



Working Title: Re-engaging the unequal distribution of rewards: A study of trust among actors in the Yam and Cassava value chain in Ghana

PhD proposal to be submitted to the Doctoral School of Humanities
Aalborg University

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Background

This Ph.D. proposal is based on a Danida sponsored pilot research programme between Kwame Nkrumah University of Science and Technology in Ghana (KNUST), and its chosen partners in Denmark - a consortium based partnership including Technical University of Denmark, Aalborg University, and University College of Northern Denmark. The pilot project is in line with the Danish Development strategy “the right to a better life”, where economic growth is central, but should be green and sustainable.

Pilot Project Title

The title of the pilot project is “Strengthening Root and Tuber Value Chains in Ghana”, and is to run from 1st January 2013 - 31st December 2015, with an overall budget of DKK 5 million.

The pilot project’s overall objective

Seeks to contribute to the national research capacity by providing scientific knowledge, solid baseline data, and methodologies to monitor performance of root and tuber (cassava, yam, cocoyam, and sweet potato) value chains in Ghana.

Specific objectives of the pilot project

In Ghana, there is limited empirical knowledge and huge unexplored potential on the performance of the entire root and tuber value chain. Hence, the scientific knowledge generated from this pilot project will help promote the growth and performance of the Ghanaian root and tuber sector to engender employment generation, improve incomes and household food security.

The value addition from the pilot project to these staple crops through new product development, technological improvement and capacity building will help reduce postharvest losses, expand the utilization base, improve incomes of key actors in the chain, stabilize food prices in urban centers, and improve household food security. As a consequence, improved incomes will lead to more investment in value added activities, employment generation and ultimately an increase in economic growth.

My Role in the Pilot Project

As part of the Danish consortium, I am part of the core team that includes highly skilled researchers. Some of the activities I will undertake in the overall project are mapping out the roots and tubers value chain, identifying key-actors, identifying challenges in the value-chain, holding stake-holder workshops, and addressing the main constraints in the value-chain.

The Link between the Pilot Project and this PhD proposal

As part of my affiliation with the overall project, and the presumed access to knowledge, environment, and research within the roots and tubers value chain, I saw an opportunity and am very interested in undertaking specific research. In addition to my current position as a teacher at UCN, I believe the research can develop my competences further, and add value to my future role and career. The focus of the intended research will explore some of the challenges related to trust and mistrust as a potential obstacle to economic growth and poverty reduction in the value chain, since it is a huge problem within many sectors, and the agricultural sector being no exception. This PhD project proposal is hence focusing on the issue of trust between stakeholders of the yam and cassava value chains in Ghana. In the following the project proposal itself, will be elaborated upon.

Introduction to the PhD Proposal

Agriculture forms the base of the Ghanaian economy, and has been the main driver of growth for the last two decades (World Bank, 2007). It contributes roughly 34% to Ghana's GDP. Around 50% of agricultural GDP comes from Ghana's roots and tubers (MoFA, 2010).

Grown by 55% of farmers in Ghana, root and tuber crop improvement is a major poverty reduction strategy for the country (RTIMP, 2004). What is more, about 90% of marketers and processors of root and tubers are women (IFAD, 2009; RTIMP, 2006). The crops are considered to be food security crops in Ghana and their consumption forms between 16 and 31% of per capita daily calorie consumption in the country (GLSS 5; GSS, 2005). It is argued by Scott, Rosegrant and Ringler (2000) that there is greatest potential in agricultural crops such as yam and cassava¹. These crops are adaptable to marginal environments, drought resistant and grow well in poor soils. Furthermore, they contribute to household food security, since they are grown by the poorest segment of the population in Ghana (RTIP, 2004). They are also flexible in mixed cropping systems, which benefit the input and outgo of soil nutrients. Also, they can be grown all year round in Ghana. The uses and advantages of roots and tubers make them an important focus for targeting and improving the welfare of the poor and linking smallholder farmers to markets (ibid), and ensuring inclusion in global value chains.

Value Chain as a Concept

¹ Ghana is the third largest producer of Yams, and Cassava is the largest agricultural produce in Ghana in terms of volume (<http://www.mcc.gov/documents/investmentopps/bom-ghana-eng-yams.pdf>) (<http://www.ifpri.org/sites/default/files/publications/gsspwp24.pdf>: 16)

The value chain approach first developed by Porter (1985) is an all-inclusive and methodical instrument that considers a range of aspects on the micro and macro level that are required *“to bring a product from its conception, through its design, its sourced raw material and intermediate inputs, its marketing and its distribution to the final consumer”* (Humphrey and Schmitz, 2001). It includes all actors *“from production, transportations, transformation, processing, marketing, trading retailing and consumption of a given product or service”* (Kaplinsky & Morris, 2003).

