value chain with all its relevant actors and challenges or opportunities will be presented in this part. Similar as in the chilli case, operate in remote rural areas as well as urban centres, in the absence of formal distribution systems (BRITWUM et al. 2012). The tomato value chain as such is described as a "two-level" system with the producers in rural areas and consumers in urban areas – with only the market women as a connecting link (ROBINSON 2010a: 1f).

The case of tomato value chain in northern Ghana needs to be distinguished from southern value chain case of tomatoes. Market women – or as they are also called itinerant traders, operate in each commune and district specifically with many long-term relationships. These relationships allow special credit lending on the base that payment is done through selling the harvest. Another positive aspect is that traders communicate quality aspects concerning grading which is carried out at the farmers' place. Each community has some few market women and one market queen; a leader that is responsible for purchase and resale of produce. In southern regions of Ghana opportunistic behaviour is widespread (Robinson 2010: 6). Therefore, not all findings that can be found in literature can be translated for the northern situation. The traders are abandoned by governmental institutions and by organisational support and they are blamed for many issues regarding producers and supply situation and prices (BRITWUM et al. 2012; *cp.* AWO 2010).

Examining the value chain for the northern part of country, it is necessary to learn about national policies and regulations for vegetables and also international agreements made. In Nkrumah's presidential era the domestic vegetable production was promoted and processing

plants opened. This changed mainly in the early 1970s while implementing structural adjustment program (SAP) with a development loan from IMF signed constituting conditions including large food imports and privatisation of state run companies among other (APUSIGAH 2002). The processing factories kept on but far below the adhered capacities.

Being an ECOWAS (Economic Community of West Africa) member, Ghana has the Economic Partnership Agreement (EPA) with the European Union stating the import of tomato paste (and poultry, amongst other[30]) in larger quantities. The issues that arise in this value chain are on one part of the input side; meaning a lack of a suitable, appropriate tomato variety as well as financing options. The African Development Bank (ADB) had pursued to re-open the processing plant assured producers with loans. The payments were delayed and therefore, planting was also delayed. Rural Banks do not favour involving in agricultural production since it is a highly risky business. In this map thus, the European Partnership Agreement is placed at processing and retailing area; although indirectly affecting production as well, clearly as a constraint.

The following map shows areas for tomato produced and marketed, with mainly two centres that are typical for the northern part: One is Tamale, the Northern Region's capital town and the other is Navrongo, a district capital that is very close to the Burkinabe border.

Figure 4.9.: Geographical map indicating tomato markets in Ghana's North



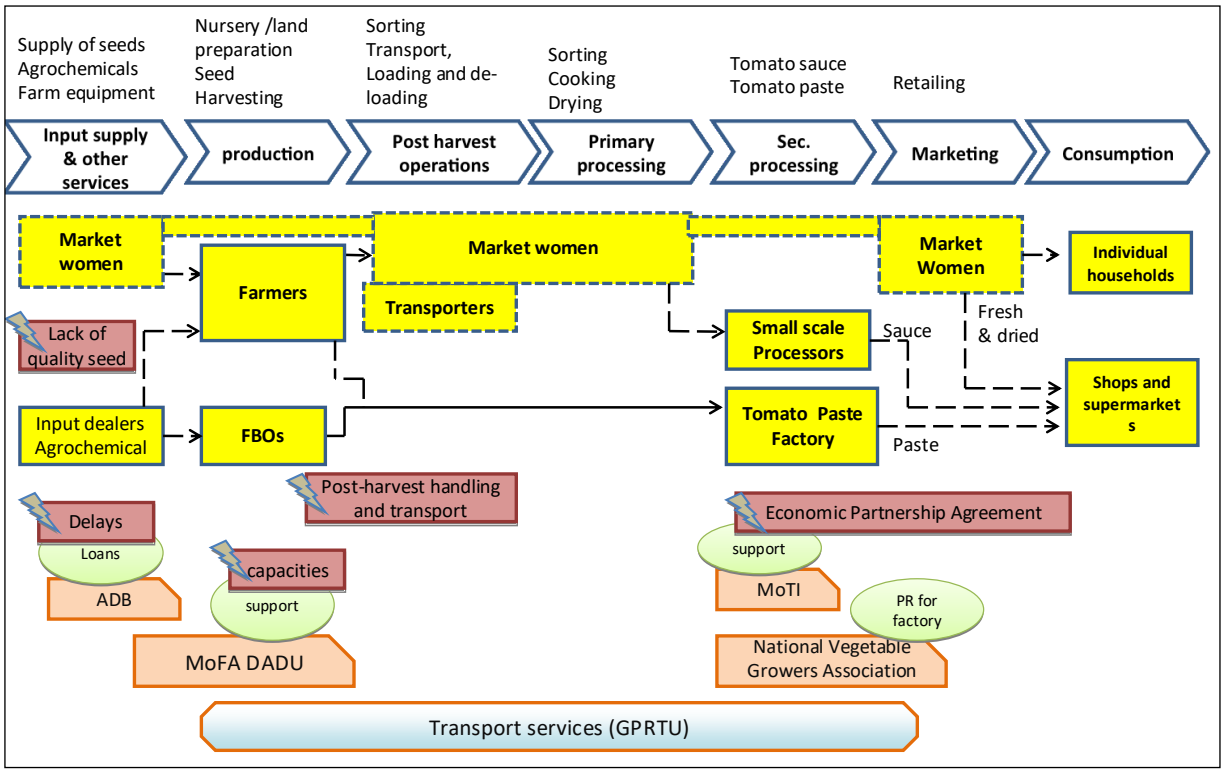
Source: ILRI FAO (retrieved 17.07.2013) with own modification.

[30] Imports of cheap poultry products was abolished from EPA after public pressure increased.

The northern region's Upper East tomato producers' malaise is geographically still close. The story reported was that market women stopped trucks loaded with tomato crates that were supposed to be provided for tomato paste factory (Northern Star Factory in Pwalagu); leading to the close-down of factory eventually. Sources admit that farmers sold their goods to factory but still had debts with the market women.[31]

Organisations and different reports claim that the factories (of which only one remains nowadays) faced a monopsonistic situation. Meanwhile, other buyers exist; one in the North of Ghana is the tomato paste factory in Pwalagu[32]. But since the re-opening of the re-named factory amounts purchased are not high as before though, and barely any amount of tins is sold. The ministry re-opened the factory to create jobs in the Upper East, yet inputs for tomato paste are not steady, and sale of tins is minimal. The management of factory is aware of the imbalanced situation, but most of the employees are appointed to their position and will not threaten their job places.

Figure 4.10: Tomato Value Chain Map for Northern Ghana



Source: own elaboration.

In this value chain specifically, market women are known as an authority and for their power in terms of price determination and market coordination. Yet, they are not recognised as

[31] Other sources report a very different course of events. The farmers actually stopped trucks with market women's tomato load because the price was too low.
[32] Note that it is not Pwalugu but Pwalagu; some sources use different spelling.

value chain actors by the supporting agencies, e.g. Ministry of Trade and Industries or Ministry of Agriculture, not to mention the large number of international development organisations. Therefore, market women are not in bright yellow as boxes are coloured normally for VC actors, but in transparent yellow with dotted lines. The differentiated shading seems to be an appropriate way of visualising a VC actor that is existent but circumvented on a broad basis and left out from all development interventions.

Some have described the tomato value chain (ISSAH 2007, Robinson 2010a-d, BRITWUM et al. 2012, BAMLER 2011), but only with their focus on southern context and traders of the country. Ghana started producing tomatoes in large scale during a program for rural economic development in Nkrumah's presidential time. Later through development loan conditions and further agreements with the EU, tomatoes were imported and supplied to markets at a low price. The market for domestic tomatoes deteriorated, the country is impeded to protect domestic tomato production due to policy agreements (ISSAH 2007, ROBINSON 2010c). Nevertheless, tomato production is claimed to be self-sufficient if all harvest could be brought to market and import regulations for foreign tomato produce would be altered[33]. Referring to ISSAH (2007) the IMF has first ignited weaknesses in Ghana's tomato (and poultry) sector, which were then tightened through the Economic Partnership Agreement. For the tomato market though, studies have shown that equilibria are restored after a short time and hence, may prove their resilience and traders' part in a correction of glut production (IHLE and AMIKUZUNO 2009).

The critical aspects of the value chain remain to be that tomatoes are cultivated as rainfed produce and conditions do not offer storage facilities which might extend the fruits' shelf-life. Thus, prices do vary much over the year and are subject to weather conditions rather than traders' actions. The traders state that their ambition is to reduce risks instead, rather than gaining high profits. It is within off-season when Ghanaian producers cannot provide tomatoes that traders will bring produce from Burkina cross the border to supply Ghanaian demands and may – in that time – generate profits.

In Burkina Faso, it seems that producers have superior storage methods and can supply better quality products, and will buy rather than from Upper East producers that have less quality produce. The market queen reported that some producers in Upper East have taken up to compete to Burkinabe produce; with diligent sorting and presenting as well as honest way of selling. Decisive though remain the transporters. These are hired and paid per unit, but most of them have long-standing relations with traders. These report that margins of bringing produce to Tamale are relatively low. But for market queen and traders, it would be equal whether produce is brought from Burkina Faso or from Ghana's Upper East.

[33] Philip Ayamba, (Community Self Reliance Centre)

Table 4: Transportation Cost from Different Farms to Tamale in GHC

	Accra	Upper East	Burkina
Fuel	590	80	360
Maintenance	270	150	190
Total Cost	860	150	550
Total Cost per kg	0.077	0.017	0.053
Revenue	1600	700	1300
Revenue per kg	0.145	0.064	0.118
Margin per truck	740	550	750
Margin per crate	7.4	5.5	7.5

Source: own elaboration (based on ROBINSON 2010)

There are generally 120 crates loaded on a typical truck; 100 that are charged for and 20 crates, which are for the truck, its transport service. With one crate normally carrying approx. 110 kg and being charged for 16 GHC each; 7 GHC from Upper East and 13 GHC from Burkina respectively.

Eventually, it remains to state that tomato producers are drastically dependent on sales to traders or direct buyers in any form. Press and other statements that accuse or defame traders bring no useful impulse, yet leave traders and producers unconnected. As just recently, a press paper complains of traders unwilling to buy produce and not keeping word (Savannah News, March 2014[34]). Producers have difficulties in selling their produce, especially in remote areas, and especially if requirements communicated are not followed, and especially if conflicts and or violence amongst tribes are daily occurrence. It may be stated that producers cannot expect high returns only through application of quality seed, application of fertilizer – it would be necessary to communicate and organise sale of produce and to communicate mandatory conditions for sale. Subsequently, crucial issues of the tomato value chain are not visible in the above-depicted map; cannot be made visible in such map. Crucial topics are communication between partners, or producers on the one hand and traders on the other.

4.1.2.3 Traders and Market Queens of Tomatoes

In this partition, tomato traders' organisation will be described concerning characteristics that affect i) intrinsic aspects of the group and ii) the extrinsic aspects of the group. Therefore, it will be explored in the first part group-related issues that were mainly communicated in the interviews but also observed. The latter part will be depicting environment of traders' group, such as national policies and economic reforms, international agreements and business environment.

[34] See savannahnewsblogspotcom.blogspot.de/2014/03/tomatoes-waste-away-in-upper-east-due.html?m=1

The tomato market queen's work is mainly of organisational affairs that derive from logistics and communication with diverse partners along the value chain and last but not least challenges within the traders' group. The crop's importance is a determinant of the value chain's relevance; as a daily ingredient and its perishableness that is high. Both factors lead to a vivid market and quick turnover. Supply is available and is required to be sold immediately as fruits are harvested in a ripe condition; transport is an issue as described earlier.

> "There are a lot of problems as a result from forming as an association. It was established five years ago to solve such problems. The group cohesion is low, although our group depends on reliability on each other. Members have been supporting each other with transporting their produce" $MQbt_2$

Although the market queen of tomato chain is the most influential queen amongst the others in Northern Ghana, group cohesion seems to be a challenge for her. The queen confirms that for fresh tomato produce; it is best to bring daily new harvest to markets. Therefore, transport and quick support in transport issues for each other workers' harvested produce is crucial. Ready to consume tomatoes will deteriorate quickly if left lying in the sun at 38°C degree.

It is communication within the traders' group that is to quickly spread information to react to calls from producers. In most cases, each trader has a commune or several villages that she is attending to; with mobile phones such communication has become easy to handle and allows quick reactions. Spontaneous actions by producers nevertheless, are not foreseen by the traders and are relatively difficult to control when all resources are involved. These external issues of unforeseeable actions refer to the extrinsic aspects and will be dealt with in the second part of this subchapter.

The main reason how and why traders are working together is a mixture of various aspects. It is on the one hand clear that these women have no better work opportunity, and on the other hand, it would be easy to default. But the organisational elements giving foundation to the traders' union are trust and power. Trust is repeatedly described as crucial for co-operating and market women justify customer relationships and lending activities (to farmers) because they have trust. Trust is established; similar as to LYON'S table shows (LYON 2000: 675) as a long-term relationship, and that reputation is exploited in case of fraud. This is clear in an interview the market queen paused first, then laughing and stating, "*I know where her home is*" ($MQbt_2$) when asked about activities in case of fraud.

The explanation by the market queen was given later as follows.

> "If a seller is not going according to our rules, she will be not allowed to the marketplace and will not be allowed to come and sell for two weeks. Such a measure and the fact that everybody knows why (she is not selling) are normally enough, so they will obey." $MQbt_2$

Shame can also be an instrument to pursue sanctions, if the individual to be sanctioned adhere to same moral, same norms. The statement later with regard to first-time default was that

> "One lady defaulted… I had to go by the rules; the consequence was she will not be allowed to the market place for three market days" MQbt1

Not being allowed to the marketplace (or workplace), which is shameful enough for a trader who is familiar to the other traders *ergo* to be excluded from gaining her income. The traders enunciate trust in its positive form as reliability on co-workers (work relationships), which they state as their main benefit of being one of them.

In one of the group interview they members mentioned a few aspects:

> "(…) She will replace me if I should have an emergency in my family"; "I inform the queen that I am tied up" hence, to let "another carry out purchase in my area"; and "if I should fall sick, one will take care" MW2

These remarks show that attending to each other is comparable to doing appropriate business and being sure that it is performed in a correct way. Power in such cases, is demonstrated only a few times. Only in reportedly seldom cases of fraud or betrayal the very same aspects are used for punishment. Exclusion from an area or for a specific time period is a penalization method, not only in Northern communities. Also, the threat of losing reputation is reported to be a method of using power; in cases of e.g. not refunded loans (HOUSE-MIDAMBA and EKECHI 1997).

Norms and networks add strength to these. Norms "define what actions are considered as acceptable or unacceptable" (LYON 2000: 665) and that are considered crucial for "building and maintaining personalised trust" which is important especially in the absence of legal framework and legal support in case of default. The network of market women is characterised by long-term relationships in a specific community; within this community members have the same norms. Their norms are rules of social behaviour within this community of market women. Trust can be seen as important for this network to operate, and it seems that trust is mentioned in the case of "having firm knowledge" of someone. Therefore, trust is referred to in positive cases solely; as reporting of a single transaction with a person not known to the community members. The women report more of norms, and rules by which they operate. Trust can also arise from many years repeatedly and successfully be transacting with others. Norms and rules mentioned by the market women are a) marketing and b) organisational aspects of importance for their group: Marketing days are to be followed, meaning trade and market activities take place only in specific areas and plots at the market; special activities are carried out on specific dates according to market date cycles. There is one specific area for rituals for ancestors and only selected members are allowed to it. The norms that market women operate with clarifying for each member how to behave correctly and consequences if a member defaults.

With trust, long-term and idiosyncratic knowledge, and rules and norms culminates in Social Capital. This is the Social Capital with which market women operate their organisation. Eventually, Social Capital contributes to the argument that traders operate as an institution (FAFCHAMPS 2004, SEARLE 2005).

The structure of the organisation is on the one hand clearly a hierarchical system with one leader, the queen and the many market women. The queen has a secretary and her intermediaries as well as her transporters. The other structure, which can be perceived is that of a swarm with many queens, not distinguishing between a leader and the followers, but each member performing according to same rules and norms. Thus, a queen as a single leader is not visible, and the group presents no individual in person as the decision-maker.

The market queen reportedly fears of being seen as in the "queen" position as her predecessors have been threatened and experienced fatal accidents and attacks. She is aware that her status is not as high as the southern tomato queens; she fears nevertheless to be identified.

> "To avoid people thinking of me as a wealthy trader I wear normal clothes as everybody else and go about like all the other traders. Look, what am I wearing, people don't notice me." MQbt3

According to her, a person can remain in position of a market queen for life. Otherwise, if traders do not see a queen performing well over a period, she might be "evicted". It remains unclear how this is carried out; it could mean both the death of a queen or democratically announcing a new candidate.

In a group dilemma of which structure is the "right" or "correct" form to reflect reality, it must be said that their organisation can switch, or adjust its structure dependent on its environment. In one situation, a group has not a single leader but many individuals following the same idea. In another situation, the leader, 'majeera' *ergo* market queen clearly differs from the group's behaviour. The different status and tasks of market queen vary depending on context and situation where she is trader or leader of traders, mediator or judge, invisible or authority.

> "When we go to buy, and some problem occurs, we go according to our rules. In former times we had no mobile phone; so we had to trust each other. Nowadays we can call majeera to advise us in the case of questions, but we don't [have to] do that much." MW5

In the era of first IMF support, price regulations were abolished and market women experienced hostile treatment and violent harassment at market places, from the beginning of the 1970s, by force soldiers destroyed their goods and women were clubbed with sticks (CLARK 2010, CLARK and MANUH 1991 in BRITWUM et al. 2012). These harassments had ceased some years later, and market women were not operating publicly, and only in exceptions. In

years onwards, mistrust and malevolence towards market women are still widespread until date; people are assuming such traders are benefiting from sales and exploit farmers; hence traders must be rich. (GOV1, DCO1, IND1)).

> "Many people think 'market queens (and market women) are considered to be wealthy, they are purely into business, and they can even afford Susu.' But the development organisations rather attend to the poor, those 'in need' and hence, address mainly producers. (...) Nevertheless, if a market queen is not rich and wealthy, she better shows as if she is not wealthy. The belief in black magic is really strong and women fear to be 'attacked' either physically or else, financially, family-wise e.g. If someone is rich, he or she has to pay for family members, whether worth it or not. Additionally, envy is widespread and neighbours and business partners might steal or bewitch them." GOV_1

The wording of "stealing" or bewitching" someone is interesting in this context as the market queen herself seeks to be invisible and inconspicuous to avoid such issues but in this regard of beliefs and socio-cultural patterns of a large group it is logic that traders fear attacks.

Such comments are fragments of a business environment for trade that restrain traders from moving freely. Government officials do not retrace the importance of trade in their domestic economic environment and thus, the relevance of traders performing their daily routine work. Admittedly, a formation of unions (e.g. labour unions) as traders' institutional network could be perceived as well, does by far encounter any positive reactions (BRITWUM and MARTENS 2008).

4.1.3 Market Women in Maize Value Chain

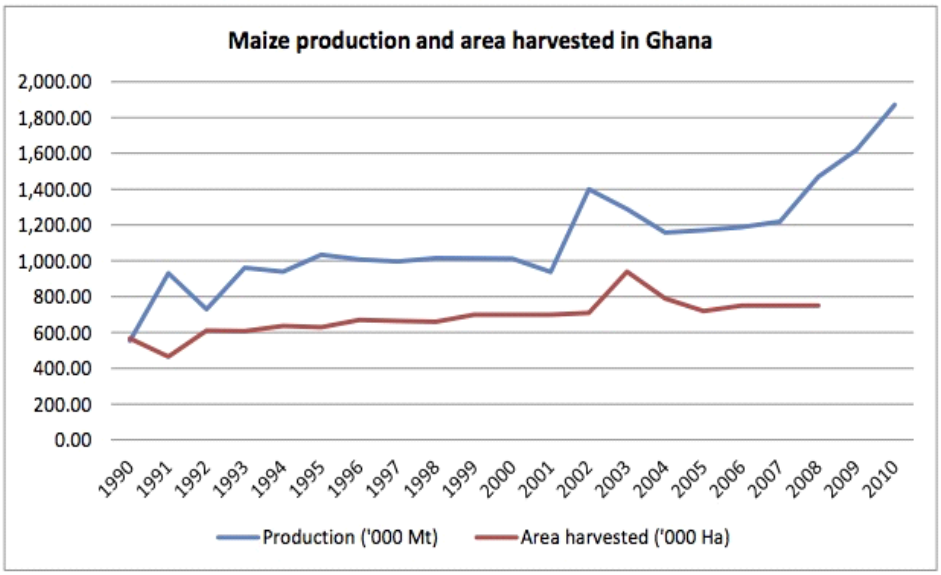
Turning to the maize value chain the same categories will be presented as in the two cases presented above but different aspects regarding produce, aspects of trade, organisation and group characteristics will be demonstrated. This partition will thus, according to the earlier cases of chilli pepper and tomato, also be separated into three parts: maize as produce in general and specifically in Northern Ghana, second a description of maize value chain in Northern Ghana and third, maize sellers – female traders within the maize value chain.

4.1.3.1 Maize as a Crop

Regarding grains, maize is a highly important crop for Ghana and increasingly replacing sorghum although most of the maize production is not for food production but for animal feed. Maize is part of nutrition, in daily meals that consist of pounded plantains, yam and large quantity of maize flour. In Ghana, mainly two types of maize are distinguished; these are called "yellow" and "white" maize with the latter being for human food. In northern areas of Ghana, the so-called "white maize" is planted increasingly more than the "yellow" type which is imported and used mainly for poultry feed. But there are quality differences for each of them; therefore both can either be used for human food – or in low quality – for animal feed. In detail, maize varieties are preferred local types due to a better drought tolerance,

which are e.g. *Okomasa* and *Obaatanpa* or *Dorke* (WIREDU et al. 2010). Nevertheless, maize is also produced for the UN World Food Program (WFP), which buys for school feeding programs in drought-affected and vulnerable regions. Overall production of maize is mainly carried out by smallholder farmers under rainfed thus, vulnerable conditions (MIDA 2012b).

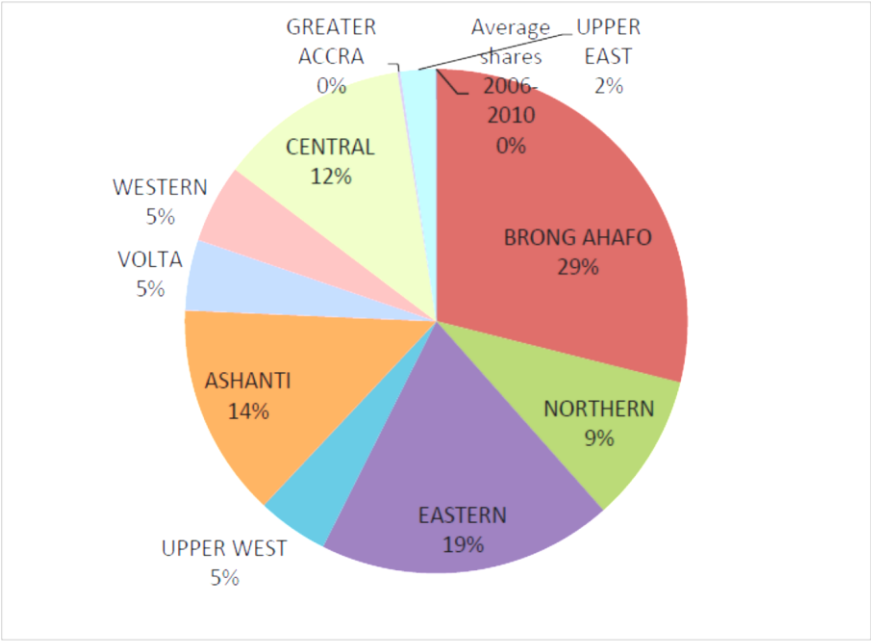
Figure 4.11: Maize area and production trends in Ghana 1990-2010



Source: Data on production are from the Ministry of Food and Agriculture, Statistics, Research and Information Directorate (SRID, 2011) and Ghana Statistical Service (2012).
Data on area harvested are from FAOSTAT, 2012

The northern regions' (Upper West, Upper East and Northern) contribution of maize production makes up to 16% of total maize production in Ghana; that is not as much as the two neighbouring regions in the South are producing; yet for those unfavourable production conditions a large number. Compared to other regions like Brong Ahafo (29 %) it is clear that production conditions in the North are very different, as illustrated in the following graph:

Figure 4.12: Distribution of production of maize in Ghana by region over the period 2006-2010.



Source: Ministry of Food and Agriculture, Statistics, Research and Information Directorate (SRID, 2011)

The harvested maize-cobs can sometimes be not completely dry or, due to early onset of rain, humidity of collected yield is high. After shelling and de-husking the produce is in some cases not dry enough, and humidity is higher than the officially allowed maximum of 12-14% humidity percentage in grains. Humidity can be above 14% in case shelling is done with the onset of rains, e.g. in September (interview IND4). Produce is then most likely contaminated with the mould of a fungus known as aflatoxin[35] hence, consumption of such grains should be avoided, especially since maize is used in Ghana's school-feeding-program.

Regarding sourcing seed for maize, the Ministry of Agriculture (MoFA) plays a significant role in MoFA's various bodies distributing hybrid maize seed in its "blockfarming programme". Many of the recipients of seed are aware that hybrid seed is not suitable for re-usage, but some farmers will still try to use it and to thus, save cost. Along with the MoFA seed ploughing service and fertilizer will be provided on a credit basis. The farmers, which received service and inputs, are obliged to sell harvests to the Ministry later. In any case, governmental NAFCO buffer stock is buying produce at a fixed price hence; it is an attractive buyer for farmers especially when prices decrease. The "blockfarming" programme addresses both men and women albeit figures of female recipients are low. The majority of the beneficiaries of these services are men and even if provided to women, it is after men

[35] Aflatoxin is a fungus which is highly carcinogenic; hence probability of cancer diseases resulting from aflatoxin contaminated food rises. See e.g. medicinenet.com/script/main/art.asp?articlekey=10796 (from 14.11.2015)

were equipped. Such "traditional structures" are complicating the work of gendered approaches in projects even for local institutions (interview GOV_1).

Sex-segregated task division governs maize farming in the small-holder sector across Ghana. Men work on tasks exclusively for men and women do almost work exclusively on other tasks. Male tasks would include land clearing, de-weeding (sometimes with herbicides) and pesticide sprayers. Female tasks would be application of fertilizer by hand, harvesting, and post-harvest processing of maize. Women traditionally help in fieldwork, which results in women being involved in land preparation and other activities, which will keep them from taking care of children, elder people and housework. In some cases if a household can afford, ploughing service is ordered. Men who bring along machinery and equipment and take in return a fee carry out these tasks. Sometimes, women follow men when men make holes in the ground and women put the seeds. Women help in clearing the land by removing tree stumps or taking out bushes. They haul water for the knapsack sprayers and cook for male family members and for hired labour in field (FARNWORTH 2012: 24).

Some soils tend to turn hard after rains washed surfaces away and leave behind an even surface with mud, which then dries to a hard layer. Nevertheless, soil quality improvement measures or erosion control is not a topic for MoFA neither in North nor in the South. Maize is a crop if cultivated in straight lines and in line with slope or flank of field, erosion increases and is accelerated through planting direction. A tireless senior expert plants such Vetiver grass roots at borderlines of fields and against slope to hold back soil from being washed away.

Harvest of maize is done ideally with hired labour and machinery but most of the farmers do not have options to acquire such relatively expensive items hence, family labour is still a preferable solution in harvest time. Regarding family labour, again women will first attend to their men's field and spend their time for harvesting maize. When all 'male' fields are covered and finished, women will turn to their acreage and plots.

Apart from complications during harvesting time, post-harvest issues are directly related to these. If collected grains get wet and are not dried appropriately and soon, mould will spread in a complete load of crop. Harvested grain typically is laid out in the house's yard to dry. Subsequently, chicken, goats and other farm animals run over and about the spread out grains and pollute it with their excrement or the least that generally occurs, is dust. Compared to mould and thus, aflatoxin contamination this is under mentioned circumstances a tolerable impurity for consumers. Nevertheless, consciousness for its health risks still is low and government and development organisations are eager to make people avoid contaminated grain and produce in general.

4.1.3.2 The Value Chain of Maize

In Northern Region, maize is a staple food crop; and ensuring sufficient maize for household food consumption is traditionally a male responsibility. In recent years, maize production and selling it to the market is a relatively new phenomenon[36]and women step in commercial use in search for own-account income.

Alongside to private sector buyers of maize, the National Food Buffer Stock Company (NAFCO) is purchasing maize, the proposed goal is to stabilise prices of maize. NAFCO is buying from farmers but farmers are only ready to sell in times of excess supply when prices are low and may decrease below the governmentally fixed price. In other seasonal times, maize is sold to traders or aggregators. Producers selling are mainly men although many women plant maize as well; albeit small acreages and lower yields. Men have larger plots and thus, more volumes to be sold, but women have small plots although higher productivity, harvests are in total small volumes.

Despite these issues post-harvest management and its various phases, which are crucial regarding probability of contamination with aflatoxin, new warehouses have been built in many areas and with mutual forces and resources. The newly built warehouses were a concerted action by a group of international organisations, striving for improved food security in Ghana's North. Such warehouses are constructed with concrete walls and metal roofs but would encounter problems with leakage through roof, insects perpetrating inside food sacks and other issues that directly jeopardize the core element: nutrition storage with healthy standards. Nevertheless, traditional mud-based silos for grain storage have proven to be of better hygienic conditions and in its results e.g. barely any insects and low content of humidity (dryness) of grains[37], *cp.* FAO[38]. Typical mud silos are built of some clay mixture mainly, blended with other ingredients to gain stickiness e.g. and Vetiver grass is added to repel insects. But such details vary from region to region. The positive aspects of the mud-based silos are preferably used for grain storage in West Africa generally for their ability to keep harvests safe and for sale at a later point of time, which allows producers to yield better prices.

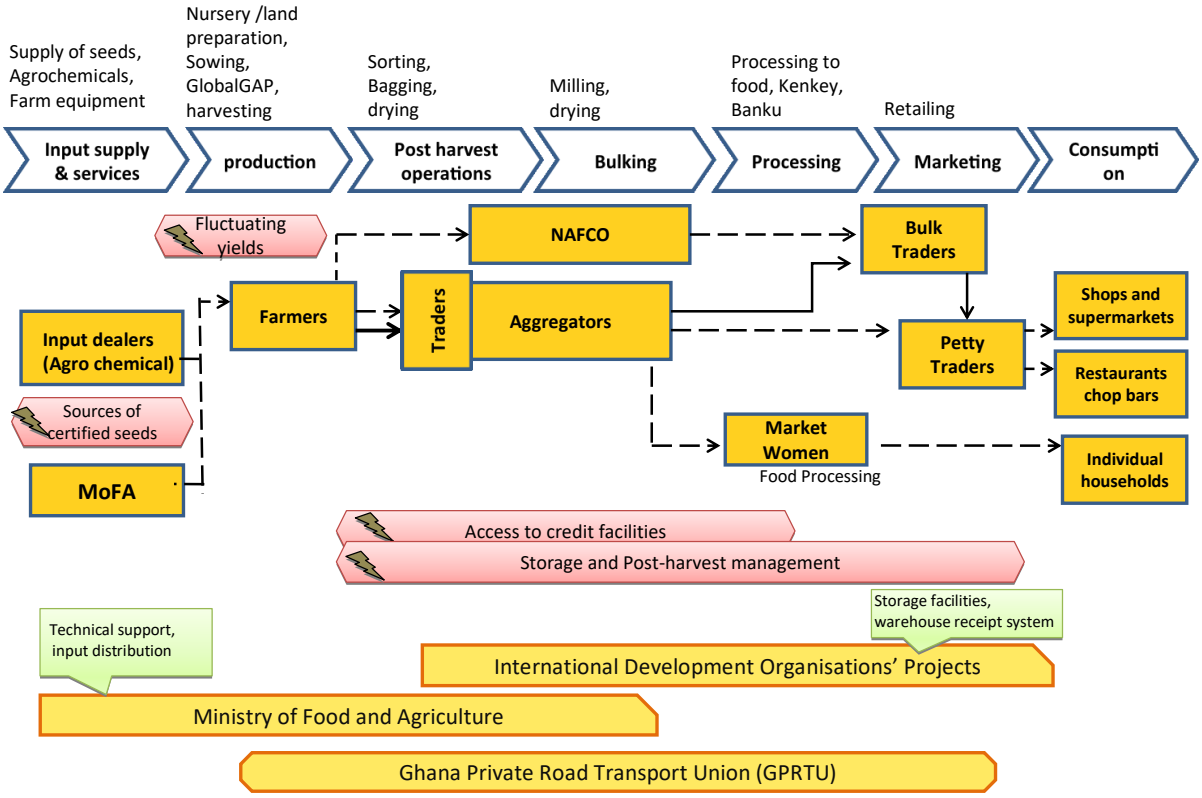
In the northern regions, aggregators are present who purchase maize in larger quantities from producers. They do not buy directly; these aggregators have traders who travel and purchase on their behalf. They can be organised as an association to achieve a better visibility, as one aggregator stated.

> "I supported their idea to get officially registered. It is better for visibility and their creditworthiness. We know it is better to be officially registered." AGG_1

[36] According to former Minister A. Mahama, unpublished comment in interviews Feb. 2012.
[37] Unpublished comment by senior expert Dr. Ernst Mill March 2012.
[38] category of "solid wall bins" www.fao.org/docrep/t1838e12.htm (retrieved 09.02.2013)

Maize activities are determined by their capital requirements; which are relatively high compared to other crops (vegetables, e.g. chilli and tomatoes). The same is true for agricultural production inputs, for harvesting equipment and harvesting labour, for transport and also storing of maize. These aspects are not visible in the map demonstrated; solely actors involved in various activities. As can be seen in figure below:

Figure 4.13: Value Chain Map of Maize in the North



Source: Own elaboration

Decisive for the different actors is a feature that can be described as access or no access to funding services and credit or loans. The male actors reported to have difficulties to access loans but are receiving financial assistance eventually. In most cases – except small-scale farmers – applicants can provide collateral in case they own land, machinery or vehicles such as tractors.

For those female actors in maize business though, financial services are not accessible due to their lack of collateral, lack of land titles, any ownership of equipment in any form. This is the very difference of northern Ghana compared to southern areas where women do possess land, equipment or buildings. In the northern area, women are typically not holding any land titles, with very few exceptions. The financial household responsibilities are the same anyway, regardless of their opportunities to access financial services. Women regularly try to break the constraint by joining traditional rotating saving schemes that might compensate them with singular additional cash outcome (*susu* in Northern Ghana), but with limited success since the total amount of money is not high enough for maize farming related

activities. Concerning these activities in maize business, women tend to engage in the less capital-intensive areas; whereas men tend to deal with remaining capital-intensive activities.

The maize value chain map is thus, particularly informative to be viewed from a gendered perspective. Women are occupying all areas, e.g. stages in this maize value chain of food and consumption, which are e.g. small food stalls, so-called chop bars, supermarkets or restaurants. The quantities of maize dealt with in these places is packed in small amounts, be it loose grain or handy little bags. Due to relatively small quantities, monies dealt with are smaller compared to earlier stages of maize business. Therefore, women may engage easier and may as well overcome hazards easier than in other parts of the value chain. Nevertheless, some business women complained that they are unprotected against the despotism of people who envy their e.g. little food stall and who suddenly chase them off their 'property' or take their plot by force. The women run away to another place but are unable to prove that they were not doing anything wrong. Taking such cases to court is not only costly and time-consuming; in the end, nobody will be sued, and not to speak of repair payments or the like.

Additional difficulties arise from such incidents, due to lost customers and need to build up good customer relationships from scratch (FARNWORTH 2012: 47ff). The little monies these women make is saved for their children, schools fees, clothes, medication and all is well recorded in book-keeping notepads. Compared to other market women these value chain members have literacy skills, which enable them to manage their business easier. Nevertheless, the business might not be an appropriate term in cases where women just seek a reliable income-generating activity without too many risks. The literacy level of these women allows them a certain self-confidence to open up again a small food stall; as well as their family members require cash monies for daily needs, school fees, medication, etc. as mentioned above. Such cost have to be at least covered through these women's business operations and fatal in cases of shortfall.

4.1.3.3 Female Traders in Maize

Traders or itinerant traders in maize value chain are not called market women as they are in other value chains. The women in maize business are also organised but their group leaders are men that are operating as aggregators. The women collect and pre-process maize for their aggregator to store produce. In Ghana's North, Tamale is the main market for collecting maize, apart from NAFCO storage centre points. Apart from female traders in maize business, there are labour gangs, which form groups (FARNWORTH 2012: 6).

A group of traders reported that

> "…most often, the aggregator or the medium or large-scale merchant arranges for the shelling machine to come to the farmer's place. And he employs workers who pack the shelled maize into bags that hold from 150 to 180 kg each. Aggregators are buying the produce and they pay per bag of maize, irrespective of the actual weight." MW3

The numbers given in the statement reveal that even though the potential difference in weight would range up to 20 percent, the aggregator still buys[39]. It is not clear whether this is due to lack of scales, lack of means or unawareness.

As reported in another interview, female maize traders, though, "face higher costs than male aggregators or male traders at the farm gate because such traders may participate in the bagging and loading, and they are more likely to have their own transport. However, women have to pay men to do all these tasks for them, and they rarely have their own transport." (FARNWORTH 2012: 8). Female traders arrange specific pick-up points with male traders for maize from very remote areas; the male traders source and aggregate first. As it is common practise that maize is bought by the bag and not by weight, male traders will "siphon off maize from their bags they have purchased at the farm gate into further bags" (FARNWORTH 2012: 8) resulting in higher cost for women traders and hence, these traders face disadvantages in competition. Another aspect that was revealed was that female maize traders do not have long-standing business relationships with producers, compared to chilli or tomato traders. Women traders agree that high transaction costs are the main reason.

Since female producers have small plots in general (0.1 to 0.3 ha), it is also low yield quantities that will result from female producers. In that course, female traders state that

> "I go anywhere where I can get maize. I buy from both men and women. I buy more from men because they have big farms (…)"

but they are facing additional cost again:

> "Women have problems carrying the heavy bags, so you have to hire the men to do it for you." MW6.

Thus, these higher "transport" cost allow traders to purchase only to a certain price level. Most of all, absence of monies and liquidity are issues that hinder women traders to perform as their male merchant and aggregator colleagues. Apart from higher transaction cost, normal business requires the availability of monies for purchase e.g. at farm gate, at smaller district markets. In discussions conducted it was stated that

> "we women (…) never build up sufficient working capital to buy maize in order to meet the needs of large buyers, nor are they able to build up investment capital." MW6

One of the interviewed groups is an association, which is maize of traders that operate for one large trader. The large trader, or aggregator provides capital, services and machines that are used by the traders to buy maize, to de-husk the grain and package purchased amounts of grain. It is here the male owner that organises working capital to purchase large quantities and to equip female traders with enough so that maize can be bought, transported and packed.

[39] Conversation for project appraisal by Farnworth in February 2012 with A. Mahama.

Also, interrupted business relationships occur relatively often; the adhered transaction cannot take place. As a trader reports that she was asked to provide 100 bags of maize, yet she could not follow, as her cash does not suffice to pay the producers. On the other hand, the buyer is also not paying before receiving the agreed quantity of maize. It was reported though, that one bank in Tamale would provide loans to market women, given that they explain their business and repayment modalities. In fact, when asked directly, a bank officer admitted they would provide a loan more likely to a women group since their repayment rates are very high. Whether loans were then later offered and given to female trader groups could not be verified.
The two aspects, working capital in the hands of traders and post-harvest management are bottlenecks for Northern maize, both intensifying the problem mutually.

Maize traders do not negotiate prices, as market women for chilli or tomato are practising. For maize, the aggregator fixes the price according to price levels in other places and towns. The traders are informed about present price and go to purchase maize. Other traders will travel independently to other regions, following information where maize is harvested. It could not be clarified how these traders will bring the maize back to Bolgatanga or Tamale. The main bottleneck seems the financial weakness of female traders; both suppliers and buyers prefer to have men as value chain partners. Some of the female maize traders said

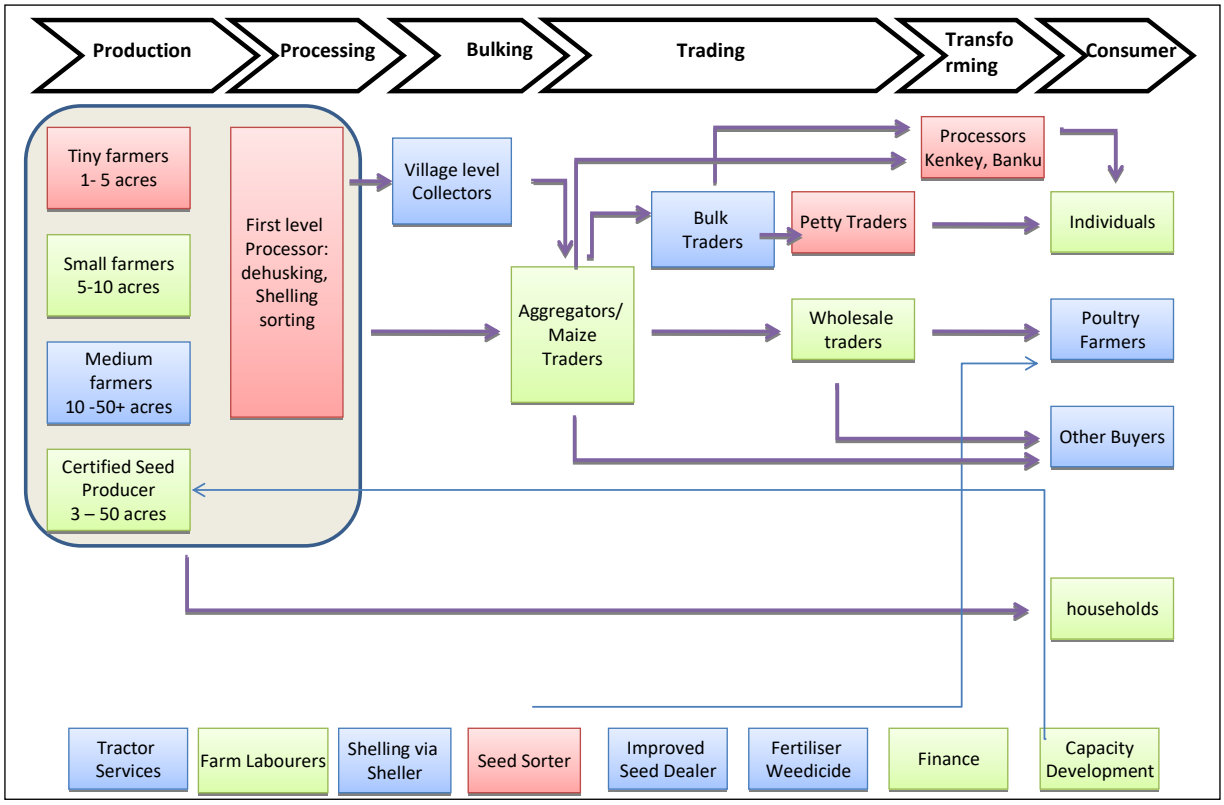
> "We face competition from men maize traders. When the villagers bring their produce to sell men traders can buy in cash, the men buy everything. The producers tell the women traders to make way for the men traders." MW3

> "Sometimes we want to buy maize in large quantities to meet an order, but we don't have enough money. We have no one to act as guarantor, and we have no collateral. If you do not save in the bank, you cannot get a loan. The income we get is used to support our family and whenever we sell maize we use the money to pay school fees and domestic things like food. We don't have enough left over to save in the bank. There are instances whereby farmers come to supply the market, but we cannot benefit from the low price they sell for." MW3

> "In many cases, producers stop working with women traders because we find it hard to pay in cash" MW3

The conditions under which traders in Ghana's North work seem to be very different from the conditions in the South. It was reported that in Techiman (260 km or 3-5 hours travel from Tamale) female maize traders do have long-standing relationships with value chain partners, let alone women owning land, possess capital and the like. It is under such conditions in the North astonishing enough, how resilient the traders' network has proven to be and how powerful their institutionalised network eventually is.

Figure 4.14: Northern Maize Value Chain with Gendered Perspective



Source: Own elaboration on basis of Farnworth (2012). Red boxes = female vc actors; blue boxes = male vc actors; green boxes = mixed male and female vc actors.

Conditions for maize traders are unfavourable compared to other crops and compared to southern regions. With maize being filled into large 50-60 kg sacks, traders are dependent on men to help or likewise, women see men making the deal and buying before female traders can act. In Northern regions, traders do not own facilities or equipment; the male family members possess all items that are used within a household. Due to traditional or cultural patterns in Northern Region, their patrilineal family structures do not foresee much involvement of women in areas that are reserved for men, e.g. commercial use of maize, producing other crops for market. Nevertheless, it is increasingly accepted that women engage in trade as long as it deals with – or seems like – smallholder products, or petty trade (*cp*. LITTLE (1999).

The status of informal trade – that is the majority of traders that are not registered in any way – gives the value chain's actors a negative note. It seems beyond the normal "unofficial" traders numbers, and there are many other women trying to sell little amount of grain. Petty traders that are individuals with few options but to trade some goods, to gain small cash monies. Traders involved in maize may respond by their numbers not as many as in the other mentioned value chains, yet they use the opportunity.

4.2 Relations and Power in Value Chains

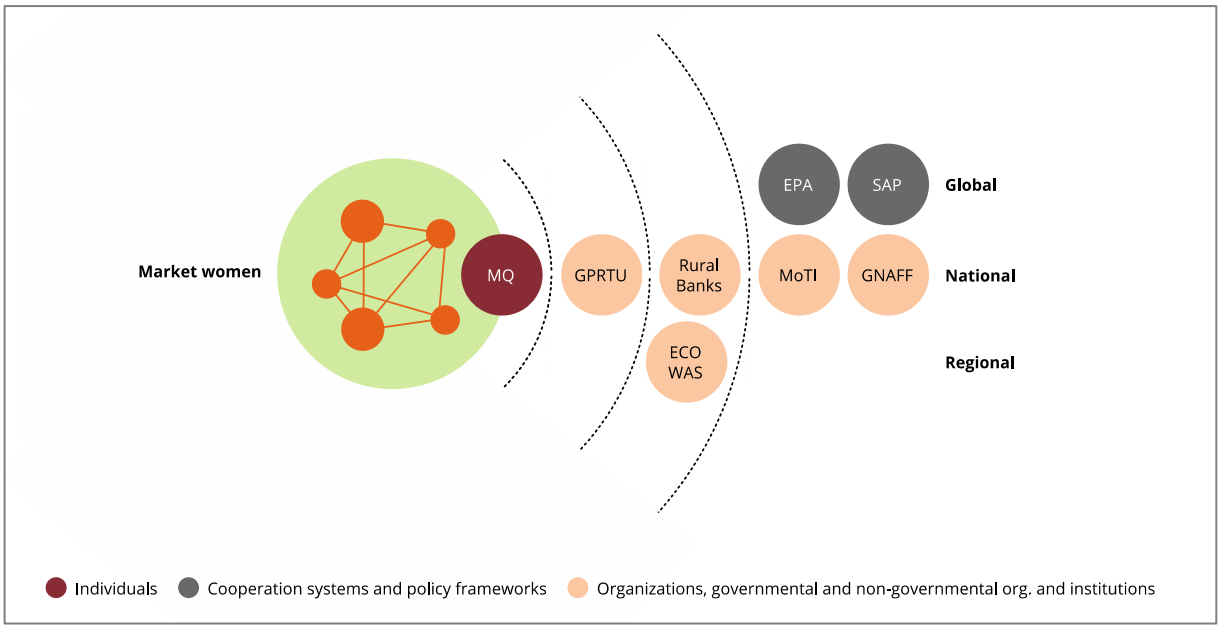
The above-depicted results for the three selected cases provide a detailed, yet two-dimensional picture of value chains and functions of market women and market queens within the chains. This following part will explicitly look at relations amongst value chain actors; market women specifically and their relevant business partners. This partition is divided into four sections; with 1) being a description of the trader groups' stakeholder landscape, 2) for cooperation characteristics that build and moreover sustain cooperation in such groups, 3) the network characteristics that consolidate traders' groups and 4), findings on the institutional settings of traders' organisation.