The value chain approach has also been recognized by the Government of Ghana (GoG) as vital for addressing issues within root and tuber crops that can contribute to employment generation and poverty alleviation, and as a consequence the GoG has formulated a policy targeted at root and tuber crop improvement as one of the key drivers of growth in the national economy through the value chain approach.

Challenges within the Roots and Tubers Value Chain

Even though there has been many schemes and research work done in Ghana (such as Aidoo et al, 2012, and in 2009/2010 by the International Institute of Tropical Agriculture (IITA)), there is still a high incidence of mistrust and limited cooperation amongst actors within the yams and cassava value chain. In some of this research the focus has been on some of the challenges within the roots and tubers in the areas of high post-harvest loss of 30-60%, the limited access to technologies, the low employment, and the weak links along the value chain which possibly is due to a limited understanding of value chain as a concept by actors.

Aidoo (2012) further argues that the limited cooperation and lack of trust within the roots and tuber value chain in Ghana has led to for instance high transaction costs, low quality products, and high product prices (Aidoo: 2012 presentation to the consortium 11th September, 2012, RTIMP, 2008). Lack of trust seems to be a major challenge to poverty alleviation and to growth and development, which would be elaborated in the next section.

Issues of Trust, Reducing Risk and Transaction Costs

Trust in business relations under certain conditions can be a source of competitive advantage, (Barney & Hansen, 1994). The argument builds on a theoretical discussion and a distinction between varieties of trust. Weak form trust implies limited opportunities for economic governance mechanisms, which make opportunistic actions costly. Strong form trust is when a party acts trustworthily since doing otherwise would violate values and principles of behavior. These authors argued that the strong form trust is rather unusual but that it can imply large competitive advantage if two actors having strong form trust initiate an

exchange relationship. Barney & Hansen's discussion has rationalistic undertones and trust in their view seems to be a calculated decision. Similarly, the view of trust as a means to reduce risk in inter-organizational relations is shared by many authors (Hart & Saunders, 1997, Lane & Bachmann, 1996, Noteboom, 1886). Luhmann (1979) argues that trust fill a necessary function in all systems of interaction, through being a mechanism by which individuals reduce the complexity and the risk in the system.

The relationship between trust and risk is discussed thoroughly by Ring & Van de Ven (1992). They write that definitions of trust are often related to either confidence in own expectations or in the other actor's good will. They argue that a certain amount of trust is required for all kinds of transactions and thus that the existence of trust is the norm. This view is shared by Sabel (1993), who writes that trust is a precondition of social life. Ring & Van de Ven (1992) however suggest that reliance on trust as a main mechanism requires experience of previous interaction implying knowledge of both parties that the other party acts according to the norms of justice. The more often previous interaction has taken place, the larger the possibility to rely on trust, and the lower the risk of the transaction. Transaction costs are the results of certain behavioral assumptions, while *bounded rationality* entails that the context in which transactions take place, is characterized by a higher or lower degree of uncertainty which the actor wished to minimize (Williamson, O.E. (1975).

The central argument of transaction costs is that economic activities would take the form of governance that minimized the cost of planning, adapting and monitoring transactions (Möllering, 2006: 26). According to Williamson (1995) transaction costs occur both in advance of the transaction from drafting, negotiating and safeguarding agreements, and after the transaction from having to deal with maladaptation, misalignment, running governance structures and bonding. Furthermore, Möllering contends that actors would chose the form of governance that best economizes on these costs, assuming that the production costs of the items to be transferred are given. Chiles and McMackin 1996 and Möllering 2006 argue that Williamson's version of transaction costs implies managerial choice, and therefore it adopts methodological individualism in contrast to the evolutionary approaches of new institutional economics (see Nelson, R.R., and Whinter, S.G., (1982).

Review of Trust Literature within Value Chains in Africa

On the global level, where local products are linked to international trade, lack of trust arguably could lead to exclusion of African producers from global value chains, and put or maintain them in a disadvantageous position (Van der Meer & Keers, 2006). According to Möllering (2006: 2), numerous scholars have pointed out that trust is a vital requirement for any meaningful relationship – both on individual level, in

organizations, and in cross-cultural context. It seems as if trust building could untie the aforementioned challenges - an issue I am interested in investigating among actors in the Cassava and Yam value chains in Ghana.

Höfler (2006) conducted an analysis for the German Development Agency GTZ on the potato value chain in Kenya under the title “can contract farming help built trust and reduce transaction risks”? The study found that indeed contract farming could be a way of building trust. However, many factors play a role in trust building starting from the nature of the product, socio-economic relationships to structure of product demand. It was also found that social organization/joint understanding of issues of inefficiency in the value chain could help in building trust, thus, pointing to other issues that could help rethinking the issue of trust in the value chain apart from contract farming. Analytical work in various other value chains, e.g. fish, export horticulture, dairy or cotton (Schuurhuizen et al., 2006; Global Development Solutions LLCTM, 2004) suggest that issues similar to the aforementioned prevail. However, it was found that more research was needed in order to:

- better understand bargaining behaviour of business partners;
- comprehensively analyse real and perceived transaction costs and transaction risks and subsequent potential benefits of contractual arrangements;
- develop a better understanding of the value of trust, social capital investments and the benefits of repeated transactions; and
- analyse the incentives for and success factors of longer-lasting mutual business relationships.

Studies on cooperation and trust were also carried out in Nigeria among Nigerian, Lebanese and Chinese entrepreneurs by Zakaria (1999) in the Nigerian plastics industry. Zakaria refers to trust as a term linked to risk, but asserts that it is indeed uncertain whether risk creates trust or precedes it. He concludes in his study that low levels of trust are a hindrance to economic development. Education plays a role in enhancing trust, but also the right institutional framework and transparent leadership is needed (Ibid.). Also the problem of high level of crime in Nigeria is a major challenge for trust building.

Another value chain study was conducted by Mumbi, Ngeli, and Wanjiru (2007) regarding cassava flour and other similar products in Uganda and Kenya. It was indicated in the study that there was an enormous demand potential with major private sector players highlighting keenness to include cassava chips in the processing of animal feeds. The organisational capacities of producers in both countries were found to be limited; value addition technologies though available to the minority of the producers, were still underutilized due to lack of clear guidelines on standards and policy issues from the public sector.

However, the study did not deal with trust directly, but arguably the conclusions and lack of cooperation and guidelines indirectly indicated the lack of trust in the study.

In the case of Ghana, Lyon (2000) conducted a study within the tomato agricultural sector in Ghana. He concludes that norms of reciprocity play an important role. He contends that norms can indeed be used in an opportunistic manner, can be generalized and not reflexive. Local mechanisms of sanctions are also important according to Lyon. Trust is created through using pre-existing relationships and intermediaries as well as through building long term relations. In order to trust others, people are gradually tested and it is found out where they live and work, in order to make sure that trust can be placed.

In 2006 Lyon carried out another study on trust and power in Ghanaian associations where he examined how groups sustain co-operation in the absence of strong legal institutions and mechanisms (such as legal contracts or regulated loan finance) that are often taken for granted in most 'western' economies. He concluded that Co-operation was found to be highly dependent on personalized relationships, due to the lack of formal legal regulatory systems. Trust is shown to be built up through having information on others' reputations. The sources of this information are from existing relationships with kin and community (embedded in a shared traditional cultural context with a set of shared normative beliefs, such as funeral attendance); from working together (reciprocal relationships building up from smaller, lower-risk activities); and from intermediaries whose roles are embedded in traditional systems of elders, chieftaincy and 'queens' (Lyon, 2006).

Relevance of the Research

In Africa, only a limited amount of empirical research has been conducted concerning the root and tuber value chains, and research specifically focusing on trust within agricultural value chains is even more limited. In the case of Ghana, no one seems to have focused on the issue of trust within yam and cassava value chains.

There are instances where the tendency has been to focus only on one crop at specific location in the country, and not so much on issues of trust. For instance in 2009/2010, the International Institute of Tropical Agriculture (IITA) carried out three separate studies on the yam sector in Ghana. The first study was a baseline survey on all yam research works that had been conducted in Ghana over the past two decades. The second study looked at the demand and supply of seed yam in four districts in Ghana and the final study examined the yam marketing chain in Ghana. Results from the last study revealed that there was a long chain of greater than three channels through which yams moved from the producer to the final consumer. Yam marketing was found to be a profitable venture for all the key players in the yam marketing

chain. Generally, the study found out that net marketing margin was highest for cross-border yam traders, followed by wholesalers. Yam marketing activities among retailers, wholesalers and cross-border traders were found to be highly efficient with efficiency ratios in excess of 100%. However, yam marketing among producer-sellers was found to be inefficient with efficiency ratio of about 86% (Aidoo et al, 2012). In the case of cassava there is very scanty, if any, empirical information on its value chain in Ghana, and the issue of trust is hardly addressed. The value chain approach and the focus on trust are hence relatively untested approaches in the yam and cassava sector in Ghana.