4.2.1 Stakeholder Landscape

Before presenting research results for traders' organisation, their environment in the northern area of the country is illustrated in this section. While traders' groups are generally embedded in a social, political and economic environment, the identification of relevant actors and description of their respective business environment can improve the understanding of the market women's organisation. The research's findings regarding a structure of the market women's group, namely the traders' market coordination system in Northern Ghana reveals many actors surrounding traders' organisation with differentiated power, relations and positions.

An outline of actors operating in Ghana's northern value chain environment is depicted in figure 17. This is an external stakeholder landscape, as its focus is the traders' organisations and stakeholders that are relevant in the outer system, the business environment of the groups. In its centre, the 'nucleus' traders are depicted, with their market queen being part and also being a distinct player that communicates differently with surrounding agents.

Figure 4.15: External Stakeholder Landscape



Source: Own elaboration, based on Capacity Works.

The centre of the diagram represents the group of market women in Ghana's North. Around this nucleus circle, three segments represent global, regional and national level. Results show that mainly one actor is operating at a regional level, which is ECOWAS (Economic Community of West African States). At the national level, especially four players are operating, which are the MoTI (Ministry of Trade and Industries), and GNAFF (Ghana National Association of Farmers and Fishermen), as well as the GPRTU (Ghana Private Road and Transport Union) and rural banks. Beyond these, two actors are operating with a global focus EPA (European Partnership Agreement) and ERP (Economic Recovery Program). EPA and ERP have been herein referred to as "cooperation systems" pursuing international agreements on bilateral level. Likewise, ERP and EPA have been identified as most diametrical actors in the diagram, as their implications do not assist traders' organisations.

The ERP needs to be mentioned as it stands for a strategic policy that is named differently in present days and was later split into various sub-programs by the World Bank. These programs could be subsumed under Ghana Poverty Reduction Strategy Paper[40] which began with the Economic Recovery Program in 1983 and continued as Poverty Reduction Strategy that altered over the years and in present days include programs such as FASDEP (Food and Agriculture Sector Development Policy) but for simplicity reasons, it is briefly titled as ERP in this diagram.

In the year 1983 Rawlings initiated the first official negotiations for financial development support by the World Bank. This meant several conditions to be tied to the development loan;

[40] [www.imf.org/external/pubs/cat/longres.aspx?sk=26126.0]

such as implementation of Structural Adjustment Program's (SAP) procedures. The conditions included liberalization of domestic markets and free price setting to allow markets to unfold benefits for the population. One of the effects was Ghanaian authority pursuing removal of price controls and soon, police identified traders as scapegoat of price manipulation. To the extent that market women were humiliated and beaten in public and banned from marketplaces as well as their stands destroyed by police. This took place until the mid 1990s and is still vividly remembered by market women and other witnesses.

Since year 2007 the EPA (European Partnership Agreement) was implemented including a removal of trade barriers to cheap imports as following the ACP agreements. The EPA seeks to open Ghana's markets and to liberalise its economy, also it is to enable a sales position for European products on Ghanaian markets. It has aggravated rural population's and not to mention women traders' situation. Not only women traders who experience repercussions, also producers, micro- and small enterprises in rural areas are experiencing difficulties. The domestic market especially of tomato and poultry are destitute, as cheap imported produce is available at a low price with which domestic produce cannot compete. The example of the tomato paste-processing factory "Northern Star" in Upper East is hence, only one distressed actor in one value chain. These two actors at global level need to be presented in this landscape as the bilateral agreements have direct implications on the traders' daily business.

Rural Banks are actors that are "closer" in this diagram to the traders compared to above-mentioned stakeholders. The banks depicted here are with one exception, national banks with a particular portfolio for rural financial services. The one exception is a rural and community bank that operates only in the northern regions of Ghana, namely Bonzali Rural Bank. Nevertheless, the mentioned banks have very limited connection to market women or market queens and hence, they are placed in between the second and third layer of the stakeholder landscape. Market women and rural banks barely have any business relation; among the constraints is the lack of collateral of female traders. The officers addressed in respect of financial services for agricultural activities were familiar with micro credit lending systems and were also aware that especially the micro credit schemes with female groups have repayment rates of 95 to 100 per cent. An impediment was reportedly the traders' illiteracy and lack of education to fill out the bank's forms in order to apply for a loan contract. Presenting willingness for negotiations on business relations, the banks are placed therefore, closer than the earlier mentioned actors. Nevertheless, it suggests only that these banks are not as antagonist to traders.

Other than the GPRTU, the local transport agency is placed in another 'closer' position to the traders' group in this landscape diagram. The GPRTU has a long-term relation with traders' groups in the North of Ghana. These are the officers that stop trucks to collect road fees or informal fees, so-called 'acceleration money' at checkpoints. From Accra (in the very South) to Paga (the very last community before the northern border to Burkina Faso) there are 7 to 9 road checkpoints that need to be stopped at for payment. The traders have their

distinct agreements with these officers and show their kindness through not stopping them for long and not demanding extra fees. When crossing the Burkinabe border to Ghana, GPRTU are most decisive for traders' organisation as fees for crossing national borders can vary depending on seasons, truck-load volumes, but mainly knowledge of the individual traders.

The GPRTU also enables timely transport to buyers in larger urban areas; in cases of delivery to an exporter in Tema (Accra harbour); whereas checkpoints could hamper and delay transportation substantially. Interviews were made but only with women who exchange information on checkpoints and officers' attitudes.

> "We have a good and long standing relation with GPRTU. That relationship was well-established a long time before my mother. We can be sure they will not hamper or impede our transfers and they will not stop our trucks longer than required, and they will inform us [through truck drivers] about anything related to our business" MQat2

In this diagram, three "layers" illustrate closeness or distance of an actor to the centre, to the group respectively.

The landscape figure shows, it is solely one actor that is close to market women; which represents other fellow market queens. Other queens of other parts of the country are in this logic the 'most intimate' actors; as they frequently consult each other, sell, buy and exchange information. The queens are operating on a national scale strictly speaking; they are operating on a regional level as they deal with exporters from other, neighbouring countries. Nevertheless, this diagram aims at visualising the Northern traders' groups and their relations hence, other queens are indicated in the national segment; but close to the regional segment.

The typical work of traders is determined by flexibility, without fixed working hours, without contract and formalities. Traders are with a few exceptions all women, and the majority of them are illiterate with no formal education; to find an official job in such cases is almost impossible. Therefore, the traders are literally self-employed and join groups that trade with various goods. It depends on the area, which crop is traded and to which group a woman may belong. It could also be that women trade with a diversity of produce, depending on seasons of the respective crops.

Nevertheless, the majority of women traders have been learning trader business from early childhood; through learning from their mothers or aunts, their elder sisters or cousins. The idiosyncratic and confidential knowledge is passed on through family ties. Not surprisingly, traders will rely on family members to help out in difficult situations; when a trader cannot perform her work due to serious reasons e.g. a child or elders being sick. Thus, their group's degree of solidarity is very high; it allows each member to conduct business seriously and trustful. The characteristics of such solidarity should be explained in the following subchapter.

4.2.2 Cooperation among Traders

This subchapter on cooperation illustrates findings of this studies' nucleus: studying the behaviour in the smallest trader-to-trader unit. Cooperation requires basic elements such as norms, trust, and power. In this order the terms a) norms, b) trust and c) power of traders' groups will be examined in relation to the group.

Cooperation among traders is built but also maintained as the group has and each member has clear rules or norms how cooperation is translated and implemented. It is the women's flexibility requirements that form some rules of traders' organisation, which are clearly based on a cooperative behavioural setting. The requirements result from administering for the reproductive sector, such as providing food for families, maintaining facilities and cleaning of clothes and house for other family members and extended family members. For the traders' organisation, this is grounded in regulations that if a woman cannot go out to purchase from a farm, her next fellow trader will go; and if necessary, the market queen instructs a trader nearby. The traders state that fluctuation in their buyers' businesses is normal in their environment:

> "We in our group know that: a woman cannot make all her trips when pregnant and when she has a new-born baby she is breastfeeding, all of us are there to help and we sell on her behalf. That is how we work. " MQbt3

Such statement explains that also those women who are involved in small shops or e.g. food stalls for selling food, small businesses they can quickly leave their business for a day or two in case they have a relative or colleague they would trust.

Flexibility is the main reason for choosing the trade opportunity: Market women of all crops report that this is what suits their needs best as working women with children, household and all costs of the latter to take care of, apart from supplying for the husband. Both man and wife earn cash payments and payments in kind to provide to the household. Nonetheless, both of the partners do not disclose their real income to the other part. In interviews conducted with both men and women (amongst them traders/ market women) stated together that men are earning income for their families.

Nevertheless, in interviews conducted solely amongst women, they indicated that they carry most of the burden to supply for their households:

> "Yes our men are responsible (for household income), but we don't want them to lose their face… since we are the ones who pay in the end… for school fees, children's clothes, transport, sometimes we even buy food. It is the role of the men to take care of that. But it is usually us…" (all laughing) MW3

The interviews showed that betrayal is a topic that barely plays a role among traders; it seems very much beyond imagination that betrayal happens among them. The women clearly trust

their fellow market women. And apparently trust is needed immensely; although they do not mention it, trust plays an important role.

Their definition of trust is translated as such: "*I know where her home is*" (MW1) and it shows that all women know the homes and places their colleagues live in. When asked if there ever occurred betrayal amongst the market women it was almost always negated. Women reported that if it comes to disputes these are settled by the market queen; thus transaction costs could be reduced as less time is wasted to find solutions for conflicts. The traders rely on the queen's ability (or talent) to settle conflicts in an appropriate and quick manner. In such way, women traders can count on other traders that their goods or money are not stolen; when being at the market place and a trader leaves her baskets, sacks or stand. (MW1, MW4, MW5)

Opportunism is widespread amongst the rural population with limited income sources; companies or contractors often and commonly experience default and most of all side selling. Amongst trader groups, all members know that default is not an option. And as a single market queen exists per region, side-selling is not attractive in the trader groups either. Default also cannot occur in a form that is common for companies' buyers. As the women have no other intermediaries to sell to. Women traders apparently operate with *tit for tat* rule; or reciprocity rule (AXELROD and HAMILTON (1981: 672). Women reported that as a trader, they might leave cash money with a fellow trader to assure the mutual interest and to build trust. In general, market women would not default in order not to put their reputation at risk.

The women reported that although almost never implemented, default or betrayal can be punished by damaging the trader's reputation. The sanctions that are explained foresee exclusion from trade activities, expulsion from the market area and thus, a public humiliation that would be visible to all traders. The women reported this is the worst case for a trader since the person will lose established relations with e.g. customers and word of mouth contributes to spreading of such information.

Cooperation is seen in the female operators' solidarity that shows: The women traders' organisation has survived even during the last three decades of crisis and suppression that they encountered. The women traders that were misused as scapegoats by politicians, the soldiers, who then flogged market women in public on the marketplace, took place in the 1980s and beginning of the 1990s. Traders have established a proficient network; remainders of the hardship and humiliation are still in the women's memory.

One of the market women narrates:

> "We fear physical attacks, like when on our motorcycle, when walking on the streets; that is why we don't move alone. We also stopped going to the remote farms alone because the people spread bad words about us. But what I also fear is 'juju'… like [in the case of] my elder sister, she had a fatal car accident." MQbt2

Northern women traders are relatively indigent and have fewer means, especially compared to southern Ghanaian population and their traders that have been described and studied in various studies (CLARK 2010; LYON 2000 and 2005). The relative poverty level of northern rural population and the traders' ability to maintain an active cooperation in their groups is one of the remarkable aspects. As mentioned earlier, the overall economic situation has improved although not for the rural areas and the three Northern regions. Income opportunities are scarce, leading to fewer options for rural working population to generate revenue. The traders of the North face harsh conditions regarding climatic conditions for agricultural production, and inputs supply not only, but also financial services assistance, or traditional patterns of female working areas. The business environment thus, joining a group as the market women's group is a popular and well-accepted occupation.

The women have very little cash to run their trade business, with the minimal capital that they own; opportunities of transport or financial support to school fees are small and limited. The way to improve their conditions and increase their opportunities they see for themselves is in joining a group. These are economies of scale that women realise that they can achieve more when being part of a group. Cooperation takes place as well because women have few alternatives; their major optional source for cash money is trading. Comparisons with market women of Ghana's South cannot be made, as traders of the North have a lower income level (North-South disparity) and different culture due to different ethnicities. Nevertheless, it revealed that traders of the North are more likely to have disputes with new farmers, governmental organisations' staff and non-governmental organisation's limitations than disputes inside their group.

Power and authority justified in traditional patterns: In value chain committee meetings with all members present with producers and traders, farmers complain about low prices and wish explicitly to sell directly off to "market". The present market women listened and always kept silent. It is traditionally in these ethnic groups that a woman must not answer back to men in public. The position of a market queen is per tradition inheriting a position that provides the person with authority and duties. Duties are amongst other conflict resolution, mediation and dispute settling; but nonetheless, she has to act according to general traditional patterns that forbid dissent with a man. The way the queen has the authority to settle disputes, among the women's group, she is limiting waste of time and capital, and *ergo* transaction cost could be successfully reduced.

4.2.3 Networks of Traders

The above-described cooperation amongst traders stabilises structures as networks that will be described in this following section. This second subchapter is depicting networks as the mentioned relations of traders and most of all their cooperation forms a network. Such a network is as mentioned above, embedded in a set of traditions and norms.

Argument of embeddedness is a factor actually powerfully shaping traders' organisations. The mentioned three groups perform according to rules that are due to traditional patterns, inherited cultural and social patterns – which form the queen's tasks and duties. Amongst the functions is the dispute settling and conflict mediation with the effect of transaction cost reduction. Therefore, the group of which the members believe the person would have a good ability for appropriate manner to identify solutions elects a market queen. The person chosen to be performing, as queen has to be quite in public when men speak with the belief that it is to avoid conflicts. Other duties include rituals that the queen worships ancestors in the market place on specific dates. She has to have the emotional strength and talent to speak on behalf of the market women's groups in front of the town's or municipalities elders.

Another traditional pattern is the revolving saving activity, a typical way of group saving. Such local saving schemes, *susu*, are used in almost every little group unit that was encountered. The amounts help women to financially support festivities in various cases (mainly funerals) and in most cases; women reported that it enables them to buy school books or new clothes. The women stated that *susu* is a crucially important source of additional cash but that the amounts dispersed are little. The amounts generated through group saving are not large enough to suffice for trader's daily transactions. The tradition with regards to financial aspects is that women may acquire for the household or the family, but it is the husband that owns it. Therefore, women have no land (apart from few exceptions) as collateral or other equipment, securities that they could use for application for loans. On the other hand, a pattern was reported that both husband and wife do not disclose their income to each other. Thus, the partners will both be earning and expending money or even saving for festivities without the other one's knowledge. The women admitted that their men would take money to rather play bets and use it for their own amusement but not for the family.

Market women of all three crops reported that there are many who have long-term business relationships with farmers. These farmers receive confidence by the traders that they would not default; for purchasing from the farm gate the sacks are not checked and trusted that contents are according to what is agreed. Such producers may receive loans for farming inputs; which might also be in form of seed or fertilizer. The loans are refunded at the end of season when traders come to buy harvested produce. Often the price for the produce is thus lower; deducted by the amount due for repayment. Nevertheless, not all farmers have long-term relationships with traders; newcomers or producers from other areas wanting to sell would experience mistrust to a certain degree. Depending on the context, such sale and price negotiations can result in accusations and or unaccomplished business actions.

One case of exemplary behaviour reported by tomato and chilli traders is that producers were insisting in a specific price, which the market women did not accept. After some days, produce began to perish but producers still insisted. Later, producers called the market woman to pick up the produce; yet their demanded price was unchanged. The produce rotted away without even receiving the lowest price eventually. But market women acted according

to their organisation's rules; that a certain price level can neither be exceeded nor a certain level be undercut. The sharing of information on producers is important here, but moreover, the cohesion of the network is crucial for the strength of the network to the organisation's environment.

For their network, an interesting event occurred with traders who reported that farmers had put stones in the prepared bags with produce, which the traders found out only at the market place much later. The traders informed the market queen who then confirmed that the traders should warn the community about maintaining their good reputation as well as to adhere to existing agreements with traders. When stones and leaves were found another time from the same community, traders excluded the community and made clear that they would not collaborate with this community again:

> "We had problems once, with the community in [location]. The farmers had prepared the bags with produce and as of lack of time; we paid for what was agreed. Only to find out later at our marketplace, they had put many leaves inside. It was a big problem." MW2

In the same interview round, another market woman supplements the narration:

> "The majeera then told us that we should warn them; that if it happens again, we will stop buying completely from their community. But what they did was, again, put some stones and leaves. So since then, we do not go there." MW1

Regarding traders dealing with buyers, these comprise a very heterogeneous group of different actors; concerning business area, ethnicities, and income level. Big buyers as export companies buying large quantities are reported to be more present in the southern regions of Ghana. Although a few (cases of chilli) were reported of traders selling large amounts beyond borders to buyers in Burkina Faso. But these are exceptions that cannot be translated to the remaining market women groups.

The issue with buyers ordering for large quantities is the lack of capital to pay the producers in the first place. One of the women reported that she had a communication and was asked to bring 100 bags maize to the buyer:

> "As we speak now, a buyer has ordered 100 bags of maize. But I cannot supply. How can I pay the farmers? How can I not pay the farmers until the buyer has paid me so I can pay the farmers? I know I will not be able to keep this buyer as my customer. This is the problem of my business." MW3

Small buyers that traders deal with are mainly women in small but more micro-scale enterprises. These buy from traders on a regular basis for their food stalls, chop bars or little shops selling spices. These buyers who are actually *per definitionem* food processors in the value chain maps depicted, have long-term relations with the traders. These are in the same way affected by low capital endowment as the traders, similarly not able to gain access to financial support services, such as e.g. loans. One food processor reported that she formerly

had a small land plot in the city centre where her chop bar (little restaurant) was located and it was taken from her by sheer force "*because it [the shop] was a success*" and because she had made "good money" (FARNWORTH 2012: 26). She improvised a stand to be used for food preparation, processing and selling in one little food stall near by the old plot. She would not invest all her small savings for a new chop bar that can be taken from her again; she took the case to court. Such cases are not isolated cases but also traders are familiar with such incidences and therefore, have no expectation towards legal framework in their area. But they rather work on their network and support each other whereas possible.

The network communication has undergone tremendous changes in the past ten years. With modern communication tools, e.g. mobile phones and mobile cash transfer market women are able to interconnect and exchange information much faster and easier. The information regarding supply, demand is thus, very easy to acquire for the women. Moreover, negotiations can be prepared and arranged. Valuable exchange of information might be the most important advantage that arrived through modern media and telecommunication. In times before mobile phones existed, traders would have to sent letters and arrange meetings long time ahead. Network operations took more time and were more difficult to be traced, problems more difficult to solve. Now the cash transfers are also simplified and safer through the 'mobile cash', a system that allows especially women in rural areas to make banking transfers. In former times, these had to be handled through personal transport of cash and it was and until date – encompasses considerable risks. The so-called frog leap of advancement holds true for women traders. It is not only information exchange that is made easier with mobile phones; the so-called frog-leap has reached the financial areas, which is an extraordinary surplus for rural women.

Transporters and traders have long-standing relationships and a special relation with each other. The transporters are men who either possess a vehicle themselves (suitable for transportation of goods), or a relative has a vehicle with which the transporter will convey goods for traders. In such case, transporters are agreed upon to bring bags from one place to another. They will transport the produce to the appointed place; in some cases, these can be truck drivers that transfer monies – separated from the goods – to the agreed location. The women accompany these men either by bus if it is a truck that transports their good; traders usually prefer to use public transport means.

There are also men that have close business relations with women traders who are responsible for interpreting when market women and market queen travel beyond national borders[41]. These men have unique communication skills to lead women traders to other countries' traders and endeavour as interpreters or 'lead boys' for the traders. These 'lead boys are fluent in several languages; grown up near francophone Burkina, where *Mossi* and other

[41] ROBINSON (2010) calls these men 'lead boys' for the cases of traders in the South of Ghana. The traders of the North did not use such wording, though. They would use 'interpreter', 'transporter', or just 'boys'.

tribes live that all speak different languages. The mentioned interpreters are those who will negotiate on behalf of the trader with the other party. The crucial point is that traders cannot understand and cannot follow price negotiation. In this case, traders depend on their interpreters and have to completely rely on their skills to settle an acceptable price; one that will also pay off for the interpreter's work. That is when these men later deduct a margin of the resulted sum as their quasi fee. Here, it cannot be said that market women are those in a powerful position, but the 'lead boys' rather who hold power (*cp*. ROBINSON 2010b).

Determining and decisive for the traders' network is their flexible reaction to challenges and threats. In one case the connections might be relatively 'weak' but the same characteristics are 'strengthening' their organization.

4.2.4 Institutional Settings

After presenting findings of the market women's groups regarding cooperation and regarding network characteristics, this partition looks at findings concerned institutional setting. In this partition, the groups' collective behaviour is demonstrated and findings that depict female trader groups as having institutional settings.

A suitable description is given by the FAO (DA SILVA and DE SOUZA FILHO 2007:12) that describe it as follows "institutions set the 'rules of the game' and attenuate uncertainty. They generally help to make sure the market, society and socio-economic interactions function properly. Thus, institutions are important for the 'coordination' of linkages among firms operating in a chain."

The traditional roles of a *majeera* are stabilizing and maintaining her group's cohesion and collective action. As explained earlier, the terms *majeera* and *ohemma* are both terms for "queen" or the typical word for a woman leading a chieftaincy. It is not a typical sight that a female holds chieftaincy in northern areas where namely the Dagomba ethnic group prevails which is patrilineal and Islamic. The chieftaincy leaders are normally men, as the male inherit from ancestors, not female relative. It is thus, an untypical sight or an exception that women are responsible for social units, not to mention being in leadership position.

In Ghana's north, men including an overall market authority embody all relevant positions. This person is nevertheless, accomplished by a market queen, a woman responsible for all market related matters. Under her supervision, market queens for e.g. tomato, chilli, onions, and yam operate. Market women though, albeit being illiterate as many girls cannot receive formal school education, but have autodidactically acquired specific knowledge and know-how, which enables them to run trade business. In theory it would allow them to formulate a loan application and repayment plan. For other cases as book-keeping and minute keeping, the trader groups have a male secretary that does the writing. Another aspect is important when discussing business relation with the financial organisations. The rural banks personnel come from the South and have no insight to diversity of ethnic groups in Ghana's North. A

different language is used in the North and also prejudices and intercultural issues prevail in communication between groups of southern areas and northern areas. There is thus, not only a language barrier but also an intercultural aspect interwoven with prejudices.

The accusations by farmers against women traders are from many and persistent; traders would be exploiting farmers and traders would manipulate prices or would even be cheating farmers (AWO 2010). Various studies over time have tried to investigate into basis for accusations whether women traders are cheating or manipulating prices. But due to lack of data, any statement is vague in this place. It is rather that such trader similar networks are found in West African countries (*cp*. LYON 2003: 11). Most of the trader networks are organised and registered as associations; alike the association of tomato women traders in Greater Accra Region, e.g. GTTTA[42]. Apart from not being registered as an association, the women traders are operating in an almost identical manner compared to the traders of the South (CLARK 2010; LYON 2000 and 2003).

It is not an advantage that market women of Ghana's North are not formally registered, or as an association registered. At the same time it is not so much relevant as a market queen is holding a traditional and cultural title; the chieftaincy for the respective commodity market. It is due to traditional patterns that her position gains respect and their traders are – for the northern regions – accepted.