These above mentioned issues make the proposed research area relatively unexplored and therefore the research project fills a gap no one else seem to have explored to date. In an attempt to address the issue of trust within the yams and cassava value chain the proposed research raises the following overall question:

To what extent does the issue of trust affect the cooperation of actors in yam and cassava value chains in Ghana?

The above research question will be supported by the sub-questions posed below:

- How does potential mistrust among actors in the value chain challenge cooperation?
- Which innovative approaches to building trust could be integrated among actors in the value chain?

Possible Theoretical Approaches

I have not decided on any specific theoretical approach yet, but in the following I will outline a possible theoretical approach that could be applied in the PhD research.

The tentative theoretical foundations of this proposed PhD may focus on the problem formulation from the perspectives of human behavior, trust/mistrust and influences on risk and transactions. For this reason I am suggesting for the time being the theory of social capital and the culture of trust from a sociological perspective by Piotr Sztompka (1999) and Francis Fukuyama (1995) (see also Coleman 1990, Putnam 1993, and Taylor 1996). Sztompka undertook his study in Poland during its transition from communism into a post traditional and modern country. It is as such not a Western theory. In the case of Ghana, after gaining independence in 1957 President Kwame Nkrumah introduced ideologies of Communism until his overthrow in 1966. Based on this knowledge, I assume that there are similarities in the context of Ghana and its agricultural transition that can be useful in applying Sztompka's theory. Moreover, general empirical studies has suggested that social capital can explain the presence, or absence, of for instance economic growth (Helliwell and Putnam 1995; Burt 1997; Whiteley 2000), human well-being (Helliwell and Putnam

2004); entrepreneurship and innovation (Svendsen and Svendsen 2005), environmental protection (Pretty and Ward 2001), as well as satisfactory democratic policies and procedures (Badescu and Uslaner 2003; Putnam 1993; 2002;).

According to scholars within the social capital approach, trust is imperative for collective action. If people involved for example in the agricultural value chain for roots and tubers do not trust the other stakeholders to put in their share of the work, there is not an effective value chain in place. Only groups of people possessing enough social capital are able to change their social conditions and this dilemma. According to Fukuyama social capital is “the ability of people to work together for common purposes in groups and organizations (Fukuyama, 1995: 10). He further clarified the definition of social capital *“as the existence of a certain set of informal values or norms shared among members of a group that permit cooperation among them”* (Fukuyama, 1999: 16).

Social capital is strongly linked to trust, which Sztompka argues is twofold in the sense that trust is both a precondition and a product of a successful cooperation. Furthermore, trust is linked to the uncertainty of the future, and always linked to human beings, where people are actively anticipating and facing an unknown future (Sztompka, 1999: 25). Trust then involves risk, and arguably we take a risk when we trust someone.

Reflections on Philosophy of Science

As a researcher within the field of trust, and from George Simmel’s point of view that *“without the general trust people have in each other, society itself would disintegrate”* (Möllering, 2006), I take into account that all research and any conclusion are influenced by my role and choices made as a researcher, the context, and the people I communicate with, and interviews made. Kvale points out that *“knowledge exists between the interrelation of person and world”* (1996: 44). In other words the world is socially constructed as argued by scholars within the hermeneutical paradigm, and by acknowledging this fact in research, a more nuanced and realistic outcome can be produced (Kvale, 1996: 61). The qualitative research method is valued within the hermeneutical school due to its emphasis on interpretation of the spoken and written word, and its emphasis on a world which is claimed not to be measurable (Kvale, 1996: 46).

The ontological views undertaken in a research paper may more or less explicitly depend on the researcher’s philosophical conviction. However, researchers often acknowledge that *“the practice of research is a messy and untidy business which rarely conforms to the models set down in methodology textbooks”* (Brannen, 1992: 1). As a consequence mixing methods and theories may enhance a nuanced and interesting outcome, and perhaps conform more to the eclectic approach.

In the following a brief reflection on the tentative research design for the proposed PhD research will be elaborated upon. I have taken into consideration that by pointing out some specific design as well as the appointed theoretical reflections in the previous section, I am as a consequence in the midst of influencing the outcome of the proposal, as acknowledged in the social constructivist school of thought. Hence, I propose to apply the hermeneutical and the social constructivist approach in this research.