Apart from the traditional setting that provides a framework for the groups' setting within their business environment, another aspect that adds power to the trader organisation. The groups of market women are business-oriented social units, as their operational set is showing four typical elements of big firms: solidarity amongst each other, a clear authority, organisational structure, and strong moral; embodied in the authority and its members. No other corporate body or institution would be capable of coordinating supply and demand, and clearly, domestic markets are not 'able' to perform such coordination. The women's and especially the queen's idiosyncratic knowledge lay a foundation for such institutions. Although in one of the selected cases (maize) no market queen exists; the market women that operate identically to market women of other crops behave as if they have authority, a moral leader.

The factors coincide that on the one hand, moral and on the other, solidarity of the group are in combination for these groups. The groups are homogenous regarding ethnicity, traditions, values and moral understanding.

The traders' groups have had more than two decades of suppression and crisis, harassment and still; market traders are a proficient network with high degree of cohesion. A striking

[42] GTTTA: Ghana National Traders and Transporters Association

factor is the flexibility with which traders perform their business. This is based on the flexibility they operate for their members when an individual needs time away from the market and trade to take care of relatives. The striking aspect is that the queen can be a trader and "disappear" in the large group of market women; the group itself can diffuse into anonymity if necessary; they can avoid making their operations public but rather going with individual measures. The institutions support market exchange towards optimised market coordination and defy any kind of formalisation (*cp*. FAFCHAMPS in LYON 2003: 13).

The understandings of such motives that sustain cooperation of market women over time go beyond functionalist approaches. Decisive is that market women and especially the market queen have very specific idiosyncratic knowledge on supply and demand history, prices and negotiations, seasonality aspects which gives them a profound basis for decisions that are required. Their Social Capital, the network and its above-mentioned moral and solidarity translate into a rigid and pertinacious institution.

It is also due to course of events before collapse of the Pwalagu Tomato Factory. The one side of actors in the value chains blamed the tomato traders who stopped trucks loaded with tomato for the factory. The traders had stopped the trucks and forced the drivers to unload and hence, destroy the produce. It was said that the market women had to stop loads of produce due to two reasons. On the one hand they did not favour that the factory circumvented their business areas and on the other hand, there were reportedly farmers that had not paid their debts to the traders, although the traders would have to take their harvest for repayment. Another insider reported in a different way – that it were farmers who stopped the trucks that were supposed to be bringing the produce to the factory. They did not want to give their produce to the factory, as the price paid was lower than the producers could accept. The market queen was willing to support produce to the factory but producers successfully hindered trucks to bring produce to factory, which lead to the collapse.

Market women successfully stopped and unloaded every tomato truck through their good relationship with GPRTU employees and drivers. As a consequence, no supplies were brought to the factory and they had to close down. The versions of the events differ somewhat from each narrator's perspective. It remains that market queens, in their concerted action through the many market women possess more power than most of value chain actors are willing to admit. It is similar to David vs. Goliath conflict; only David is outnumbering efforts that intend to keep him weak or small.

4.3 Summarising findings in SWOT

The above-depicted results of traders' groups are varying from case to case, *ergo* from value chain to value chain yet some issues and characteristics can be subsumed under equal aspects. An appropriate tool to illuminate such characteristics is a SWOT box as presented below; with four categories that are highlighted: strengths and weaknesses and the other two

alternating issues opportunities and threats (thus, in short SWOT). It is a brief list of main findings that should be listed to give an overview.

Table 5: SWOT Box

Strengths	**Weaknesses**
1. Strong social capital 2. Strong network 3. Skills and abilities specific for produce/ value chains 4. Network flexibility 5. Flexible work	1. Illiteracy 2. Low self-esteem 3. No registration 4. No collateral 5. Little monies/ small working capital
Opportunities	**Threats**
1. Tailor-made loan schemes 2. Access to leased vehicles 3. Lease equipment 4. Integrated by development assistance 5. Improved post-harvest management	1. Old mind-set, mistrust 2. Beliefs e.g. Juju 3. Accidents and losses 4. Default

Source: own elaboration.

In the above chapter, results from the interviews and findings from observation and data collection were presented. These have shown, on the one hand, information about traders' groups in each of the three value chains in northern regions and on the other hand, findings related to interpersonal and collective group aspects.

The intention was to clarify women trades' roles in each of the value chains as it differs in some respect as to power and respect but also showing common aspects like commodity related business practices and challenges. The other section was to illuminate findings related to group characteristics; which showed strong group cohesion and cooperation and moreover, firm rules and obligations for members and leaders. Main objective was the illustration of market women and market queens' action and roles in North Ghana's markets; yet interpretation of findings and results will be displayed in the following chapter.

5 Interpretation

From the above chapters, combining the theoretical basis with the empirical findings and results of research, findings shall be interpreted to allow answers to research questions. It will be looked at i) functions of market women and market queens, ii) options for market women integration, and iii) combining outcomes in Threats-Opportunities-Weaknesses-Strengths (TOWS) matrix.

The functions of market women's network will be discussed separately in three subchapters: a) networks of traders and market queens, b) trust between traders and other value chain actors, and c) Social Capital of traders and market queens. The second part of options for integration is also divided into three subchapters; with each for one of the value chain cases. The last part is combining interpretations and structuring all into a TOWS matrix.

5.1 Functions of Market Women and Market Queens

The initial aspect that derives from it is a general assumption related to trader groups. According to Searle's definition of institution, and the findings described in the chapters 3 and 4 earlier above, it is plausible and appropriate to posit market women or trader groups respectively as institutions. The information revealed that market women groups and their market queens apparently operate as an institution. Although not willingly taking action, it is a rather undeliberate effect of the queen's and her group's collective actions that their organisation gains an institutional character. It would assumingly be of clearer presence if such groups were not suppressed. Another aspect contributing to the non-acceptance is that those trader groups are not officially registered.

Subsequently, from findings resulted from interviews and from literature reasons for hostility gain a clearer picture. The main and first complaints about traders are perceived after Rawlings coup d'état. It is shortly after that time with initiation of Structural Adjustment Program (SAP) measures by the World Bank that traders were under attack[43]. Other reasons are prejudices – *not a bene* in many other developing countries – that middlemen and traders are *per se* futile and selfish, and exploiting producers. The seemingly monopsonistic constellation that traders e.g. market women operate in informal channels is another reason to accuse traders of cheating or being involved in illegal merchandise; whereas market women in Ghana's South are registered and officially operating *viz.* Ghana National Tomato Traders (GTTTA), which are more accepted.

5.1.1 Networks of Traders and Market Queens

One characterisation for position of market queens is that these are authorities to settle disputes between group members. The market women rely on their leader or queen, the *majeera* to resolve issues such as disputes over damaged purchases, rules violation or e.g. fraud. This function of the queen to quickly and smoothly solving problems is a significant benefit for group members especially in an environment lacking a reliable legal framework and reliable governmental institutions. Dispute settling is also a system to reduce transaction

[43] The politics of determining the guilty in a minority, a domestic niche population or sometimes other nationalities is typical strategy to quickly find a culprit. The actual cause may be very different from the minority group but it is a feasible strategy to rapidly quiet an 'unsatisfied' population.

cost, which explains why a queen is elected as leader according to her skills to resolve problems, to negotiate successfully and enable the group to work efficiently (LYON 2003)[44].

Traders cannot rely on official legal institutions to support conflict resolution and even in cases when issues were brought to court; too much time wasted and cost are too high with no satisfactory result to compensate. Dispute settling is a highly relevant contribution in a business environment with barely any legal regulations or rule enforcement. This is an important function to assure some kind of 'security' within an insecure institutional setting and also to successfully guide and manage their group. It is therefore, important that group members respect their authority to overtake such function and to thus, reduce transaction cost and allow group members to quickly take up business activities afterwards.

Another aspect that emerged from interviews and findings is the ability of traders and especially the market queen to collect information. The information is retrieved through talking to other traders on prices, producers' behaviour or simply road conditions. The information shared is referred to as helping fellow traders. Their understanding is that all traders of a group are colleagues and have to stick together and to share information relevant for their business. The traders are 'brokers of trust' (LYON 2003: 16) as they know how to access crucial information for their business operations. The higher the hierarchical level, the more relevant information they will have. According to the results, the queens respectively has all relevant information on supply and demand situation, buyer and seller credibility and trustworthiness which are essential aspects for entrepreneurial actions. The factors enabling market women and market queens chiefly to perform market regulation are such information firstly.

Additionally important is the group's welfare benefits for all members. The results show that traders are part of market women groups due to welfare reasons. Some activities are more effective if carried out in a collective way than individually; with the most popular activity being a rotational saving scheme. Such savings are reportedly successful and not exploited by individuals because traders know that each member will have her turn and receive. In some very few cases, fraud took place, resulting in a comprehensive punishment of the violator in absence. Additionally, yet another aspect is that all group members benefit from support through their group when a funeral takes place, which is normally relatively costly regarding the widespread low-income situation. The women receive little donations from the other women – some refer to it as insurance so that "*a trader's working capital is not lost*"[45]. The reason that all group members contribute is that in case one would not pay, she would

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[44] This was clarified in beautiful way at interviews with FARNWORTH who was accompanied by former Minister of Women Affairs and Children

[45] Cited in LYON (2003:15) [from DENNIS and PEPRAH (1995) Coping with transition: Techiman Market, Ghana. *Gender and Development* 3.3, 43-8.] Although this is referring to a situation in the South of Ghana with very different context, the comment is accurate for Northern region.

not obtain assistance from the other group members or support for dispute resolution in future.

One function of a market queen and trader's network is attenuating uncertainty. The rules that are basis of market women's network are their bylaws as they call these. Bylaws are the grounds for daily business and to reduce risks, share the cost and support each other in order to collectively work their trade business. Uncertainty is reduced or attenuated with all traders following the same rules; for any case of interruption in their trade business, a queen will have made clear to traders how to react. The way traders perform as a network with collective understanding and knowing how to obey rules, they act like a swarm, and trade takes place from the very remote areas to the urban centres of Northern Ghana. In some cases, defaulting traders distort such behaviour enormously, e.g. betrayal whilst purchasing or selling on behalf of another. These exceptions though are part of the network as such and rules or bylaws exist as how to address problems of such type. Keeping all weak and incomplete issues of traders groups' in mind, network of traders is *as it is* intact and efficient.

Another function of *majeera*, a market queen is to function as a broker. Originally described as an auctioneer – the 'Walrasian auctioneer' by LÉON WALRAS (KREPS 1977); the auctioneer will match demanders and suppliers together and finds bid by bid a market clearance. The argument is that such an auctioneer will clear any excess produce from the market, and gain an economic equilibrium eventually.
The market queen herself holds a specific position as detailed findings in above chapter 4 have shown. The diverse situations that were reported by the market queen attest that her position could provide power regarding monopolistic and exploitative measures. Nevertheless, this is not applied and a collapse of such system or organisation would be certain. It was perceived though, that the market queen has a distinct power to exert but is making use of it very few times and in subtle ways.

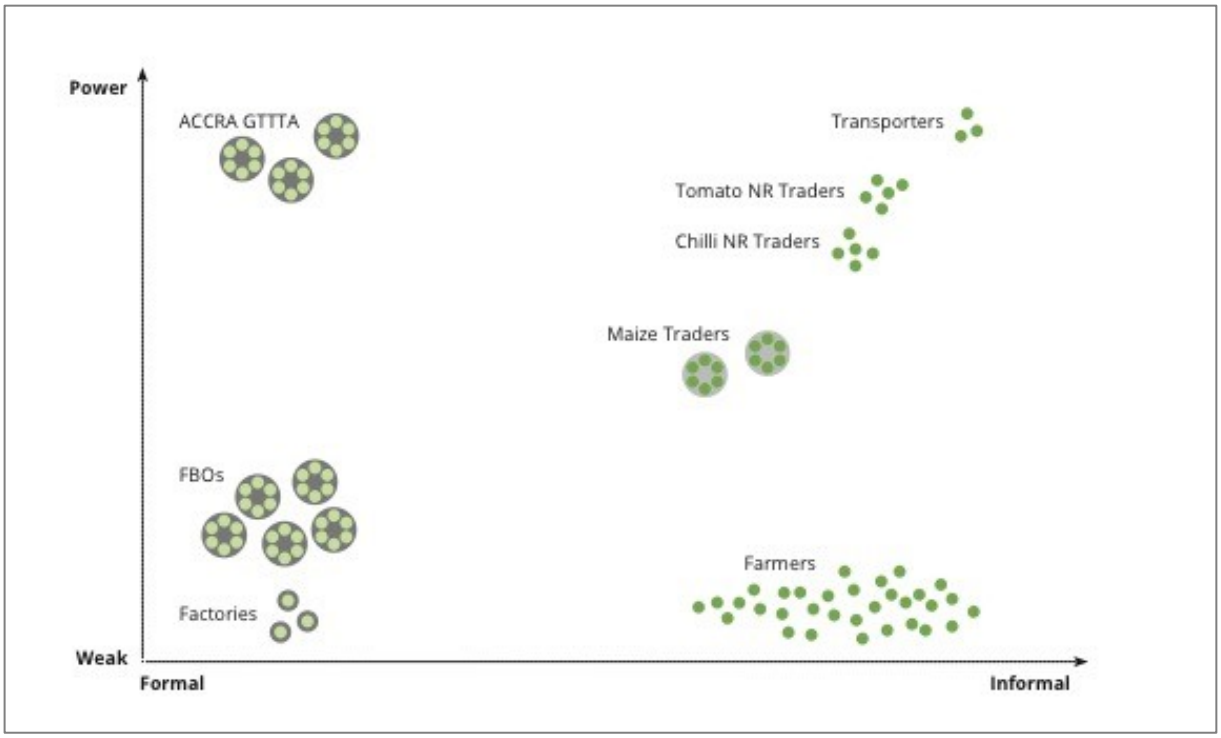
Hence, it can be stated that a queen is barely holding power rather it is the very specific information that provides knowledge; her accumulated knowledge on the credibility of buyers or creditworthiness of sellers but also other relevant aspects that determine decisions and permit her entrepreneurship and business intelligence. This set of complex network information is critical to fulfil position as market queen. The network the market queen is working with is generated through accumulation of all information, more or less relevant to trade business. But it seems inappropriate to describe the network as an only informational system. The influence, power and personal dimension and last but not least a cultural element are all woven into each other (RAM 1994).

This combination of diverse aspects of network makes the position as market queen as what is perceived as 'powerful'. SMALLBONE and LYON (2002: 20) refer to such networks as 'social networks'. And most of the aspects of such network are informal since cultural, personal and information are not exchanged in formalised systems. In most literature, such

informal social networks are explained as a competitive advantage to build up businesses in industrialised countries' frameworks. Studying Northern Ghana' context, the political situation barely provides the typical characteristics of private sector and business development. Therefore, in Northern Ghana, such networks of trader groups and their market queens represent a unalloyed successful business option for rural and peri-urban population in a business environment with weak legal framework.

For the research's area, business environment seems to be divided into two sections: one is officially and formally set up, the other are in loose, informal constellations. Although those who have made efforts to be in a formal setting (e.g. such registered farmer-based organisation with bank account); those organisations in loose or informal settings are more powerful. The graph below illustrates disparity between of powerfulness and informal group constellation.

Figure 4.16: Power and Formation



Source: Own elaboration

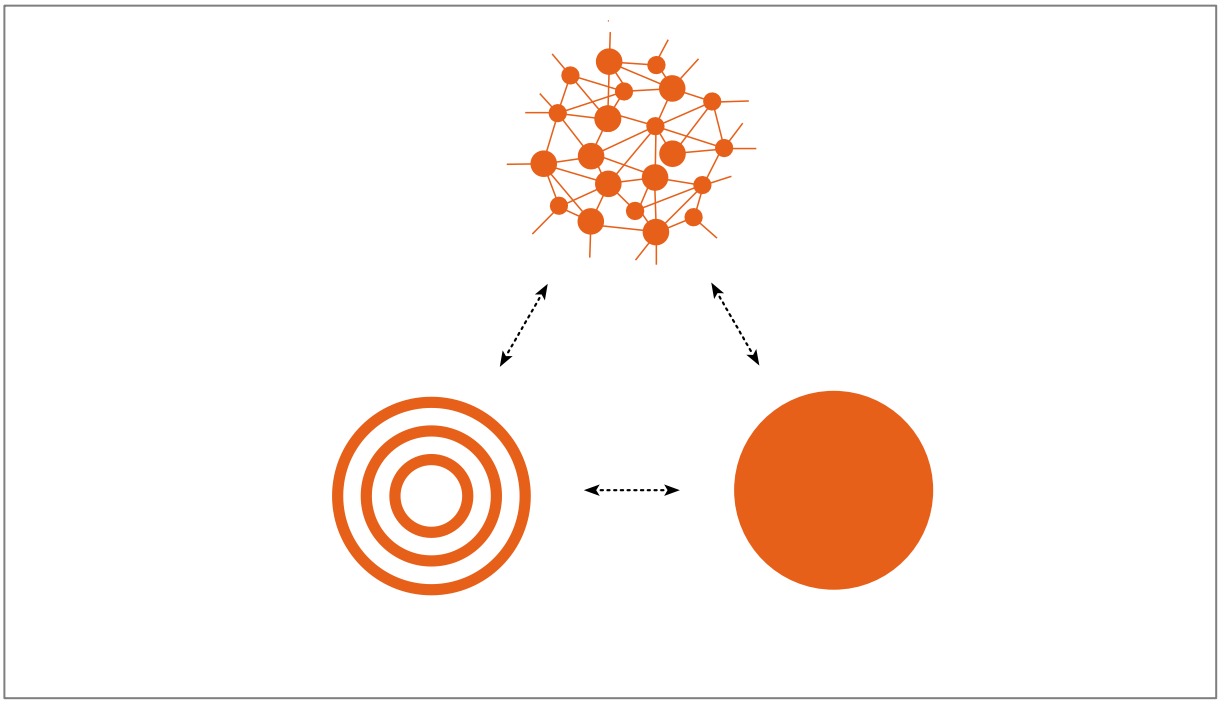
Needless to mention, as the interviews showed that traders confirm their wish for registration that would provide them with a better self-esteem in general:

> "If we could be registered [as a group] people would be more sincere towards us… and respect us better" MW2

An aspect of market women's network is important yet not addressed in any of the points mentioned before. In addition to the organisation's power and institutional character, it was explored that the group's constellation or network constellation varies from context to

context. The women are collectively describing it as 'in case A happens, we will do B' logic, in combination with the queen's statement that she behaves in a certain way to not attract attention, yet behaves differently when addressed concerning e.g. for a conflict resolution. The constellation switches from different situation's contexts and will do so in many times as necessary and within seconds. Therefore, it is here described as a 'switching' of group constellations of their group or network. Although usually, case studies will look at static characteristics and cannot describe dynamic and changing situations; to be of a changing nature is difficult to analyse. Despite difficulties for analysis, switching from one constellation to another is not a difficulty for the group members. It is for the market queen and each trader to decide how to react to certain situations, which are incorporated from their very first instructions to trader's business code of conduct. It is also marking the groups' strength and fitness to survive; to adapt and to adopt to various challenges. A schematic graph is outlined to describe switching of constellations in the below graph.

Figure 5.1.: Switching between different network constellations



Source: Own elaboration according to SCOTT (1991, 2000).

These networks can apparently compensate for the weak institutional setting and non-existent governmental support. GRANOVETTER outlines that such groups have a "strong sense of moral obligation to other members" (GRANOVETTER 2005[46]) and that in such groups it is clearly defined which behaviour is acceptable and appropriate and what is not. It is not despite the ignorance by governmental bodies but seemingly *because* they are left to themselves and alone without assistance – groups clearly define how and what is to be done

[46] In: SMELSER & SWEDBERG 2005 (ebook) Loc 17081.

in which context. The market women and their market queen should consequently, be rather described as "networker" in a setting with little institutional and legal framework.

5.1.2 Trust between Traders and other Value Chain Actors

This subchapter is looking at trust and its role for traders and with other value chain actors. Trust is alone important in such a context in which traders operate; with imperfect market information, weak legal framework, weak institutions and susceptible infrastructure. But trust *per se* is crucial for many interpersonal relationships, concerning business relations or other daily life relationships, especially in an environment of weak legal framework as explained earlier above. As FAFCHAMPS (2004) puts it "by trust we mean the *willingness of two or more individuals to enter in a negotiated agreement with each other, to incur obligations, and to acquire rights that have only imperfect legal protection*." (emphasis by FAFCHAMPS (2004: 155).

It is mentioned in various sources that trust can be a very effective 'key business resource' (GRANOVETTER 1985, *cp*. LYON 2002: 20; RAM 1994) that might also provide a competitive advantage. Trust as the traders describe it, is that they have a perception of a high probability that their colleague will behave appropriately. The circumstances for market women to operate in their business, infrastructure, labour safety, and institutional framework are of poor condition for operating trader business; occasionally losses occur, problems arise and create sources for mistrust. But to avoid mistrust and reducing cost from such issues the key is hence, creating trust. Women traders describe trust as it can either be generated by repeated interactions or transferred trust, by a confirmation through a kin or a close colleague. The traders reported that their strategy to assume away some risks is reciprocity; so that abused trust is responded with sanction. With women traders having solid certainty that the market queen will deal with the reported defaulting member, applying sanctions or other penalties on her, the other trader can take up activities again and hence, keep transaction cost low. Reduced transaction cost would in this context demonstrate how trust is applied within traders' group.

Essential for traders' actions and business is, as GRANOVETTER puts it, it is *interpersonal* trust (GRANOVETTER 1985). To an extent, this is the case for most of traders and especially the market queen. For other members, the group is too large and their strategy is to solely count on intermediaries or to re-assure potential colleagues and partners of control. The control is embodied in knowledge on home location and siblings, reputation and other vital information. In the case of disappointment, damaging one's reputation e.g. can be used as a threat to convince the person to repair or recompense. Other possibilities include sanctions from participation in group benefits; or the exclusion or peer pressure. The highly important business activity of traders is hence, collecting information, which is also named as gossiping. For traders, gossip is vital due to its network information content and with a

reciprocate character it builds trust simultaneously (common practice also by various Asian trade associations to provide crucial network information (LYON 2000: 664).

The authority of the three market queens varies though, with respect to their commodity's importance as a crop. The chilli queen has long been little and part-time existent, until the crop production increased and gained relevance through volume and export market. The producers have traditionally been women, but since chilli is most recently associated with business and probably higher income source, increasingly men are involving in production of chilli. The changes caused by such a shift in producers' gender would require further research. The tomato queen has a high authority as the crop has long time played an important role in the industrialised food production, which was started in the early 1960s with Nkrumah's ambitions to foster domestic food production. There is apparently room for manipulating prices and building cartels amongst each other, but none of the findings is indicating such impression[47]. A similar differentiation of authority can be perceived for market queens' cases in Ghana's South (CLARK 1994).

It requires a specific 'glue' to sustain and maintain such a network as described above. The personal, cultural and other dimensions are very strong arguments for trader groups as traders of Ghana's North. All group members embed their trust in the market queen's actions and statements. And in other words: It is likely that in the case of mistrust, traders will no longer want to be part of trader's group/ network/organisation.

The trust phenomenon receives a different dimension as concerning business relationships with non-members, or non-traders. A particular group with a unique relationship to merchants are the so-called transporters. These are men who drive and own vehicles, such as trucks or other smaller vehicles that can be used for transport of produce. Some of these are also speaking various languages that allow negotiations on behalf of traders in remote regions as well as in foreign countries. The women traders and the market queen reported long-standing relations with transporters. A market queen needs to rely on negotiation skills of transporters, without trust existing in between trader and transporter deals could not take place.

The transporter nevertheless, gets his share after the deal is set in the form of a portion of the bought produce or alternatively, some cash. The transporters are perceived as powerful concerning decision-making (e.g. which farmers to buy from) and in price setting (to receive an attractive share themselves as well). Other sources differentiate between transporters who take up solely transport activities and so-called lead-boys, which are responsible for translation, negotiation and as a linkage for traders to farmers (ROBINSON 2010b: 6).

[47] This is contributing to WEISSMAN'S study (1990) there was nevertheless, no evidence that market women or market queens are cheating.