Research Design

In order to generate empirical data to answer the problem formulation I plan to undertake qualitative research at some specific locations in Ghana, namely Ashanti², Brong-Ahafo³ (Techiman) and Northern⁴ Regions. These regions are noted for root and tuber production, processing and marketing. The two main root and tuber crops in Ghana, Cassava and Yam, shall be the focus of this project in the respective regions where they are mainly produced. In view of this, I intend to use the ethnographic approach⁵. Participant-observations and semi-structured interviews with value chain actors from producers/farmers, processors, sellers/marketers/ will be carried out, In order to get as nuanced a picture as possible on the issues and challenges of building trust. My intention is to mix methods as outlined earlier in this proposal via the eclectic approach, as argued by Brannen (1992). Specific locations of carrying out the interviews will be identified on the basis of accessibility, history, challenges, number of poor farmers and where specific activities of farming, marketing, procession the yam and Cassava are taking place within the 3 aforementioned main regions in Ghana. When for instance farmer villages are pointed out, I will spend 1-2 weeks undertaking interviews in the field in each farmer village, which will involve helping with farming activities, and applying a random-walk technique after farmers have returned to the villages at night to look into the issues of trust, cooperation and transactions costs. In order to clarify issues doing the field studies, a number of focus groups discussions will take place. That could be to discuss some of the issues that will pop up doing the research, to discuss the meaning of trust in different languages and among ethnic groups, as well as shedding further light on the 2 sub-questions that will help in answering the

² Agriculture is the dominant sector in the region's economic activities and it is endowed with abundant arable lands which support the production of cash crops such as cocoa, coffee, oil palm, citrus cashew, mango and food crops like cassava, plantain, rice, yam, cocoyam, maize, and vegetables. Approximately 65% of the total population in Ashanti region depends on agriculture for their livelihood (http://mofa.gov.gh/site/?page_id=642)

³ Yam production is very high in the guinea savannah zone, around Techiman, Kintampo, Nkoranza, Yeji, Prang and Kwame Danso

⁴ About 80% of the people in the Northern Region depend on farming for their livelihood (<http://www.fao.org/wairdocs/x5426E/x5426e03.htm>)

⁵ Ethnography "takes the position that human behavior and the ways in which people construct and make meaning of their worlds and their lives are highly variable and locally specific" (LeCompte, 2010: 1). Within ethnography the researcher must first discover what people actually do, and the reasons they give for doing it, before interpreting their actions with the researcher's own set of values and beliefs (LeCompte, 2010: 2). This is the major difference from other research methods.

proposed research question. In this connection, it may be a good idea to make use of an interpreter doing my interviews. In addition, I will also observe the interactions between farmers, processors, sellers and consumers to establish the grounds to answer my problem formulation. Hence carry out ethnographic observations and interviews at yam and cassava markets, at processing centers and with consumers. Naturally, it will be necessary to narrow my focus further during the process of preparing the final research plan.

Time plan for 2013-2015

<i>First semester: 2013</i>
Research Activity Clarification of the research plan - including the reading of the relevant studies in the area, and theoretical and methodological work. 1 month participation in the mapping of the roots and tubers value chain in Ghana with the project consortium and the establishment of initial appropriate ethical relations with the participants in the study.
Teaching and Supervision Approximately 200 hours
Ph.D. courses About 6 ECTS
<i>Second semester: 2013</i>
Research Activity Continue work from semester to broaden my theoretical and methodological horizons. Prepare a preliminary guide/likely forms of data collection and initiate some data collection
Coordination of the roots and tubers project Approximately 5 hours per week
Teaching and Supervision Approximately 200 hours
Ph.D. courses About 6 ECTS
<i>Third semester: 2014</i>
Research Activity Focus reading to gain more subject knowledge and further understanding of cogent lines of enquiry necessary to support the theoretical framework of the research Analyze the data generated in the previous semester. Collect more data and continue to analysis

of these as well.

Coordination of the roots and tubers project

Approximately 5 hours per week

Teaching and Supervision

Approximately 200 hours

Ph.D. courses

About 9 ECTS

Fourth semester: 2014

Research Activity

Submit working papers of literature review chapter, theoretical section and research methodology, for conferences, workshops or seminars

Coordination of the roots and tubers project

Approximately 5 hours per week

Ph.D. courses

About 6 ECTS

Fifth semester: 2015

Research Activity

Writing the dissertation

Coordination of the roots and tubers project

Approximately 5 hours per week

Ph.D. courses

3 ECTS

Sixth semester: 2015

Research Activity

Completion of thesis for submission

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