Market queen and market women of this study pointed that only transporters are responsible for all these tasks. The trust is mainly with one person who translates and also brings purchased produce over the Burkinabe border; this is also requiring language and negotiation skills. For the farmers, traders are perceived as the main powerful actors with transporters being slightly less powerful. The least powerful they perceive are farmers and consumers, both actors that have to accept prices and availability of produce. Nevertheless, albeit having arrangements with transporters, the market women and especially the queen would still be held responsible for produce damage and losses on the way, due to road accidents or robbery. There are various costs that traders need to calculate and seek all various options for reducing risks. Ultimately, such elements of trust and measures of control lead to understanding trader organisations more of resembling institutions.

5.1.3 Social Capital of Traders and Market Queens

Having looked at networks and trust, this is the next aspect, which is key for understanding trader and market queen's network. It is necessary to frame the term of Social Capital regarding to traders and their environment. The very key asset of traders and especially market queens is their ability to acquire and accumulate Social Capital. Social capital arises from the accumulation of information on other actors and group members, their credibility, reliability but also including knowledge on their homes and relatives.

Strictly speaking, social capital is the very capital that women traders have. Albeit absence of financial capital mainly, their networks, power, and knowledge provide a substantial Social Capital that primarily market queens are equipped with. And as MISZTAL puts it, Social Capital is "at its strongest when rooted in old traditions of civic culture" (MISZTAL 2001: 372). As trader position and vocation are inherited or passed on from family members to daughters or relatives, also so-called extended family members, who can be neighbours, friends, close relationships definitely; handing over of all relevant Social Capital is between close ties.

Social capital is nevertheless, not to be 'owned' by one single person but it is moreover, a collective phenomenon (NEWTON 2001: 207) that is why a market queen alone has not such thing as 'power' but rather through the network and trust of market women. It might be logic to understand traders' position when looking at the social capital's composition is defined as including:

"(...) levels of trust, the extent of networks, the density of relationships within networks, knowledge of relationships, obligations and expectations about relationships, leading to reciprocity, forms of local knowledge, operating norms and existence and use of sanctions to punish free riding" (PENNINGTON and RYDIN (2000) in SMALLBONE and LYON (2002: 20).

Such Social Capital allows a market queen to coordinate as organisers of auctions. When abstracting the very position of a market queen it was assumed that such leader is behaving

as an auctioneer which can also be described as the Walrasian auctioneer – a person that is collecting information on supply and demand and auctioneering actors of both sides for purchase deals and sale respectively (Walrasian auctioneer *cp*. FAFCHAMPS 2004: 12). FAFCHAMPS (2004) and PORTER et al. (2007) are describing market women but in their case those of the South of Ghana as market institutions which is very different from Northerners. As mentioned earlier, Southern traders are more established and better respected than traders of Northern areas (*cp*. BRITWUM 2012).

Nevertheless, FAFCHAMPS (2004: *ibid*) conclusion holds true for Northern traders as well. A trader organisation that has effective and adequate Social Capital and authority through trust and knowledge, no means but ways to coordinate market supply and demand according to fixed rules is very likely to be a market institution. The real characterising function of market queens is the capability to auctioneer supply sources and demand *ergo* buyers, both from inside and outside of the country.

It is to question, though, as GRANOVETTER states whether business groups evolve because of a market failure or "rather because of special skills and abilities of entrepreneurs, families, and alliances to mobilise resources" (GRANOVETTER, Loc 17029 in SMELSER & SWEDBERG 2005). It is nonetheless not profitability that attracts traders to their business; from the study's findings, it is more suitable to speak of the latter, special skills and abilities of traders. Additionally, the interviewed market queens confirmed (in their own words) the main reason is the reduction of risks instead of attempting to gain huge profits. It appears in the first impression that market women do their first best possible "job" opportunity, which is selling of home gardens' produce – from their families as well as produce on behalf of their neighbours. Knowledge of each other's homes means knowledge on e.g. creditworthiness, honesty, family situation, children, issues; and such allows the creation of a strong social tie. These and the latter aspects will be illuminated in the following sections.

Seemingly much tends to confirm GRANOVETTER'S statement for this study that such business groups evolve over time "to compensate for market failures" (Loc 17029 in SMELSER & SWEDBERG 2005)[48]. Though intentional action by traders, or a deliberate decision by a trader of filling a gap such as bridging a missing link for market failure is almost impossible. The reason for working as a trader is simply due to lack of appropriate and reasonable alternatives in rural areas, for illiterate women that need to feed their families.

5.2 Options for Market Women Integration

In this subchapter, a final aspect is the integration of traders *ergo* market women by other organisations, e.g. international development organisations. According to the third research

[48] Unfortunately, no page number could be identified than the e-book "location". In the book, GRANOVETTER'S article starts at page 429.

question, it will be outlined how other actors that are part of traders' business environment can alter their programmes to benefit affected value chains through integrating traders. The question was initially which options of value chain upgrading through integrating market women would accrue. Value chain upgrading as described in chapter 2.2.3 would mean a qualitatively improved value chain; and with better linkages amongst actors, market women's Social Capital and the network would contribute to enhancing efforts for an improved handling of product or better quality of a product (sorting, grading, and hygiene) along a value chain. Through the integration of traders by other organisations and actors in the area, their overall situation of depicted value chains would improve and simultaneously allow upgrading opportunities.

Another aspect needs clarification in this regard; an understanding of value chains and integrating traders will not be done through changing actors or actors' behaviour. Such plans would imply that change is needed due to traders' inappropriate actions. It is rather outsiders' projects and development cooperation agencies' understanding, which requires amendments towards traders.

The findings in chapter 4 present that market women are a lively part of value chains, which carry out functions that enable supply and demand, and market coordination. Hence, the question is how to involve traders better, as a necessity of market women to be included in value chains can be confirmed. The question would be as to how an integration of traders ergo market women takes place – since they are an important part of market coordination. And it is to clarify what would have to be done for such integration. In a first step, various options from findings of the three cases are to be exposed. It is required to be careful with measures and strategies that would not imply a participatory approach. For successful measures of inclusion, these would need to be identified in an alternating process together with traders; market women and market queens. Therefore, a preliminary outline of strategies will be depicted in the following parts for each crop.

5.2.1 Options in Chilli Value Chain

Specifying the options for integrating market women's activities for the chilli value chain is the first step in this section. As explored earlier the implications for the traders in general, this section looks at impacts for the chilli value chain. The focus will be laid on activities, programmes, and interventions that organisations in the field are recommended to implement.

An aspect that is not quite typical for value chain's traders is that male producers who claimed not to need any women traders pushed them out. Accusations were frequent until daily routine made clear that it is not a market queen or traders themselves who set prices. In this specific context, options for integrating market women need to be made without provoking counteractions by male producers. Therefore, it is suggested to look more into

improving traders' business environment, e.g. communication with local authorities, awareness creation at local institutions instead.

The chilli pods as a product are relatively robust; it can be used as an insect repellent in production and also later in mixture with other natural ingredients to add to e.g. garlic, Neem tree leaves. But its handling requires know-how to avoid losses that can occur through fungal or viral diseases as well as post-harvest infection. The varieties and breeds utilised are manifold as explained earlier and especially chilli varieties traded as fresh produce need specific, careful handling. Processing of dried chilli is also crucial.

Table 4: Intervention Opportunities to Improve the Chilli Value Chain

Name	Field of work	Approach	Opportunities	Challenges	Priority areas of ODA intervention
Equipment lending organisation	Vehicles and equipment to lease or lend	Lending of vehicles to female traders/	Increasing volumes of transported chilli	Roads' condition	Assistance to organisation, awareness creation, dialogue
Equipment lending organisation	Vehicles and equipment to lease or lend	Leasing equipment to processors	Improving quality of produce		
Rural Banks	Financial assistance	Lending ultra-short-term micro loans to female traders	Increasing chilli purchase and aggregation	Credit scheme solely for female traders	Awareness creation at banks, creating dialogue
MoTI	Trade enhancing activities				
Development Organisations in Northern Region	Paris Declaration	Round tables, gendered value chain approaches			Post-MDG

Source: Own elaboration.

A typical issue of chilli produced in the North is the availability of certified seed, as explained earlier, as well as fluctuating yields, but largely its grading and packing, processing and marketing options. The options could be hence, acquiring sources of certified chilli seed, which is available already in Southern parts of the country. The traders would continue to give seeds and other inputs to producers; only seeds being of better quality and potential production and yields can increase. Many of the producers think they should use the hype and generate quick cash. Others who rather prefer to let the hype pass and then yields will stabilise; less bulk production of male producers that seek high cash income and later, continuously more produce by women with improved seed.

Marketing of chilli is yet underdeveloped and could present another business option for chilli traders. The packaging of different varieties according to produce requirements plays a role when selling. Producers claim, though, that export market is a new niche that needs to be addressed; whereas market women and market queen could not verify that a credible buyer exists. The processing of dried pepper to chilli powder is crucial concerning hygienic aspects. Powdered chilli that is generally very popular in household utilisation; although hygienic criteria are not fulfilled in many cases. Insects, dirt and other alien parts in dried chilli can occur if drying process is not carried out professionally; leaving the grinded, powdered chilli intermixed with inappropriate substances.
Lack of financial assistance for equipment of packaging and processing, most of all is required.

In the chilli value chain much can be accomplished with relatively small financial assistance. If suitable equipment could be used through the public private partnership that is leasing out equipment and various devices for processing (e.g. drying oven) to micro and small enterprises. With such access to facilities, traders would be able also to process according to standards, given that training and material (e.g. bags and seals for packaging) is available.
Marketing to the South is an option that traders often mentioned; which could be feasible due to many relations to markets in Ghana's South.

Last but not least, chilli group registration was repeatedly mentioned and is indeed from both outside value chain actors as well as by chilli trader and queen declared as desirable. The group members would gain more self-esteem and thus, mobilise more resources and probably achieve better results in e.g. discussions with producers, farmers who want to sell at different prices, or discussions with governmental officials or policemen. The members themselves understand the positive effects of registration as a group; it is most probably a question of time when this group may accomplish this step. But if not accomplished freely, it is not advisable to push or directly confront members with registration approaches.

5.2.2 Options in Tomato Value Chain

The value chain of tomatoes has very different challenges that are primarily related to policies for tomato market, lesser product quality and product handling. Although tomatoes value chain may seem unfortunate due to product characteristics and handling or shelf-life issues respectively, many options prevail that can be mobilised through traders.

As described earlier above, tomatoes are harvested and put into wooden crates to be brought to the farmhouse where traders come to buy tomato produce. They are then packed into large wooden boxes (as shown earlier in fig. 4.8) and transported to next bigger marketplace. Most of the roads' conditions are poor and contribute additionally to product damages. The value chain map presented (see fig. 4.10) depicts amongst others leading issues that create - real or potential - threats. Such a threat is understood as an impediment that puts risks at the value

chain. One mentioned is the lack of quality seed; the second is post-harvest handling and transport, third is the Economic Partnership Agreement and lastly but not to mention delays of loans promised by the African Development Bank as well as the lack of capacities of technical support through Ministry of Agriculture. Related to the first listed, quality seed could be addressed similarly to chilli seed production as carried out in Brong Ahafo Region; with a participation of research institutions and farmers. These could include traders as well which are in many cases, female small-scale producers as well.

Similar to chilli case before, financial assistance is crucial. Especially in this study's case of the tomato value chain, tailor-made financial assistance solidifies as key. Rural banks need to be pushed some more to provide access to short-term medium loans that are solely for market women. There have been talks as mentioned earlier, and there have been affirmative discussions and promising plans (at the beginning in chapter 2 of the study). It will have to be evaluated whether these were realised sufficiently and if not, what is feasible and required additionally or differently to permit traders to access loans.

The same holds true for capacity building trainings to address the post-harvest handling issue. The traders would be advised to pack harvested tomatoes in smaller crates[49] – ordered by market women from carpenters – in combination with the introduction of grading at an early stage in a view to avoid losses through infected produce contaminating other. Two problems would be addressed, thus; qualitative losses through high weight on produce (crushing tomatoes) could be avoided as well as quality improvement through grading in the first place. With traders' understanding created and increased knowledge on handling and grading some of the losses could be avoided. It would remain to finance producing new crates instead of the known huge crate, or possibly create new ones from old ones.

An issue to address issues of problems resulting from short shelf-life could be through improvement of transport facilities. Instead of traders waiting for vehicles to be ready, an organisation to make vehicles available solely for traders could improve bottlenecks of transport and produce rotting away. It would have to be ensured that such vehicles are available in sufficient numbers to allow transport when needed. Such an organisation would be advised to lend appropriate crates as well.

Other facilities are suitable to be rented out, especially in cases where traders are in contact with producers in remote areas. Pre-processing could make sense or be adding value instead of transport, e.g. dried tomatoes. The devices and equipment that is required for such steps are normally impossible to be acquired by typical traders. It is possible only if such

[49] Such crates would require a smaller size but most of all much lower height. The height determines low packaging weight. Additionally, spacers at four edges preserve the upper crate to stand with its weight on crate rather than on produce.

organisation as an equipment-lending organisation is in the region and ready to work with traders.

Table 5: Intervention Opportunities to Improve the Tomato Value Chain

Name	Field of work	Approach	Opportunities	Challenges	Priority areas of ODA intervention
Rural Banks	Financial assistance	Lending ultra-short-term medium loan to female traders	Increasing chilli purchase and aggregation	Lending system only with female traders	Awareness creation at banks, creating dialogue
Equipment lending organisation	Vehicles to lease or lend	Lending/ leasing of equipment to female traders/ processors	Increasing volumes of transported chilli	Roads' condition	Assistance to organisation, awareness creation, dialogue
Ministry of Family, Children and Women Affairs	Awareness creation	Improve willingness to lend monies to women	Higher volumes of harvested amounts		Transport costs
MoTI	Awareness creation, trade and assistance	Reduce cheap imports	Empowering national tomato markets		
Development Organisations in Northern Region	Paris Declaration	Round tables, gendered value chain approaches		Policies change – avoid cheap import	Post-MDG

Source: Own elaboration.

Either way, it would have to be investigated on the women's habits and norms beforehand to ensure they are willing and able to implement changes. As it is per EPA (Economic Partnership Agreement) that markets in Ghana are flooded with cheap imported tomato paste, motivation might not be too high to change in a business environment averse to domestic tomato production.

Another issue is related to traders' statement that current tomato variety decays much faster than it used to a few years ago. Former variety was stated to last for five to seven days in a fresh shape whereas current variety does not last but only up to two days. There are three options to deal with this problem: One would be to start investigations and research into which specific variety this current one shows the negative characteristics. The second option is to introduce a variety with characteristics of e.g. tougher skin, firmer flesh. The third option is to carry out both the options together to simultaneously address the issue and alleviate produce characteristics. Probable partner for such implementation could be a private partner (tomato processing factory e.g.) as a governmental partner would not be able to interfere in

EPA policy and intention. Another appropriate approach could be to equip market queen with financial sources to conduct such implementation solely with a little technical assistance of a development organisation. This would be an effective way to avoid waiting for governmental loans that might never find a market queen and traders.

5.2.3 Options in Maize Value Chain

In Ghana in general data reveals that women contribute 90% of labour in post-harvest activities. For maize, it is mainly due to post-harvest handling issues and know-how lacking with regard to varieties and specific handling, storage plays an important role for maize value chain. But for the aggregators and traders interviewed it showed a main bottleneck is the lack of financial assistance. The map depicted in fig. 16 expressed some critical aspects along the chain as the following: Lack of certified seed (or seed of good quality), secondly fluctuating yields (some hybrid seeds some conventional seed), thirdly lack of access to credit facilities (for both producers and traders) and mainly the problem of losses through humidity that lead to fungal diseases. Such losses are largely not perceived as loss but little damage – if detected at all – and detected contaminated amount of maize will be fed to animals instead.

Regarding the first mentioned issue of lack of certified seed is a typical problem most value chains or most crops are facing in Ghana. The easiest way that is distribution of suitable seed (in this case through the Regional Directorate of MoFA) is undermined nevertheless. Many producers retrieve the seed from harvested maize cobs for re-usage. The options for female traders in this value chain arise from many areas they are involved in. One group of traders, which is attached to an aggregator, could improve quality whilst collecting the grain, when putting it into store, and when handling takes place for sale. These measures would increase quality before it gets to the aggregator as well as when maize is bulked, repacked, sold or stored. Another group of women traders is in charge of marketing; petty traders that buy from bulk traders or aggregators (not on a regular basis) and sell to shops, restaurants or supermarkets. It could be avoided that maize is dried in an inappropriate way (e.g. on the ground) and allow women to achieve better margins through the improved quality.

To achieve better quality can be through better drying techniques to reduce humidity below 14 to 12 percent which is the required minimum. Another additional way is to allocate separate room for drying to not let animals come to touch with grains. As for all relevant drying techniques, a diversity of international development organisations is providing trainings to value chain actors. Unfortunately, female traders are not amongst the trainees. These trainings include usage of storage facilities. Nevertheless, the most successful storage facility type identified for the semi-arid and arid regions is a traditional mud silo. The dried

mud mixture of clay and straws of various grasses (e.g. Vetiver grass[50]) functions as a protection against both weather effects and intruding animals including insects (FREY 2010).

Figure 5.2.: Mud silo in front of farmers' house in Northern Region



Source: Own, 2011.

The option would be to promote better know-how on product hygiene as well as storage facility know-how. Local material and local labour (apart from the traders' labour) can be mobilised through local authorities as well as ministerial bodies, which would contribute positively to underpin the traders' efforts.[51]

Looking at the aspect of financial assistance for traders and its impediments could contribute to Ghana's target to reduce its annual maize deficit that is expected to increase to up to 250,000 metric tons by the year 2015 (GROSSE-RUESCHKAMP 2011)[52]. As reported by traders, requirements of monies to purchase larger quantities for a buyer are not met due to lack of guarantor and lack of collateral. The rotating saving model is not sufficient to allow purchase of amounts exceeding e.g. 100 bags of maize. Therefore, an unknown large amount of maize is not reaching aggregators' places and thus, will barely contribute to reduce the above-mentioned deficit. This aspect holds true for other value chains as well but is best seen in the capital-intensive maize value chain. Maize aggregators and traders (as well as processors) face constraints that their fellow male colleagues do not have; such as creditworthiness, collateral or the like. Financial institutions and rural banks are not prepared to give loans to clients that do not have large cash amounts in their account or may not bring guarantor or

[50] Free paper on "Benefits of Vetiver Grass" by ECKART FREY, Tamale 2012.

[51] Modern storage facilities built by international organisations, which were made of concrete walls, iron door, and tin roof proved already to be barely suitable. The material is quickly affected by harsh climatic conditions and damages occurred in roofs, walls and doors allowing insects and other undesired effects into the storage.

[52] GROSSE-RUESCHKAMP 2011, Economic Analysis of the Maize Value Chain with emphasis on the post-harvest part of the value chain. Study Report (October 2011), internal study.

collateral forward. Additionally, popular micro-finance models would not suffice even if attained. It may need the support and encouraging policy approach that explicitly assists female business entities in ultra-short-term medium loans. The term is deliberately chosen as ultra-short-term as traders normally need cash for two or three days until amounts are collected, transported and sold. And deliberately termed as medium loan since traders require larger amounts than those, which are normally provided through micro credit systems.

Financial requirements are one aspect, yet other criteria would mobilise maize value chain activities such as improved transport facilities for traders. Through making transport more available to traders, clearly more volumes of grain could be transported, that are normally available in few numbers and as tradition foresees such equipment is provided first to men. By the time a female trader would be able to access a transport vehicle; harvest is long time bought by some other traders or may even be deteriorated.

Maize is used largely in Ghana for its School-Feeding-Programme (coordinated by the World Health Organisation, WHO) and a large quantity of domestic maize production is used for feeding school children. Nevertheless, quality issues prevail in this sector as well and foreseen instruments to measure the exact humidity grade are not available but rather a rough calibration tool. With this, aggregators decide whether maize can be sold to WHO or rather to poultry farmers. Nonetheless, fungal infected grain is causing health damages to animals as well. Thus, it is necessary to assure drying of maize to the required level of max 14 % in any case. The difference whether a maize grain is animal feed or children's food depends moreover on variety. The option to be suggested in this case is hence, training women traders to a) utilise instruments that measure humidity grade and b) train traders in drying techniques as described above in order to achieve better quality of produce but most of all, prevent major losses.

Table 6: Intervention Opportunities to Improve the Maize Value Chain

Name	Field of work	Approach	Opportunities	Challenges	Priority areas of intervention
Rural Banks	Financial assistance	Lending ultra-short-term medium loan to female traders/ aggr.	Increasing maize purchase and aggregation	Lending system only with female traders/ aggregators	Awareness creation at banks, creating dialogue
Equipment lending organisation	Vehicles to lease or lend	Lending/ leasing of equipment to female traders/ aggr./ processors	Increasing volumes of transported maize	Roads' condition	Assistance to organisation, awareness creation, dialogue
MoFA	Post-harvest management, grain drying techniques	Support to drying of maize by MoFA bodies	Improving quality of maize and reducing losses	Lack of funds	Equipment and know-how supply to MoFA bodies
Ministry of Family, Children and Women Affairs	Awareness creation	Improve willingness to lend monies to women	Higher volumes of harvest aggregated	Lack of funds	Transport costs
MoTI	Awareness creation, trade and assistance	Train officers in departments		Transport costs	Change of mindset
ODA	Paris Declaration	Round tables			Post-MDG

Source: Own elaboration.

The above chapter was to provide an interpretation of results and findings. On the one hand, functions of traders and market queens were analysed, and on the other hand, each value chain case had a separate interpretation as to which options could appear as practicable for traders. For the first part on functions, it was analysed that traders have a large and tight knit network. Their organisation's rules, ways to strengthen trust, measures of control and organisational setting are comparable to an institution. This very institution is in place for market coordination and organising supply even from neighbouring countries, and selling to where demand is found or where buyers can be identified. Concluding with the third characterisation, traders' social capital is enabling an auctioneer function. The auctioneer is the combination of the first two functions, and resulting in a position auctioneering demand and supply. Only with specific aspects and characteristics presented that allow successful trade business in context of low institutional legal forms and governmental framework (cp. OKALI 2011).

The options resulting thus, for each of value chain's cases are depicted to provide interpretation concerning effective use of women trader's capacities and functions. It is yet to determine which of the explained cases of inclusion would be most effective for upgrading value chains; which will be done in the following section.

It could be made visible that the financial aspect is an issue that is clearly necessary to be adapted for women traders. It is agreed by diverse sources and actors in value chain that financing is important for any activity to be improved for the women. A strategy should hence, involve rural banks and allow special credit loan facilities for traders. It has become clear that such banking products should allow short-term credit. It would be required to introduce special conditions as traders do not have collaterals; but a highly repayment mentality *ergo* creditworthiness. An approach would be to attend to rural financial institutions and their heads to discuss methods of integrating new customers; as it was done by a former (female) minister of Ministry of Women and children's affairs, who spoke with bank managers about loan schemes for women. It was much appreciated by all partners that a local authority person was attending to the topic; such activities would also need regular follow-up measures.

Another aspect is the design of official development assistance programmes. With a modified value chain approach, which is able to integrate female traders' issues an improved situation of trader groups would be feasible and other effects such as better product quality and higher harvest volumes. Key are gendered approaches that would include female producers as well as agro-food processors in such way that undermining through traditional labour division and or traditional roles is circumvented.

5.3 Combining outcomes into TOWS matrix

From interpreting findings of the three value chains a combined, a focused graph should be presented. The following is a Strengths- Weaknesses- Opportunities- Threats- Analysis (SWOT). The boxes will each contain the above listed aspects and prepare for the analytical part, analysis of combined issues (strengths plus opportunities or e.g. weaknesses and opportunities). As already explored earlier, such outcomes were collected in the SWOT box and now brought to pairs of strengths and weaknesses and threats and opportunities. Combining these pairs, external and internal factors can be explored that are intrinsic or extrinsic. Each of these requires appropriate strategy adjustment, which is outlined in the following matrix that is called TOWS matrix.

Table 7: TOWS Matrix

Internal Factors → **External Factors ↓**	**Strengths** **1. Social Capital** **2. Strong Network** **3. Skills and abilities specific for produce/ value chains** **4. Network flexibility/ Flexible working schedule**	**Weaknesses** **1. Illiteracy** **2. Low self-esteem** **3. No registration** **4. No collateral** **5. Little monies/ small working capital**
Opportunities 1. **Tailor-made loan schemes** 2. **Access to leased vehicles** 3. **Lease equipment** 4. **Integration by development assistance** 5. **Improved post-harvest management**	**Strenghts + Opportunities** - Alleviated working capital, increased turnover, higher volumes (S1, O1) - Higher volumes and improved transport (S2, O2) - Improved post-harvest situa-tion, reduce losses and increase quality (S3, O3)	**Weaknesses + Opportunities** - Improve group cohesion and self-esteem of members through enabling business (W2, O2) - Access to tailor-made loans brings access to working capital, improves household situation (W4, O1)
Threats **1. Old beliefs, mistrust** **2. Beliefs e.g. Juju** **3. Accidents, bad roads, loss** **4. Default**	**Strengths + Threats** - Using same know-how and skills to weaken envy or mistrust through partners (S1, T1) - Avoiding situations that provoke mistrust, sticking to partners that respect (S2, T1)	**Weaknesses + Threats** - Reduce risks of default and scarce capital through group registration and group responsibility (W5, T4)

Source: own elaboration

The above-presented matrix of strengths, weaknesses, opportunities, and threats is the typical box that was depicted earlier and assists in clarifying the SWOT analysis, which is also named as TOWS. The single box contents are put against each other, and so are strengths contrasted against threats and opportunities; the same for weaknesses with threats and

opportunities. Results illuminate a concept, or drafted strategies how risks are dealt with and how success can be targeted.

6 Conclusion

After having analysed and interpreted each of the cases value chains and respective groups of market women, this chapter will present the conclusions for each case respectively. Attention is brought to how to imply insights from this study and to break down recommendations for strategy development in a focused and clear approach. Such efforts to specific value chain approaches mean focussing on discussed issues that may increase production and productivity, accelerate the introduction of innovative technologies, increase household incomes, and ensure certain improvements in all over nutrition situation. Addressing market women would mean to address several Sustainable Development Goals (e.g. SDG 2, 5, and 13) and improve achievements.

Agricultural and horticultural food value chains in Ghana are important to be developed not only after looking at the present SDG targets; especially child nutrition and health situation of rural households require amendment of prevailing development strategies. A side effect of integration of market women (as explored in chapter 5.2 and 5.3) into value chain development would be agro-food value chain upgrading that reduces losses and improve produce quality. Value chain programmes and rural development interventions are set up to address improvement of production stages and linkages in value chains amongst other issues, taking linkages between actors as a priority and strong motivation factor. Considering stakeholders as knowledgeable in their various operation fields, development interventions look at capacity building regarding value chain advancement, e.g. improvement of group cohesion, assistance in setting up standards of quality, compliance with standards, or support of agreements and conflict mediation.

Albeit existences of many projects in the field of rural economic development, mainly producers are addressed, governmental institutions staff. Some few cases of specific post-harvest management are targeted. None of the recent and current projects is addressing those actors transferring produce to markets, those who are notable regulating actors of agro-food supply and demand; and hence, compensating for lacking institutions. Nevertheless, development interventions and their projects are circumventing traders. Although such traders in Ghana seem to smoothly and successfully coordinate demand and supply, traders groups are well connected and strictly organised.

Additionally, development intervention is increasingly ignoring that female actors do not have same access to assets as male actors. Despite ignorance by programmes and projects of these market actors, some groups have formed themselves. Markets in Ghana are increasingly deregulated and it is questionable whether local and traditional systems and institutional settings can be included or their related actors would be progressively left out.

In this section, conclusion on market women and market queen's functions will be presented and furthermore, their functions concerning suitable strategies of *inclusion* into value chain development. It will be eventually concluded which upgrading strategies would be recommendable.

6.1 Market Queens and Market Women in Value Chains in Northern Ghana

As explored above in chapter five, market queens can be described as 'networkers' on behalf of traders' organisation which can be compared to market institutions due to resilience of this specific organisation form. Although traders' groups are not registered in an official form; their coordination of supply and demand hence, market clearance is just one benefit of traders' orchestrated actions amongst other. The interpretation of functions showed that traders' groups are a market institution rather than a loosely formed group. The flexibility of group formations and actors' collective behaviour that traders perform as an institution.

Most of market participants are not aware that market women buy and sell also *beyond* national borders, in case there is demand. In times of shortage of particular vegetables, traders buy from neighbouring countries such as Togo, or Burkina Faso. Additionally, traders take risks by crossing borders, which are not equipped with transparent handling procedures; instead traders have to pay "acceleration fees" at several check points or to be acquainted with a person that would support. Normally traders will travel with trucks loaded with produce they will sell and which can serve as payment option as giving smaller portions in baskets to accelerate e.g. a customs' officer's decision. Such actions will not be realised or paid for at the end of consumers market. That is part of actions and typical work of "invisible hands" of these markets.

A decisive aspect is the information that trader women are collecting which was much improved through utilisation of cell phones; the so-called and well-known frog-leap effect[53]. With cell phones, gathering information has become an essential asset of traders that very much accelerates decision-making and substantiates strength of their network. The network itself is also key, that enables traders to perform as successful market institution and its combination with traditional patterns and rules that provide close-knit linkages of relations. The factor that makes women traders a resilient and sustainable institution is the interwoven combination of those aspects mentioned above which summarised state their social capital. Social capital is permitting women traders – the organisation as a whole – to perform as a Walrasian auctioneer as explained in chapter 5.1.3 earlier.

Additionally, traders take up other functions such as providing an opportunity of input supply on credit base with which producers can carry out farming activities as planned without having to pay in times when they have least cash monies. The sum is deducted with the

[53] Also described as leap-frogging

harvested produce or in other forms; harvested produce's price is lowered by the traders to take their loans back. Another option is to siphon off some agreed amount of the total amount of bags yielded. As explored above in chapter five, the terms "betrayal" or "exploitation" that is used by many of the value chains' actors with regard to traders' behaviour towards farmers is not applicable. Accordingly, governmental and other organisations should cease assaults on traders and instead, encourage and support in traders to carry out regular business activities.

The depicted traders as value chain actors have more than there is to be found with normal traders but they perform as organisers of transport, sorting and responsible for appropriate sale to demand locations; compensating for a variety of lacking value chains sections, e.g. post-harvest steps. There is need for awareness raising and acknowledgement by governmental organisations. Financial institutions such as rural banks in addition to registration of groups will improve the groups' members self esteem as their recognition. Such steps should not be in contrary to traditional structures, and e.g. registration. It is known to GPRTU, the Ghanaian Private Road and Transport Union that market women travel with trucks or send trucks to transport goods, and agreements between both parties allows market women to pass controls with less time loss. It is due to longstanding relations and agreements that these transports are handled without greater efforts.

Last but not least, position of traders could mean a powerful multiplicators position to enhance value chain development or to strengthen household situation regarding e.g. family nutrition situation, childrens' health and nutrition. Evidence shows that women are responsible for household work e.g. children and care taking of all family members, it is decisive what access these women have to resource food and goods for their families. Traders in their roles as mothers, agricultural producers, food stall owners, and income earners are more likely to be food provider for their family. Depending on socio cultural circumstances their role as food providers is at higher risk as their male family members as women are not entitled to own things such as land or equipment, bicycle etc.. Enabling women to access production items results are likely to have positive effects on families' nutrition situation. Strengthening traders' roles is therefore, probate to achieving targets that address improved child nutrition and nutrition security, which is also of national interest. Moreover, the present SDG pinpoint such issues and thus, improvement of nutrition and food security should be prioritised target at national level, including all governmental bodies and institutions.

6.2 Recommendations for Strategies and Policies

As described earlier in the analytical chapter, part 5.2 highlighted various options for integration of traders. These shall now be translated into specific options for strategies. These are to be understood as comprehensive strategies for policies from the national level and specifically for Northern regions of Ghana. It needs to be differentiated for governmental bodies to address Northern issues with tailor-made strategies and save resources to attend to

these effectively. The strategies explained in the forthcoming section are not addressing traders as individuals or as a group to change but rather, most and foremost, governmental bodies to change patterns and design different ways to acknowledge traders' organisations work. And to subsequently, persuade all other value chain participants.

According to the above-depicted options from each value chain, a specific strategy will be depicted.
It overwhelmingly seems important to stress the women traders' participation in such processes; which might be self-explanatory but implementation could require a lot more attention and many resources. As described earlier, market women would not speak in public and would also not declare themselves as traders in an open place or in public. Challenging is that market women would only speak freely if they are amongst their members, meeting with one person they would trust. Therefore, participatory approaches might face challenging circumstances and require specific constellations for framework to initiate dialogue in meetings, trainings, or workshops. The recommendation is to rather refrain from interventions that expose traders in their role to publicity.

The first case, chilli as described in chapter 4.1 has first of all, a positive market environment due to an increased and steady demand. The upgrading should take place through an improved packaging stage to enhance further value chain development strategies. With a hygienic standard procedure that would be carried out by traders responsible of that product stage, a higher quality of produce is feasible. The main issue would be the respect towards traders and such a new standard procedure; acknowledgement by other value chain actors that is demonstrated towards traders in this value chain is crucial. The relevant chilli market queen is relatively newly established – compared to the tomato market queen that exists since at least the 1960s – and therefore, her task and the environment as well.

Additionally, the increasing number of male producers needs to get acquainted with market queen and market women of chilli. On the other hand, with consumers perceiving an improved product – processed chilli, e.g. powdered chilli – could be more likely to appreciate traders' role in enhancing a traditional product. Last but not least, chilli traders are keen on improving their business through taking up small loans for purchasing larger quantities. Such loan opportunities were discussed with a rural bank and with acknowledgment of traders' business activities by a former minister, bank staff was glad to agree on further talks to determine a credit scheme for trader groups.

Chilli recommendations:

- Enabling traders to access to equipment specifically only for traders (lending or leasing vehicles/ devices)
- improved hygienic conditions through introduction of a standard and new procedures

- access to micro-loans for very short periods
- registration of group and acknowledgement of accomplished market support

With regard to tomato traders, it is required to address tomato market policy first and to reduce imports that are brought at a low price to Ghana's market. Other interventions to improve tomato value chains whether North or South cannot bring much success if policies are not amended first. Quality issues which are highly correlated to handling procedures; the quality of produce is as explored above, partly the damage caused by transport and partly due to fungal diseases spreading to rest of tomatoes surrounding. Choosing a set of suitable varieties that are less vulnerable e.g. tomatoes that have a tougher skin.

The large group can function as a multiplier and for her business environment, outside the value chain actors she is a person that is respected; a well-known semi-public figure. The tomato market queen would as well be interested in applying for credit; albeit she managed for years already without access to finance. The tomato traders have been bearing with the financial situation for decades and it seems they will wait to assure of the rural bank's genuine intentions on providing short-term loans. It is thus, important to confirm the feasibility of short-term loans for traders with rural banks.

T**omato recommendations**:

- Enable traders to access to transport vehicles only for traders (lending/ leasing scheme)
- financial support in medium loan range, depending on deals volume; short period of time
- re-selection of varieties and supply of adequate seeds
- amend national policies that allow tomato produce imports to supplant domestic produce

A strategy for traders involved in the third case; maize could be in diverse aspects ergo, in stages of value chain phases. The strategy for maize value chain thus, would be linked to financial aspects due to capital intensity of the crop. The strategic element has to define a loan scheme that allows maize traders to purchase grains from producers and also to allocate resources and allow a specific infrastructure e.g. for solely drying grains. A successful strategy should also include traditional mud silo constructions and utilisation know-how, enabling sustainable, appropriate and cost effective storage of maize and understanding of healthy and safe food simultaneously.

It would be traders' responsibility to dry and measure dried maize for humidity level with correct instruments, like to equip traders' organisation with more capacities and earn respect and acceptance. It should be made clear that traders' hierarchical position is not altered too vigorously; to avoid any resistance from their male colleagues' side. Those would still be employed in all processes that are related to dealing with large weight and or big bags (up to 60 kg each) as well as other activities that are traditionally occupied by men.

It is advisable for a successful strategy to include both men and female actors in capacity building trainings and or workshops; only some specific aspects are discussed and decided solely amongst women and other amongst men. One of such aspects is an option of tailor-made loan scheme for maize traders.

Maize recommendations:

- Make financial institutions to grant tailor-made loans for traders
- provide equipment and devices for female producers (e.g. on-time access; and light or small knapsack sprayer)
- specific transport vehicles available for traders/ female aggregators (drying techniques)
- improved infrastructure of maize value chain

It should be kept in mind that too much attention might not be what traders' organisations helps; and not what is appreciated by traders. Despite traditional roles' understanding it has to be clear that intervention programmes should not pinpoint at traders or their organisation but rather at their "invisible hands", their work. Supporting dialogues of ministries with e.g. financial institutions' partner such as rural bank's officer to create better access for trader groups and to find tailor-made solutions for providing micro credits to traders although the groups are not officially registered, bring no required collateral, and are illiterate. It should be raised awareness that these traders are autodidacts and own vast idiosyncratic knowledge.

Especially maize traders were interested in such credit schemes due to the comparatively high capital required for their business actions, followed by the chilli traders, and similar to tomato traders.

6.3 Value Chain Upgrading through Integration of Traders

Upgrading as explained earlier in chapter 2.2.3 would mean improved quality of produce or procedures e.g. reduced transaction cost or better marketing or handling processes that result in improved quality. The options of value chain upgrading are manifold and depend strongly

on each specific value chain and its context. An envisaged value chain upgrading for the three value chains analysed in this study have there to be mentioned as examples in subchapter 5.2 with options for integration of traders in each value chain respectively.

The examples describe upgrading in each of the respective cases with focus on feasibility and appropriate steps that assure traders' participation and approval as advised per strategic constellation in subchapter 6.2 onwards.

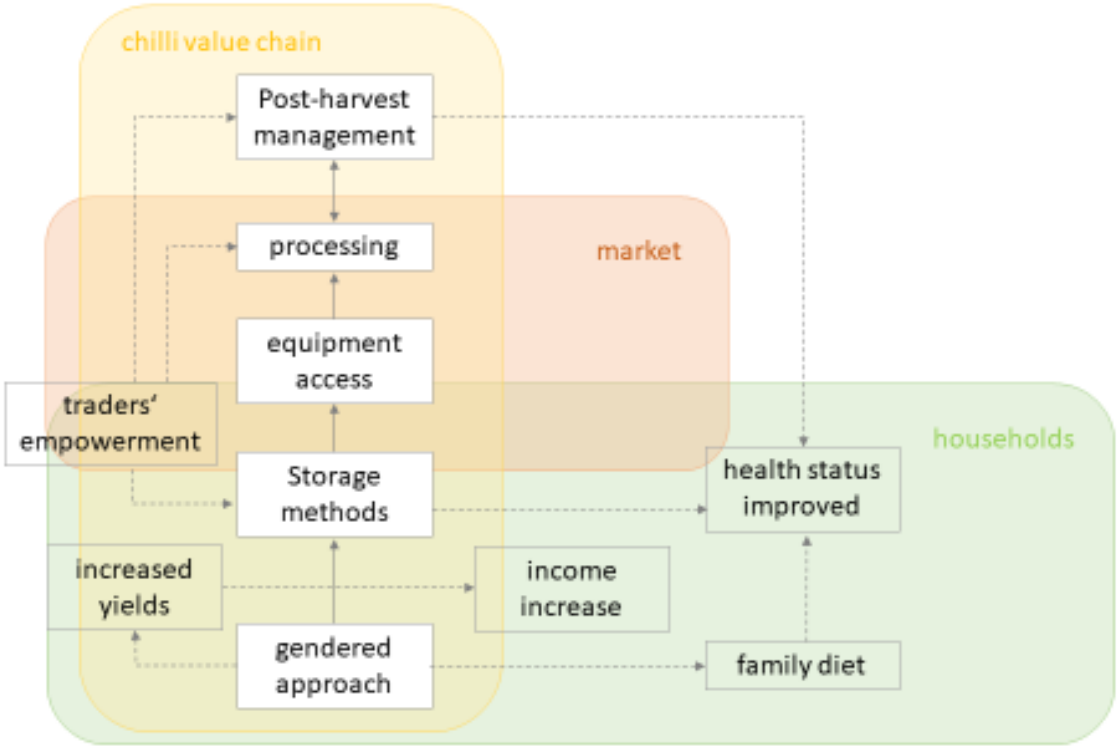
The first step would be a concerted intervention step to partner governmental organisations and institutions for understanding traders' accomplishments. Such interventions commence with talks, which would be with Ministry of Trade and Industries, with Ministry of Food and Agriculture, with their sub-bodies e.g. Department of Cooperatives Officers. It is crucial and not to underestimate a thorough preparation and time-consuming discussions, but it would be naïve to believe that organisation's heads will overthrow with decade-old suppositions and easily take up new ideas. To enable changes in old programmes and portfolios, it would also be advisable to pinpoint at traders' decades of business experience and that so far, markets did not fail. Instead, it is to be made understood that it is indeed desirable to keep such typical price levels and normal patterns throughout seasons. Additionally, traders are involved in many specific value chain stages and would make use of their vast network.

The first value chain to start with shall be the Northern chilli case. The above-mentioned concerted intervention would have to be addressed to one major partner institution or ministry that is then followed by other ministries and institutions. In this case, the value chain requires some marginal financial support that may alleviate shortcomings in the purchase of harvested produce from farms. Also storing facilities need improvement in order to maintain certain quality levels. The diverse equipment or material for constructing appropriate storages should be made available locally with local materials. Here, MoFA can perfectly assist in assisting with sourcing correct construction material. In combination with adjusted and improved processing measures, output of volumes increase and quality aspects automatically, too.
A specific aspect for the chilli value chain is the group's registration. This cannot be applied or imposed from neither governmental organisations nor other outside organisations. It has to be anticipated by individuals to assist the group and to accompany if requested. Assistance should be offered in confidential manner.

Another critical aspect is the access to vehicles and equipment, for transportation on the one hand and processing and handling on the other. An interesting Public-Private Partnership has launched a start-up that leases out a variety of equipment, e.g. drying oven and vehicles, e.g. small tractor, motoking to micro enterprises and small businesses. The chilli traders would profit from such initiations to accelerate turnover and increase their traded volumes.

The effects resulting from an upgraded chilli value chain reach the rural households' diet and thus, their health status. Through improved processing and increased volumes of traded produce, incomes increase and allow higher food as well as non-food expenditures. Since women tend to spend more of their income on food and caretaking products, and men tend to spend more on private items, a gendered approach for value chain upgrading needs to address both roles in households. On the other hand, ensuring that such a gendered approach allows women to take care of their planted crops will result in higher yields, and thus, again in higher income for family expenditures (IAASTD 2008).

Figure 6.1.: Upgraded chilli value chain and implications



Source: Own elaboration

The case of tomato value chain is more complicated due to import arrangements and other policies such as e.g. EPA affecting domestic tomato production. On the one hand, quality issues may be addressed but only with policies amended in favour of domestic tomato production, an upgrade of tomato value chain would make sense. This said, it seems obvious why no intervention takes place concerning tomato value chain promotion. Above all such recommendations stand the actors' participation and ownership. Although it would be favourable for Ghanaian rural economic development to improve its governmental support; at least such policies like EPA consequences' reduction should be targeted. To allow policies favouring domestic tomato production is essential to enable sustainable economic growth.

Nevertheless, the Northern tomato value chain actors are keen on improving the different stages of their chain. Quality improvement is one; financial opportunities may be another;

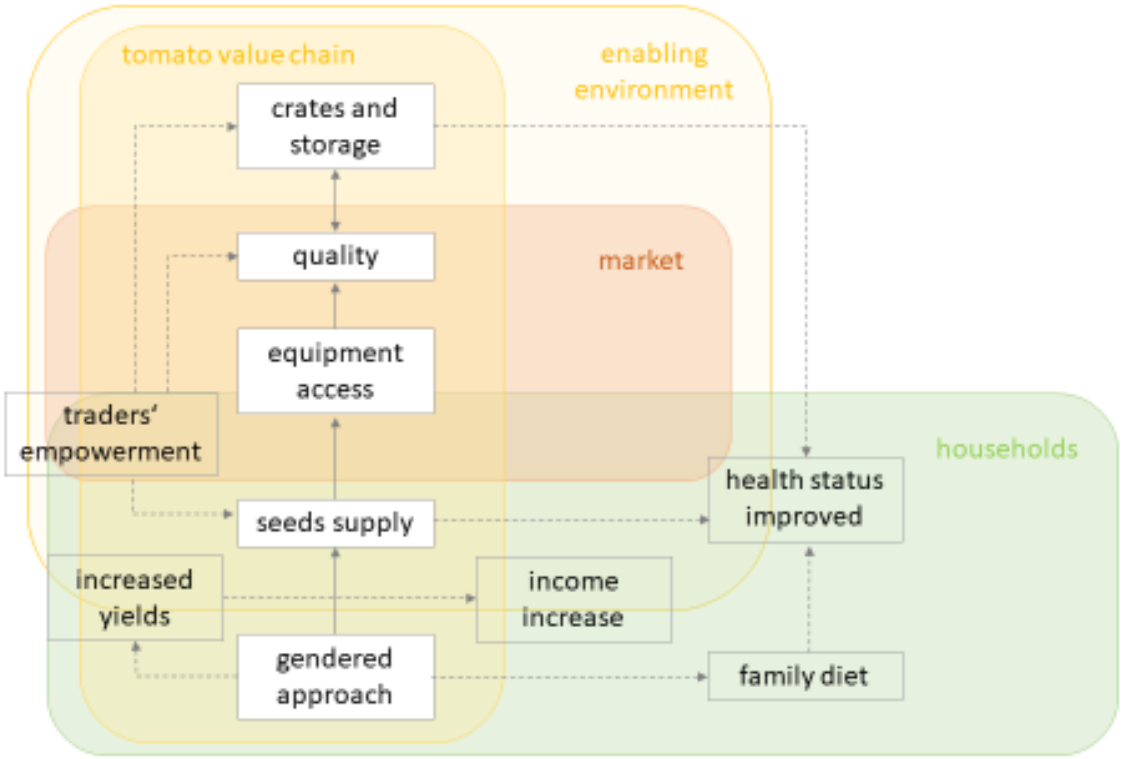
varieties and supply of adequate seeds for those is another major imperative. Provision of seeds sources of adequate varieties that show characteristics of tougher skin and longer shelf-life (like the formerly used varieties) and to gain access to such sources. Or possibly, governmental institutions that produce affordable seeds in a seed bank as applied for other crops. Referring to the lack of equipment for processing and other issues like transport, the above-mentioned organisation lending and leasing out devices could be an enabling success accelerator.

Such intervention – given that policies would be amended in favour of tomato value chain actors – would allow small enterprises as market women to process specific produce and achieve more quality produce and thus, realise a larger turnover.

For best results, it is recommendable to find solutions for tomato traders to accessing medium loans for micro-terms. The traders have a high reputation with high repayment rate at 95% that is what bankers will applaud for even in global comparison. Therefore, talks with rural banks were of affirmative nature and plans were discussed of such lending schemes tailor-made for traders. It is to be seen whether these were actually realized throughout finalizing the study.

When such activities are in place, it is possible to achieve an upgrade of the tomato value chain with: appropriate post-harvest handling, different containers, and different varieties. Increase of volumes and improved quality only *if* policies are amended in favour of the value chain and related value chain actors.

Figure 6.2.: Upgraded tomato value chain with implications



Source: Own elaboration

When traders are integrated and activities are in place, such upgrading could be feasible: Volumes increase and quality is improved, processing is improving and sales increase for domestic market – export is still existing – but domestic is more important for daily nutrition. It might be that male producers' numbers decrease but the productivity of female producers is high and with some more producers total figures will increase more.

The recommendations for maize value chain target the same institutions and governmental bodies to assist foremost maize traders gathering produce for aggregators. Financial support to traders, post-harvest management and transport are critical aspects of maize value chain requirements for improvement. The situation in Ghana's North requires that traders that build the link between farmers or producers to markets receive optimised financial support.

In specific, these measures would address Ministry of Trade or Ministry of Commerce to allocate resources for improved maize purchase. Rural banks would be enabled to provide short-term loans to traders to purchase from producers. In combination with access to vehicles and transport facilities, traders could supply more produce to markets than what is supplied so far. The combination of financial assistance and transport improvement would lead to larger volumes traded and sold to e.g. NAFCO buffer stock. Additionally, storage facilities are being addressed through a post-harvest management intervention already whilst this study's compilation. Nevertheless, improved and locally adapted storage facilities (e.g.

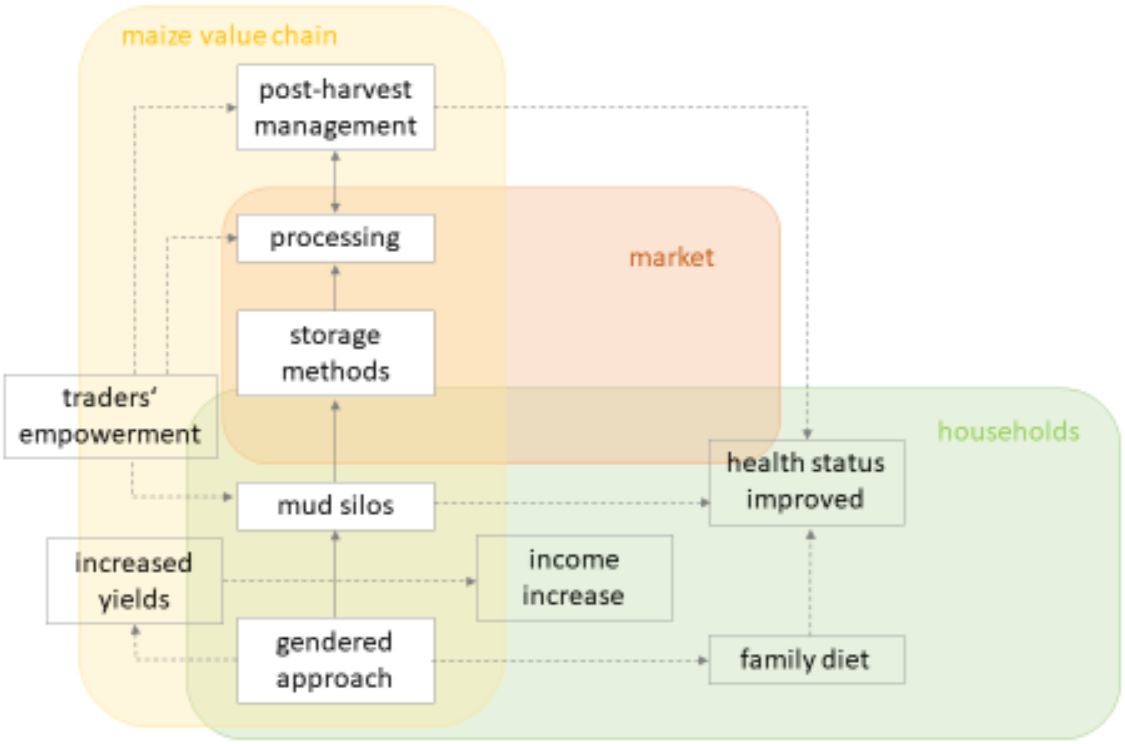
mud silos) are an important part that can a) bridge shortages or keep grains for household consumption at farm level and also b) store grains in a clean and most of all dry place until sale.

In brief, maize value chain requires tailor-made financial products for traders, in short term and medium volume (referring to 100 bags of maize). In combination with transport facilities that are accessible for female value chain actors only (since men have their own motorbike e.g.). Promoting the construction and the know-how of building traditional mud-silos is crucial for hygienic storage of grains, an aspect that also creates jobs in the rural and semi-urban sector.

How to accomplish value chain upgrading: in a case of a women-only equipment and vehicles lending scheme is successfully in place and medium loans for very short terms are available to traders, storage facilities and hygienic aspects can be improved. An add-on would be to make micro-loans available to maize processors (*banku*, *kenkey*) and allow strengthening of women in agro-food chains of *processing* stages of the maize value chain. Building local mud-silos that may carry up to 1 tonne (FAO[54]) and supplying devices to confirm on correct humidity level are crucial elements for successfully upgrading the maize value chain. There could be several positive effects, which would derive from including market women into value chains and thus, upgrading value chains such as e.g. the maize chain.

[54]FAO online document www.fao.org/docrep/t1838e/t1838e12.htm (retrieved 03.01.2016)

Figure 6.3.: Upgraded maize value chain with impacts and implications



Source: Own elaboration

The positive effects of upgrading an important crop's value chain may be underestimated; let alone improved access to a slightly higher income for traders and thus, their caretaking expenditures could be in favour of family's nutrition situation. Higher yields would result from traders being able to allocate resources and equipment for their plot with maize, which they later will sell through trade business.

7 Summary and Outlook

7.1 Summary

Traders in Ghana's North are organised in seemingly loose groups or networks but their actions and measures within value chains is that of systematic, long-standing and well organised operations: Hence, the work of market institutions. The apparently loose formation of Northern traders is characterised by a strong cultural persistence over time. The vast variety of organisations, institutions and governmental organisations in the Northern part of Ghana is not addressing women traders' issues since official sources identified traders as contradicting to policies implemented due to an IMF development loan and the perception of betrayal and belief of price manipulation by traders is still present. The World Bank's measures and conditions for development credit such as the Structural Adjustment Programme in the 1980 years lead to a drastic and far-reaching change in market environment and business climate as to using traders as scapegoats for price fluctuations. By violently

chasing traders off markets, different structures emerged and lead to an 'incognito' trader organisation.

Until date, traders of Ghana's North avoid public appearance and in daily business, each dresses as normal or rather poor rural women. Instead, market women act according to their market queen's rules and orders and thus, act as one institution, or as market broker, and indeed comparable to a Walrasian auctioneer. The difference is the fact traders are a vast group of individuals.

Statements and comments by diverse value chain actors that traders are exploiting farmers, betraying buyers and suppliers, or manipulating prices could all not be verified. The opposite seems to take place be it by will or by mistake, that traders are asked to restrict amounts of supplied produce at markets in times of glut production and a threat of price deterioration. Lack of timely availability of technical equipment and transport facilities are hampering market supply in times of high yields. Nevertheless, supply and demand are met, as traders arrange provision from various areas to market places. Betrayal of customers or suppliers could also not be verified; instead, traders seek risk reduction and favour trustful relationships. And concerning farmers, traders provide inputs on credit basis, which is subtracted at time of harvest. The other way round, betrayal by farmers may take place and is tolerated once or twice with a warning and if necessary, followed by sanctions until after final warning, business relations are ceased.

Each of the trader groups is in similar ways strictly organised; has a strict inner decisions organisation and hence, a market queen (*majeera* or *ohemma*) as a leader for business, code of conduct and moral related rules. Such a market queen takes up her duties concerning dispute settling, sanctions or punishment of defaulters, negotiations with private sector partners, governmental representatives or traditional authorities. Such a market queens' routine function is to gather all relevant information and to estimate quantities of supplied produce coming to the market and quantities requested for purchase and to hence, settle the price for purchasing produce and for selling accordingly. Above all, market queens are responsible for business relations with market queens of other regions, or even deals with suppliers from abroad.

For most women in rural areas where high illiteracy rate prevails, who have minimal or no formal education, trade is providing a suitable vocation and income generating opportunity. Additionally, being part of the traders' network offers some social and or financial benefits. Due to a strong network with higher (or lower) cohesion, women can rely on support of others in case they should be not able to carry out trading activities. As in most Ghanaian tribes' cultural and social context, care-taking of other family members is an important responsibility for women. In cases of children falling sick, elder family members needing assistance, funerals or other important dates, other traders will stand in for their co-workers. A flexibility of combining work and such social responsibilities is critical for traders; so are

women who breastfeed a baby whilst being at the sale's stall a largely common sight. Normally, traders take also part in *Susu*, a traditionally rotating saving scheme, which allows each member to once ripe what has been saved collectively. Susu is one of the few options for female traders to access liquidity. At least in a limited form, this occasion allows them to purchase larger amounts and pay easier. A common risk although, with Susu remains default by individual members. Nevertheless, the shared benefit is larger than the risk; collective action and control is key.

The study detected that such trader networks operate like auctioneers for agri-food markets, according to market queen's rules and through her orders. It was found that trader groups seem to occupy such institutional voids, as there is no other organisation or individual carrying out trade in such dimension. The traders purchase produce and transport it – with the mentioned constraints and issues to handle – to nearby markets or to a larger market, depending on orders. Amount of purchased produce also depends on transport means in some cases; as it is with maize. Due to heavier weight, traders sometimes do not possess the required heavy transport vehicle, neither can they access nor can they borrow it in a short time. These can be reasons for traders not complementing purchases of agri-food produce. In some cases, a market queen can be reducing or retarding purchases intentionally in times of glut production for decelerating price decline.

Among the relevant outcomes is that in all of the three cases researched value chains, traders require access to financial assistance – as it is relatively normal for male value chain actors in the same areas. To allow the traders' activities gain higher effectiveness, their daily business routine of buying and selling to run more smoothly and with fewer challenges, in many cases financial assistance could realise enormous positive effects. The traders normally need some little liquidity, cash monies to pay farmers when purchasing produce at their farms. Sometimes orders are requested; purchases of larger quantities than usual but traders are often not able to comply. Hence, financial support in short-terms in a medium range would be ideal though not what rural banks typically provide. The amounts are less high than typical loans that male value chain actors would receive (farmers, aggregators) in the agricultural sector. Additionally, these loans are generally required for solely 24 to 48 hours. That is to pay the farmer(s) and receiving money from the buyer. These issues are hampering most of market women's deals; and lack of cash monies for short time is their major bottleneck for improved trading practices. It is to be seen whether talks that were commenced at beginning of this study will show results and traders receiving short-term medium-credit loans.

Therefore, it is recommendable that development interventions should hence, rather incorporate market women's institutional formation to make good use of value chain development interventions and profit from traders' enormous network to *multiply* effects. These can ideally be in correlation with nutritional aspects that are more important than ever since current SDG focus on nutritional issues. Addressing these traders would mean

sustainably consolidating value chain development and strengthening an important interface in rural areas: agro-food value chains and their processing, trade and micro enterprises. This interface connects to the majority of relevant actors: young female traders and or micro business entities. The integration of traders and their network is nonetheless to be done through policies amendments and providing access to rural banks as well as access to other sectors related to trading activities. It should be kept in mind though, that directly addressing traders or bringing their operations to public attention by force, will not lead to envisaged effects.

The second aspect that stands out in all three cases is lack of equipment, which is suitable for female value chain actors (processing devices, small agricultural machinery) and lack of transport means (motoking, tricycle, motorbike) which would allow traders to reach farms quick enough and to carry away packed produce. The difficulty is with the first, that most machinery is heavy and too large to be carried by women and thus, specifically designed equipment would create large positive effects. Devices as such are e.g. small knapsack-sprayers, ploughs and as for vehicles small motorbikes would be useful. A single private sector actor provided such equipment on leasing and lending basis. With increased mobility and improved capacities to buy and transport immediately or timely, traders could improve trading and increased market provisioning, eventually.

For each value chain, options were depicted for better integrating traders and their institutional network and simultaneously upgrading value chains. The options for chilli first, are mainly the two aspects mentioned above; but use of export market linkages could increase demand and later; could push further production. The options for various chilli varieties is still marginal but has potential to grow larger since chilli is a popular ingredient in various typical local dishes. Options for tomato value chain actors including the traders are still comparably lesser, as long as national domestic policies allow cheap tomato products to Ghana's markets. It is recommendable to attenuate impacts of cheap tomato imports for the sake of all related value chain actors, not only traders. Although traders may still be purchasing produce from abroad in some cases and as long as it is paid for. The options for the last and third case, maize traders' is strongly depending on the two mentioned bottlenecks illustrated above (national policy and financial support to traders). But in this case, different from the other, gendered approach in combination with improved storage and handling procedures of maize/grains would possibly effectuate large positive results in yield figures and most of all, quality of nutrition and post-harvest losses reduced.

Upgrading of value chains, the last section in this concluding chapter is after this study research probably easier to achieve if traders' network is integrated. The relevance of such upgrading of value chains is explicitly desirable not only but moreover since the formulation of present SDG, e.g. SDG 2 and SDG 5. There is also a requirement of research to better operationalise and quantify effects; to carry out research as to quantify the economic contribution to trade is achieved by traders in various value chains. Last but not least,

research and policies for trade beyond borders will require more attention and policies to focus on improvement and simplified measures to enable better cross-border trade.

7.2 Outlook

The initial questions what role market women are performing, what would contribute their integration; or if trader organisations would impede market transactions, cannot be answered without doubt. As traders are part of and relevant actors of trade, their role cannot be analysed apart from the complete system. It may seem an alternative option ignoring or circumventing traders, but it is barely a reasonable option neither for governmental bodies nor development cooperation agencies. Such relevant actors of trade may be avoided, but cannot be stopped, as market mechanisms also cannot be stopped. Additionally, trader networks and their queens replace other market organisation bodies in a relatively efficient way – measured within a comparably inefficient system. As there is no alternative in place and little legal framework support, traders are bridging a gap effectively. Hence, strengthening domestic markets and with it interrelated; strengthening its trader networks or institutions is an imperative.

In case trader networks and market queens are better respected to carry out their trading operations, and allowed to access small credit schemes, with possibly additional support through access to appropriate equipment (e.g. machine-lending organisation), some real positive upgrading effect could possibly be evoked. One positive side-effect would be with the improved income situation for traders' households, their colleagues and families. Keeping in mind that it is officially the male household members' responsibility to provide for the family's needs, but unofficially the female in the household who contribute their income; and the fact that women spend 80 percent of their cash for their family. Thus, the effect of an improved economic situation of women will be for the whole household, and in particular for caretaking and family nutrition situation, that are a SDG priority.

Continuing with such an improved economic situation of traders, it should be measurable that producers - e.g. requiring inputs on credit basis from the traders – would also benefit from a most probably easier access to input sources provided by traders. Easier access to required inputs might eventually lead to the effect, in the long run, to leave producers also with real surplus cash income. Provided, they use the input timely, and in the way it is supposed to; it may lead to an increase of their total production. Provided, they would also follow their traders' recommendations regarding the handling aspects, sorting and grading. Such criteria would alleviate traders' operational burden and let post-harvest issues improve.

Concerning the maize traders, an improved post-harvest management is crucial particularly in the stage from the field to the typical storage facility; as pollution could be minimised and e.g. contamination with fungal mould (creating aflatoxin) could be avoided. An awareness creation plays a significant role for aflatoxin-issue with maize, but also enforcement agents who are familiar with the produce and its handling are critical if not indispensable in sustainable value chain development. The same applies to the chilli and tomato value chains.

Traders operate at an important stage of value chains and instead of chasing these agents away; much could be achieved through acceptance of traders and their functions.

The alternative outlook is if nothing is done to support traders in carrying out functions in agro-food value chains, which post-harvest issues prevail and increase, with more or less large amounts of harvest losses. The alternative is that traders would not be able to access micro credits to purchase from remote areas or even beyond borders, or to provide adequate input sources to their farmers. Not to mention, also the traders' household situation would not improve, or at least stagnate, and the market women would not be able to accumulate more income to save some for their children's school fees, e.g. medicine, books and clothing. It is a question though that policymakers do not ask as topics such as support for traders may not have any direct economic growth effect, neither is it popular to address the economic situation as inefficient or poorly justified to reach the proclaimed objectives. Nevertheless, support to trade and informal sector withholds a large potential to economic growth in the long run.

8 References

Adler & Adler (1994). Observational Techniques. In Denzin, N. K. and Lincoln, Y. S. (eds.) Handbook of Qualitative Research. Sage Publications, 1994.

Addo, E. and Marshall, R. (2000). Ghana's non-traditional export sector: expectations, achievements and policy issues. Geoforum 31, pp. 355-370.

Addo, B., Korboe, D., Williams, J. and Mensah, O. (2010). Implications of IMF Loans and Conditionalities on the Poor and Vulnerable in Ghana. Report by ActionAid Ghana, P.O. Box AN 19083 Accra, 2010.

Alderman, H., Shively, G. (1996). Economic Reform and Food Prices: Evidence from Markets in Ghana. World Development, Vol 24, No. 3, pp.521-534. Pergamon Press.

Apusigah, A. (2002). Sacrificing Social Justice for Economic Growth: A Problem of World Bank/ IMF Reforms in Ghana. Studies in National and International Development, 2002.

Aryeetey. E. and Kanbur, R. (2005). Ghana's Economy at Half Century: An Overview of Stability, Growth and Poverty. Paper presented at the "Ghana at the Half Century" conference by the Institute of Statistical, Social and Economic Research, University of Ghana and Cornell University, 2005.

Asiedu-Saforo, K. (1989). Economic reform programme and agricultural development. Macro policy sequencing in Ghana, 1983-1988. Food Policy, Elsevier 1989.

Awo, M. (2010). Marketing and market queens: a case of tomato farmers in the Upper East Region of Ghana. Dissertation, Friedrich-Wilhelm University Bonn.

Axelrod, R., Hamilton, W. (1981). The Evolution of Cooperation. Science, New Series, Vol. 211, No. 4489 (Mar 27, 1981), 1390-1396.

Baba, I., Yirzgala, J., and Mawunya, M. (2013). The Tomato Industry in Ghana – Fundamental Challenges, Surmounting Strategies and Perspectives. A Review. International Journal of Current Research, Vol 5., Issue 12, pp. 4102 – 4107.

Bair, Jennifer (Ed.) (2009): Frontiers of Commodity Chain Research. Stanford University Press 2009.

Bamler, J.-N. (2011). Market Structures and Sustainable Livelihoods. Interactions, Implications and Opportunities for Tomato Farmers at the Tono Irrigations Scheme (Navrongo, Ghana). Diplomarbeit, Christian Albrechts-Univeristät zu Kiel.

Barrientos, S., Dolan, C., Tallontire, A. (2003) A Gendered Value Chain Approach to Codes of Conduct in African Horticulture. Elsevier, World Development Vol. 31, No. 9, pp 1511 – 1526, 2003.

Barrientos, S. (2013). Gender production networks: Sustaining cocoa-chocolate sourcing in Ghana and India. BWPI Working Paper 186, University of Manchester, 2013.

Becker, C. D. and Ostrom, E. (1995). Human Ecology and Resource Sustainability: the Importance of Institutional Diversity. Annual Review of Ecology and Systematics, Vol. 26 (1995) 113-133.

Bessant, J. (1991). Managing Advanced Manufacturing Technology. London, Basil Blackwell.

Bokelmann, W., Riedel, B. and Canavari, M. (2009). Combining cluster and value chain approaches to analyse the competitiveness of fresh vegetable producers: case studies in Germany, Italy and Spain. Paper presented at 113th EAAE Seminar, 2009.

Bonus, H. (1986). The Cooperative Association as a Business Enterprise: A Study in the Economics of Transactions. Journal of Institutional and Theoretical Economics 142 (1986), pp. 310-339. Tübingen.

Bourdieu, P. (1985). The Social Space and the Genesis of Groups. Theory and Society, Vol. 14, No. 6, (1985), 723-744.

Britwum, A. and P. Martens (2008). The Challenge of Globalization, Labor Market Restructuring and Union Democracy in Ghana. African Studies Quarterly, Volume 10, issues 2 & 3, 2008.

Britwum, A. (2010). Union Democracy and the Challenge of Globalisation to Organised Labour in Ghana. Dissertation. Maastricht University 2010.

Britwum, A., K. Douglas and S. Ledwith (2012). Women, Gender and Power in Trade Unions. In: Labour in the global South: Challenges and alternatives for workers. Edited by Mosoetsa and Williams; International Labour Office Geneva. ILO, 2012.

Britwum, A. (2013). Market Queens and the Blame Game in Ghanaian Tomato Marketing. In: Food Crisis. Implications for Labor. Edited by C. Scherrer and D. Saha. ICDD publications Labor and Globalization, Vol. 2. Rainer Hampp Verlag, München 2013.

Chang, H.-J. (2005). Understanding the Relationship between Institutions and Economic Development – Some Key Theoretical Issues. Paper to be presented at the WIDER Jubilee conference, June 2005, WIDER, Helsinki.

Clark, G. (2010). African Market Women. Seven Life Stories from Ghana. Indiana University Press, 2010.

Clottey, V.A., Karbo, N., Gyasi, K.O. (2009). The Tomato Industry in Northern Ghana: Production Constraints and Strategies to Improve Competitiveness. African Journal of Food Agriculture Nutrition and Development, Vol. 9, No. 6, pp.1436-1451.

Coleman, J. S. (1988). Social Capital in the Creation of Human Capital. In The American Journal of Sociology, Vol. 94, Supplement: Organisations and Institutions: Sociological and Economic Approaches to the Analysis of Social Structure. (1988), pp. S95-S120.

Coleman, James S. (1990). Foundations of Social Theory. The Belknap Press of Harvard University Press. Cambridge, Massachusetts, and London, England.

Danaher, K. (1994). 50 years is enough: the case against the World Bank and the International Monetary Fund. South End Press, Boston, MA.

Da Silva, C. and de Souza Filho, H. (2007). Guidelines for rapid appraisals of agrifood chain performance in developing countries. FAO, Rome 2007.

Davidson, B. (1978). A History of West Africa 1000-1800. Longman 1978.

Dorward, A., Poole, N., Morrison, J., Kydd, J. and Urey, I. (2003). Markets, Institutions and Technology: Missing Links in Livelihood Analysis. Development Policy Review, 2003, 21 (3), pp. 319-332.

Doss, C. (2002). Men's Crops? Women's Crops? The Gender Patterns of Cropping in Ghana. World Development, Vol. 30, No. 11, pp. 1987-2000. Pergamon Press.

Eaton, D., Meijerink, G., and Bijman, J. (2008). Understanding institutional arrangements. Fresh Fruit and Vegetable value chains in East Africa. Markets, Chains and Sustainable Development Strategy & Policy paper, Wageningen University, Netherlands.

Ellis, S. and McGaffey, J. (1996). Research on Sub-Saharan Africa's Unrecorded International Trade: Some Methodological and Conceptual Problems. African Studies Review, Vol 39, No. 2: 19-41. African Studies Association.

Fafchamps, M. (2001). Networks, Communities and Markets in Sub-Saharan Africa: Implications for Firm Growth and Investment. Journal of African economies, CSAE.

Fafchamps, M. (2004). Market Institutions in Sub-Saharan Africa: Theory and Evidence. MIT Press; Cambridge, Massachusetts Institute of Technology.

FAOSTAT (2013). FAOSTAT database https://www.faostat.fao.org Various data retrieved from 2011 until 2013.

Farnworth, C. (2011). Gender-Aware Value Chain Development. Expert paper, UN Women, in cooperation with FAO, IFAD and WFP: Expert Group Meeting, Enabling rural women's economic empowerment: institutions, opportunities and participation. Ghana 2011.

Farnworth, C. (2012). Final Maize Gender Analysis. Internal report for GIZ, Tamale/ Accra, February 2012.

Frey, E. (2010). Benefits of Vetiver Grass. Unpublished Paper, Tamale, Ghana.

Gambetta, D. (2000). Can We Trust Trust? In Gambetta, Diego (ed.) Trust: Making and Breaking Cooperative Relations, electronic edition, Department of Sociology, University of Oxford, chapter 13, pp. 213-237.

Gereffi, G., Korzeniewicz, M. (1994). Commodity Chains and Global Capitalism. ABC CLIO 1994.

Gereffi, G., Humphrey, J., Kaplinsky, R. and Sturgeon, T.J. (2001). Introduction: Globalisation, Value Chains and Development. IDS Bulletin, Vol. 32, No. 3, 2001.

Gereffi, G., Humphrey, J., Sturgeon, T. (2005). The governance of global value chains. In: Review of International Political Economy 12:1 February 2005 pp. 78-104.

Ghana Statistical Service (2009). Ghana Demographic and Health Survey 2008. Ghana Statistical Service and Ghana Health Service, 2009.

Ghana Statistical Service (2012). Population and Housing Census 2010. Summary Report of Final Results. Accra, May 2012.

Gibbon, P. and Ponte, S. (2005). Trading down: Africa, value chains, and the global economy. Temple University Press, Philadelphia.

Granovetter, M. (1973). The Strength of Weak Ties. American Journal of Sociology, Vol. 78, Issue 6, pp. 1360-1380. JSTOR 2001.

Granovetter, M. (1985). Economic Action and Social Structure: The Problem of Embeddedness. American Journal of Sociology, Vol. 91, Issue 3, pp. 481-510. JSTOR 2003.

Granovetter, M. (1992). Economic Institutions as Social Constructions: A Framework for Analysis. Acta Sociologica, Vol. 35, No. 1 (1992), 3-11.

Granovetter, M. (1993). The Nature of Economic Relationships. In: Swedberg, R. (ed.) Explorations in Economic Sociology. New York, Sage, pp. 3-41.

Granovetter, M. (2005). Business Groups and Social Organization. In: Smelser & Swedberg (Eds.) (2005) The Handbook of Economic Sociology. Second Edition.

Grosse-Rueschkamp, A. (2011). Economic Analysis of the Maize Value Chain. With Emphasis on the Post-Harvest Part of the Value Chain. Study Report (Final Draft). GIZ MOAP Internal Paper. Hamburg and Accra 2011.

GTZ (2008). Value Links Manual. The Methodology of Value Chain Promotion. Reprint of First Revised Edition, Jan 2008.

Haller, T. (2007). Understanding Institutions and their Links to Resource Management from the Perspective of New Institutionalism. NCCR North-South Dialogue, No. 2. DSGZ Zürich.

Hamel, G. and C. K. Pralahad (1994).Competing for the Future. Cambridge Mass, Harvard Business School Press.

Hart, K. (1973). Informal Income Opportunities and Urban Employment in Ghana. The Journal of Modern African Studies, 11, 1 (1973) 61-89. Cambridge Univ6ersity Press.

Hasse, R. Krücken, G. (2005). Neo-Institutionalismus. Mit einem Vorwort von John Meyer. Zweite vollständig überarbeitete Auflage, transcript Verlag, 2005.

Helfferich, C. (2009). Die Qualität qualitativer Daten. Manual für die Durchführung qualitativer Interviews. 3., überarbeitete Auflage, VS Verlag für Sozialwissenschaften, GWV, Wiesbaden 2009.

House-Midamba, B., Ekechi, F. (1997). African Market Women and Economic Power: The Role of Women in African Economic Development. Journal of Political Ecology: Case Studies in History and Society, Vol. 4, 1997.

Ihle, R. and Amikuzuno, J. (2009). The Integration of Tomato Markets in Ghana with and without Direct Trade Flows. Contributed paper prepared at the International Association of Agricultural Economists Conference, Beijing, China, August 16-22, 2009.

International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) edited by McIntyre, B.D. et al. (2009). Agriculture at a Crossroads. Volume V Sub-Saharan Africa (SSA) report. Island Press, Library of Congress Cataloging-in-Publication data, USA.

Issah, M. (2007). Right to Food of Tomato and Poultry Farmers: Report of an Investigative Mission to Ghana. FIAN International, 2007.

Janesick, V. (1994). The Dance of Qualitative Research Design: Metaphor, Methodolatry, and Meaning. In: Denzin, N. K. and Lincoln, Y. S. (eds.) Handbook of Qualitative Research. Sage Publication, 1994.

Jiggins, J. (1989). How poor women earn income in sub-Saharan Africa and what works against them. World Development Vol. 17, Issue 7, 953-963 Elsevier.

Kapila, S., Lyon, F. (1994). People Oriented Research. Expedition Field Techniques. Royal Geographical Society with IBG, London 1994.

Kaplinsky, R. and Morris, M. (2001). A handbook for value chain research. International Development Research Centre, Vol. 113. IDRC, 2001.

Kiratu, S. and Roy, S. (2010). Beyond Barriers: The Gender Implications of Trade Liberalization in Southern Africa. International Institute for Sustainable Development IISD, 2010.

Ki-Zerbo, J. (1993). Die Geschichte Schwarzafrikas. Fischer, Frankfurt a. M. 1993.

Kreps, D. M. (1977). A note on “fulfilled expectations” equilibria. Journal of Economic Theory, Vol. 14, 32-43 (1977).

Kula, O., Downing, J., Field, M (2006). Value chain programmes to integrate competitiveness, economic growth and poverty reduction. Small Enterprise Development 17, no. 2, pp. 23-35.

Leipold, Helmut (2006). Kulturvergleichende Institutionenökonomik. Lucius & Lucius Verlagsgesellschaft, Stuttgart.

Lesser, C. and Moisé-Leeman, E. (2009). Informal Cross-Border Trade and Trade Facilitation Reform in Sub-Saharan Africa. OECD Trade Policy Working Papers, No. 86, OECD publishing, OECD.

Little, P. D. (1999). Selling To Eat : Petty Trade and Traders in Peri-Urban Areas of Sub-Saharan Africa. Institute for Development Anthropology, Binghampton, New York, October 1999.

Lyon, F. (2000). Trust, Networks and Norms: The Creation of Social Capital in Agricultural Economies in Ghana. Elsevier, World Development Vol. 28, No. 4 pp. 663-681 (2000).

Lyon, F. (2003). Trader Associations and Urban Food Systems in Ghana: Institutionalist Approaches to Understanding Urban Collective Action. International Journal of Urban and Regional Research, Vol. 27, 1 (2003) pp. 11-23.

Lyon, F. (2005). Managing Co-operation: Trust and Power in Ghanaian Associations. Organisation Studies 27 (1): p. 31-52, Sage Publications.

Manners, P. and Behar, A. (2007). Trade in Sub-Saharan Africa and Opportunities for Low Income Countries. Background Paper. World Development Report, Oxford University, 2007. {citation?}

Manfre, C., Caselli-Mechael, E. and Rubin, D. (2012). Policy Brief: Women in Cross-Border Agricultural Trade. USAID and EAT, No. 4, 2012.

Massing, A. (2000). The Wangara, an Old Soninke Diaspora in West Africa? (Les Wangara, une vieille diaspora Soninke d'Afrique de l'Ouest ?) Cahiers d'Études Africaines, Vol. 40, Cahier 158, pp. 281-308.

McKim, W. (1972). The Periodic Market System in North Eastern Ghana. Economic Geography Vol. 48, No. 3: 333-344.

Meagher, K. (2003). A Back Door to Globalisation? Structural Adjustment, Globalisation & Transborder Trade in West Africa. Review of African Political Economy, Vol. 30, No. 95: 57-75.

Meillassoux, C. (1971) (ed.). The Development of Indigenous Trade and Markets in West Africa. 1971. The development of indigenous trade and markets in West Africa.

MIDA (2012)a. Investment Opportunity Ghana Chilli Pepper. Millennium Development Authority. https://www.mcc.gov/documents/investmentopps/bom-ghana-english-chili.pdf (retrieved August 2012).

MIDA (2012)b. Investment Opportunity Ghana. Maize, Soya and Rice. Millennium Development Authority. https://www.mcc.gov/documents/investmentopps/bom-ghana-english-chili.pdf (retrieved August 2012).

Miller, S. (2012). Social Institutions. The Stanford Encyclopaedia of Philosophy (Fall 2012 Edition), Edward N. Zalta (ed.), http://plato.stanford.edu/archives/fall2012/entries/social-institutions/ (retrieved Jan 2013).

Misztal, B. (2001). Trust and cooperation: the democratic public sphere. Journal of Sociology 2001 37, pp. 371-386.

Mitchell, J., Coles, C. (2011). Markets and Rural Poverty: Upgrading in Value Chains. International Development Research Centre. New York and Canada 2011.

Napoleon, M. G. (2010). Value Chains Analysis of Asian Vegetables Produced in Honduras. Dissertation, LGF, Humboldt University in Berlin.

Ndiaye, T. (2008). Case Story on Gender Dimension of Aid for Trade. Women Informal Traders Transcending African Borders: Myths, Facts and Ways Forward. UNIFEM and International Trade Centre publication. http://www.intracen.org/uploadedFiles/intracenorg/Content/About_ITC/Where_are_we_working/Multi-country_programmes/Women_and_trade/Women%20Informal%20Traders%20Transcending%20African%20Borders.pdf (retrieved 3. March 2012)

Nee, V. (2005). The New Institutionalisms in Economics and Sociology. In: Smelser and Swedberg, The Handbook of Economic Sociology, Second Edition, 2005.

Newton, K. (2001). Trust, Social Capital, Civil Society, and Democracy. International Political Science Review, 2001 22; pp. 201-214.

Ninnin-Massenet, V. and Ribier, V. (1998). Saisonnalité des prix céréaliers en Afrique subsaharienne. Economie rurale. No. 248, 1998: 38-44.

North, D. C. (1990). Institutions, Institutional Change and Economic Performance (Political Economy of Institutions and Decisions).

North, D. C. (1992). Institutionen, institutioneller Wandel und Wirtschaftsleistungen, Tübingen.

North, D. C. (1995). The Adam Smith Address: Economic Theory in a Dynamic Economic World, in: Business Economics, Vol. 30, No. 1, pp.7 – 12.

Okali, C. (2011). Achieving Transformative Change for Rural Women's Empowerment. Expert paper, UN Women, in cooperation with FAO, IFAD and WFP: Expert Group

Meeting, Enabling rural women's economic empowerment: institutions, opportunities and participation. Ghana 2011.

Patton, M. Q. (1980). Qualitative evaluation methods. Sage publication, 1980.

Peppelenbos, L. (2005). Market Queens of Ghana: The potential for cooperation with smallholder farmers. Koninklijk Instituut voor de Tropen (KIT), Royal Tropical Institute. Project number 552509, commissioned by CORDAID and DGIS.

Meillassoux, C. (1971). Review of The Development of Indigenous Trade and Markets in West Africa by Claude Meillassoux, The Journal of Economic History, Vol. 32, No. 4: 1000-1002. Published by Cambridge University Press

Ponte, S. and Gibbon, P. (2005). Quality Standards, conventions and the governance of global value chains. Economy and Society, Vol. 34, No. 1 2005 pp. 1-31.

Porter, M. E. (1990). The Competitive Advantage of Nations. Harvard Business Review 68, no. 2, (1990): 73-93.

Porter, G., Lyon, F., Potts, D. (2007). Market institutions and urban food supply in West and Southern Africa: a review. Sage, Progress in Development Studies 7, 2 (2007) pp. 115-134.

Powell, W. W. and DiMaggio, P. (1991). The New Institutionalism in Organisational Analysis. University of Chicago Press, Chicago.

Premchander, S. and Müller, C. (eds.) (2006). Gender and Sustainable Development. Case Studies from NCCR North-South. Perspectives of the Swiss National Centre of Competence in Research (NCCR) North-South, University of Bern, Vol. 2, 2006.

Ram, M. (1994). Unravelling Social Networks in Ethnic Minority Firms. International Small Business Journal 1994, Vol. 12, 3; pp. 42-53.

Robinson, E. and Kolavalli, S. (2010a). The Case of Tomato in Ghana: Productivity. Ghana Strategy Support Program (GSSP) Working Paper No. 19. International Food Policy Research Institute, Washington, DC.

Robinson, E. and Kolavalli, S. (2010b). The Case of Tomato in Ghana: Marketing. Ghana Strategy Support Program (GSSP) Working Paper No. 20. International Food Policy Research Institute, Washington, DC.

Robinson, E. and Kolavalli, S. (2010c). The Case of Tomato in Ghana: Processing. Ghana Strategy Support Program (GSSP) Working Paper No. 21. International Food Policy Research Institute, Washington, DC.

Robinson, E. and Kolavalli, S. (2010d). The Case of Tomato in Ghana: Institutional Support. Ghana Strategy Support Program (GSSP) Working Paper No. 22. International Food Policy Research Institute, Washington, DC.

Ruben, R. Slingerland, M., Nijhoff, H. (2006). Agro-food Chains and Networks for Development. 1-25

Scott, J. (2000). Social Network Analysis. A Handbook. Second Edition. Sage Publications 2000.

Searle, J. R. (2005). What is an institution? Journal of Institutional Economics, 1: 1, 1-22 (2005).

Shively, G. E. (1996). Food Price Variability and Economic Reform: An ARCHApproach for Ghana. American Journal of Agricultural Economics, Vol. 78, No. 1 (1996), 126-136.

Smallbone, D. and Lyon, F. (2002). A Note on Trust, Networks, Social Capital and Entrepreneurial Behaviour. In: Entrepreneurial Strategies and Trust. Structure and Evolution of Entrepreneurial Behaviour Patterns in East and West European Environments – Concepts and Considerations. Forschungsstelle Osteuropa Bremen. Arbeitspapiere und Materialien, No. 37, 2002.

Smelser, N. J. and Swedberg, R. (Eds.) (2005). The handbook of economic sociology. Second Edition. Princeton University Press, 2005.

Springer-Heinze, A. (2007). ValueLinks Manual. The Methodology of Value Chain Promotion. Reprint of First Revised Edition, 2008, GTZ, Eschborn.

Stake, R. (1994). Case Studies. In Denzin, N. K. And Lincoln, Y. S. (eds.) Handbook of Qualitative Research. Sage Publication, 1994.

Stamm, A. (2004). Wertschöpfungsketten entwicklungspolitisch gestalten. Anforderungen an Handelspolitik und Wirtschaftsförderung. Konzeptstudie. Gesellschaft für Technische Zusammenarbeit, Eschborn.

Steck, J.-F. (2007). La rue africaine, territoire de l'informel ? Flux, 2006/4-2007/1 No. 66-67: 73-86. Cairn.info.

Tschumi, P. and Hagan, H. (2008). The operational guide for the making markets work for the poor (M4P) approach. (2008).

UNIDO (2009). Agro-Value Chain Analysis and Development. The UNIDO Approach. A Staff Working Paper. Vienna, 2009.

UNWomen (2010). Unleashing the Potential of Women Informal Cross Border Traders to Transform Intra-African Trade. United Nations Entity for Gender Equality and the Empowerment of Women, 2010.

UNWomen (2011). Annual Report 2010-2011.

Van den Berg, M. (2008). Making value chains work better for the poor: A toolbook for practitioners of value chain analysis. Version 3. Making Markets Work Better for the

Poor (M4P) Project, UK. Department for International Development (DFID). Agricultural Development International: Phnom Penh, Cambodia. 2008.

Vermeulen, S., Woodhill, J., Procotr, F. and Delnoye, R. (2008). Chain-Wide Learning for Inclusive Agrifood Market Development. Wageningen, 2008.

Von Oppen, A. (1993). Terms of Trade and Terms of Trust: The history and contexts of pre-colonial market production around the Upper Zambesi and Kasai. Vol. 6. LIT Verlag Münster, 1993.

Watterson, B. (1992). Scientific Progress Goes *'Boink'*. Andrews McMeel Publishing, 1991.

Weissman, S. R. (1990). Structural Adjustment in Africa: Insights from the Experiences of Ghana and Senegal. World Development, Vol. 18, No.12, pp. 1621-1643. Pergamon Press.

Williamson, O. E. (1973). Markets and Hierarchies: Some Elementary Considerations. The American Economic Review, Vol. 63, No. 2, Papers and Proceedings of the Eighty-Fifth Annual Meeting of the American Economic Association (1973), 316-325.

Williamson, O. E. (1981). The Economics of Organisation: The Transaction Cost Approach. American Journal of Sociology, Vol. 87, No. 3, (1981) 548-577.

Williamson, O. E. (1993). The Economic Analysis of Institutions and Organisations – in General and with Respect to Country Studies. OECD Economics Department Working Papers, No. 133, OECD publishing.

Williamson, O. E. (2000). The New Institutional Economics: Taking Stock, Looking Ahead. Journal of Economic Literature, Vol. 38, No. 3, (2000), 595-613.

Wiredu, A. N., Gyasi, K. O., Abdoulaye, T., Sanogo, D., and Langyinto, A. (2010). Characterization of Maize Producing Households in the Northern Region in Ghana. CSRI/ SARI publication. Drought Tolerant Maize for Africa (DTMA) Project Country Report – Household Survey. October 2010.

Wolcott, H. (1929). The Art of Fieldwork. AltaMira Press, 1995. Sage Publications.

Yeboah, A.K. (2011). A Survey on Post-Harvest Handling, Preservation and Processing Tomato in the Dormaa and Tano South Districts of the Brong Ahafo Region of Ghana. Kwame Nkrumah University of Science and Technology, Institute of Distance Learning, 2011.

Zezza, A., Carletto, G., Davis, B.,Stamoulis, K., and Winters, P. (2007). Rural Income Generting Activities: Wahtever Happened to the Institutional Vacuum? Evidence from Ghana, Guatemala, Nicaragua and Vietnam. FAO, Agricultural Development Economics Division, ESA Working Paper No. 7-24.

Zucker, L. (1977). The Role of Institutionalization in Cultural Persistence. American Social Review 42, 726-743.

9 Annex

Part A

Interview Respondents Sample List Traders

Code	Description	Date	Respondent
$MQat_1$	Market Queen a	23 Aug 2011	Queen a
$MQbt_1$	Market Queen b	6 Oct 2011	Queen b
$MQat_2$	Market Queen a	14 Feb 2012	Queen a
$MQbt_2$	Market Queen b	16 Mar 2012	Queen b
$MQat_3$	Market Queen a	09 Sep 2012	Queen a
$MQbt_3$	Market Queen b	07 Sep 2012	Queen b
MW1	Market Women chilli	8 Nov 2011 + 2 Mar 2012	Group
MW2	Market Women tomato	25 May 2012	Group
MW3	Market Women maize	15 Feb 2012	Group
MW4	Market Women chilli	13 Sep 2012	Group
MW5	Market Women tomato	4 Sep 2012	Group
MW6	Market Women maize	06 + 18 Sep 2012	Group

Interview Respondents Sample List Development Partners

GOV1	MoFA WIAD	17 Sep 2012	Pamela Sandoh
GOV2	MoFA Bolga	06 Sep 2012	Kwasi Bonde
GOV3	MoFA Wa	Feb 2012	Mr. Eledi
GOV4	MoTI Bolga	19 Sep 2012	Kyie Adam
DCO1	NRGP	06 Sep 2012	Amina Alhassan
DCO2	SNV	17 Sep 2012	Mr Sulemana
DCO3	ADVANCE	04 Sep 2012	Catherine Phiri
DCO4	ACDEP	17 Sep 2012	Malex
DCO5	CARE Int.	18 Sep 2012	Mrs. Ayisha, Mr. Iddi Abubakari, Ms. Agnes Loriba

Interview Respondents Sample List NGO Partners

NGO1	Presby Agric Station	18 Sep 2012	Mr Emmanuel & Mrs Alhassan
NGO2	Savanna Farmers Marketing Co.	14 Sep 2012	Mr. Sumeyla Mohamed
NGO3	Equipment Leasing PPP	14 Sep 2012	Mr. Mahama Abukari

Interview Respondents Sample List Private Sector Actors

IND1	Northern Star	11 Sep 2012	Mr. Kwabena Darkwa
IND2	Taimako	17 Jan 2012	Hajjya Taimako
IND3	Queen Gef ent.	20 Mar 2012	Mrs. Gef
IND4	Maize and Rice Aggregator	06 & 19 Sep 2012	Mr. Gundaa
CDE1	Wumpini	14 Sep 2012	Mr. Wumpini

Part B

Questionnaires

Interview Sheet for Market Queen:

Start: General and pricing

1. How is the supply situation at this moment of season?
2. How is the demand at this time?
3. Was there a change in prices recently?
4. Can you describe how you decide on a price.

Infrastructure and movement

5. How do you travel when buying?
6. How do you move outside the country?
7. How do you send the purchased product to the market?
8. How do you assure safe transfer from the place to market?

Organisational aspects

9. How do you describe the group of the market women?
10. How does it look like?
11. How do you decide who is part and who not?
12. Do you have rules in your group?
13. Did you introduce these rules?

Inter-organisational issues

14. Do you save money for your group (Susu)?
15. What do you use the money for?
16. When purchasing, how do you access cash?
17. Who is allowed to use this cash?
18. How do you deal with mistrust?
19. Can you explain what mistrust means to you and your group.
20. Please explain trust.

Core issues

21. How is the market queen elected?
22. For how long have you been queen?
23. For how long is a market queen elected in general?
24. How do you communicate?
25. How did your predecessor do it?
26. How did you communicate before mobile/ cell phones existed?
27. Who are your main partners (bank officer, input dealer, buyer)?

Interview Sheet for Market Women (interviewed in group):

Start: General

28. How long have you been a market woman for commodity x?
1. How many of your fellow market women do you know?
2. How did you learn to deal as a market woman?
3. What are the most important things a market woman must know?
4. What are important rules for you?
5. What if they are not followed?

Infrastructure and movement

6. How do you travel when you buy?
7. How do you send the purchased product to the market?
8. How do you assure safe transfer from the place to market?

Organisational aspects

9. How do you describe your group of market women?
10. How often do you meet all women?
11. How do you decide who is part and who not?
12. How do clarify problems/ issues in your group?

Inter-organisational issues

13. Do you save money for your group (Susu)?
14. What do you use the money for?
15. When purchasing, how do you access cash?
16. Who is allowed to use this cash?
17. How do you deal with mistrust?
18. Can you explain what trust means to you and your group.

Core issues

19. How do you elect market queen?
20. How do you know about the present price she has determined?
21. How do you communicate?
22. How did you communicate before mobile/ cell phones existed?
23. Who are your main partners (bank officer, input dealer, buyer, producer)?
24. What do you like about the business with this person?

Interview Sheet for Maize Aggregator:

Start: General

1. How long have you been in the business of inputs (for maize)?
2. How did you learn to make business in inputs?
3. How did you start the business?
4. How many customers do you deal with?
    a. How many "small" ones
    b. How many "bigger" ones?
5. How many market women do you know?
6. Can you describe the relation between the market women/ queen and your business?
7. Can you describe how you negotiate on a price; equipment or special type of produce.
8. How do you access loans?
9. Are you organized in a group formation/ association or else?

Interview Sheet for Input Dealer:

Start: General

1. How long have you been in the business of inputs
2. How did you learn to make business in inputs?
3. How many customer do you deal with?
    a. How many "small" ones
    b. How many "bigger" ones?
4. How long do you make business with market queen x?
5. For how long do you know her?
6. How many market women do you know?
7. For how long?
8. Can you describe the relation between the market women/ queen and your business.
    a. Mistrust/ no appreciation/ disrespect
    b. Good business/ trustful/ appreciative attitude/ respect
9. Can you describe how you negotiate on a price; equipment or special type of produce.

Interview Sheet for Producers (m/ f):

Start: General

1. How long have you been farming commodity (x, y, z)?
2. How did you learn to do farming?
3. How many buyers do you deal with?
4. How many market women do you know?
5. Can you describe the relation between the market women/ queen and your business.
6. Can you describe how you negotiate on a price; equipment or special type of product.
7. Are you satisfied with your harvest and the quality? Is there a difference?
8. Are you in agreement with the buyer/ market women?
9. How many years have you been dealing with market women x?
10. How do you deal with mistrust,
    a. Negotiation or
    b. What if goods refused?

Interview Sheet for Factory Owner (m/ f):

Start: General

1. How long have you been producing the very item?
2. How did you start to process the produce?
3. How many producers do you deal with?
4. How many market women do you know?
5. Can you describe the relation between the market women/ queen and your business.
6. Can you describe how you negotiate on a price; equipment or special type of product.
7. Are you satisfied with your purchase and the quality?
8. Are you in agreement with the seller/ market women?
9. How many years have you been dealing with market women x?
10. How do you deal with mistrust,
    a. Negotiation or
    b. refusal?

Infrastructure:

1. What means do you use to accumulate the produce/ raw product?
2. How do you deal with losses (road accidents etc.)
3. Do you have any insurance??
4. Did you encounter any Robberies?
5. What kind of protection do you know of?