

Marketing and market queens:
a case of tomato farmers in the Upper East Region of
Ghana

Inaugural-Dissertation
zur
Erlangung der Doktorwürde
der
Philosophischen Fakultät
der
Rheinischen Friedrich-Wilhelms-Universität
zu Bonn

vorgelegt von

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aus
Navrongo, Ghana

Bonn 2010

Gedruckt mit Genehmigung der Philosophischen Fakultät
der Rheinischen Friedrich-Wilhelms-Universität Bonn

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Tag der mündlichen Prüfung: 26.10.2010

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Dedication

This thesis is dedicated to my late mother Sarah Ayeribire, who has been a mentor and a friend, nurtured me to know that higher heights can be achieved one step at a time. To my late father Mr Abraham Atopurige, whose best gift of enrolling me in school has brought me this far. My brother Malex Alebikiya, has played the role of a father and a brother to perfection. Throughout my life, you have actively supported me in my ambition to realize my potential. You took over the responsibility from father, never questioning the consequences, but for you, I would not have realized this dream of contributing to academic knowledge.

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List of Abbreviations

ALADI	Latin American Integration Association
AMA	Metropolitan Authorities
ASEAN	Association of South-East Asian Nations Market
CACM	Central American Common Market
CEPS	Customs Excise and Preventive Service
CMB	Cocoa marketing Board
CSIR	Center for Scientific and Industrial Research
DA	District Assembly
DDT	Dichlorodiphenyltrichloroethane'
ECOWAS	Economic Community of West African States
ERP	Economic Recover Program
EU	European Union
FORIG	Forestry Research Institute of Ghana
FTZ	Free Trade Zone
GAPTO	Ghana, Agricultural Producers Tomato Organization
GDP	Gross Domestic Products
GNA	Ghana News agency
ICOUR	Irrigation Company of Upper Region
IMF	International Monetary Fund
INERA	Institut de l'environnement et des Recherches Agricoles
ISSER	Institute of Statistical, Social and Economic Research
KCM	Kumasi Central Market
KND	Kassena Nnankane District
KNE	Kassena Nnankane East
KNW	Kassena Nnankane West
MD	Managing Director
MoTI	Ministry of Trade and Industry
MOU	Memorandum of understanding
NGO	Non Governmental Organization
NSTC	Northern Star Tomato Factory
PVL	Prairie Volta Limited

SAPs	Structural Adjustments programs
SARI	Savannah Agricultural Research Institute
SSA	Sub-Saharan Africa
SWAPO	Sirigu Women's Organization of Pottery and Art
TFL	Trusty Foods Company Limited
TNC	Trans-National Corporations
TYLCV	Tomato Yellow Leave Curl Virus
UER	Upper East Region
UN	United Nations
UNWFP	United Nations World Food Program
VAT	Value Added Tax
WB	World Bank
WHO	World Health Organization

Abstract

Structural reforms have been experienced in many African countries following the economic crisis in the 1980s. Subsequently, the implementation of Structural Adjustment Programs (SAPs) affected various sectors of agriculture. A key area in Ghana is the “tomato sector” in the Upper East Region where the influences of trade policies on marketing continue to be a challenge to small scale tomato farmers. The tomato sector in the region has often been perceived as a potential area for employment and income generation. However, little is known about the complex nature of the market. Imports of tomato paste led to the collapse of the region’s tomato processing factory, creating a market vacuum. This opened an opportunity for local traders whose strong association is controlled by ‘Tomato Queen Mothers’. The manipulative strategies of the traders are facilitated by service providers whose role of exploiting farmers to the advantage of traders ensures their job security. In another dimension, the process has generated a market interest for neighbouring Burkina Faso tomato farmers who attract 80% of Ghana’s market. The problem for Ghanaian farmers is compounded by traders’ preference for Burkinabe tomatoes. However, continuing production by local farmers in Ghana raises an interesting question about the factors that sustain production and asks why farmers do not diversify into other economically viable crops. This study uses theories on power, risks and traders’ dilemmas to examine and explain the complex dynamics of the sector.

There is clear evidence that the sector is influenced by both economic and social factors inherent in the power of the traders’ associations and the political systems that influence social interactions. These factors are exploited in various ways to sustain a market outlet that motivates farmers while serving the economic and political interests of players the other players. Traders employ their powerful position to their economic advantage by ensuring they have the support of important government institutions and local players. On the political front, attempts to revamp the factory are thwarted by the political ambitions of government and the profit maximisation goals of investors. Socially, the interface of power and society is shaped by the influence of the deeply embedded moral and cultural norms in the market. These pose a dilemma with, on one hand, the players trying to

project a good image in society by accumulating economic resources while, on the other, following the withdrawal of support by the financial markets, remittances from families provide the necessary support to enable production to continue. Farmers' desire for assets such as aluminium roofs on their houses instead of thatch, television sets, radios, mobile phones etc. all symbols of status within their society, drives them to continuously produce. The capacity to diversify to other marketable crops is hampered by climate changes and insufficient information about the markets for them. Longer dry seasons and recurrent water shortages create problems for the irrigation of economically viable crops such as garden-eggs, leafy vegetables, pepper, and okra. A lack of knowledge about marketing such crops and the absence of an effective delivery system, also impose limitations.

Using both qualitative and quantitative data, evidence has been gathered which shows that market policies do not cater for the poor and are largely responsible for the low performance of the tomato sector. This thesis therefore comes to the conclusion that the sector will only have the economic potential to adequately generate employment and income if given the necessary support from elsewhere. In the current situation, where the annual farming cycle is one of financing through remittances and the selling of assets, production remains at a subsistence level and is not being developed as a business enterprise.

Deutsche Kurzzusammenfassung

Die Agrarsektoren vieler afrikanischer Länder sind seit den Strukturanpassungsprogrammen (SAP) der Weltbank (WB) und des Internationalen Währungsfonds (IWF) vielseitigen Veränderungen unterworfen (World Bank, 1981, IMF, 2001). Die stark exportorientierte Agrarpolitik vernachlässigte wichtige lokale landwirtschaftliche Markt- und Subsistenzsektoren der ländlichen Bevölkerung. So wurde beispielsweise in Ghana der Kakaoanbau, der den Süden des Landes prägt, staatlich subventioniert (Khor, 2006; 4), was indirekte Auswirkungen hatte auf den Nahrungsmittelsektor, in dem die Mehrzahl der ländlichen Bevölkerung tätig ist. Die landwirtschaftliche Nahrungsmittelerzeugung bleibt aufgrund mangelnder ökonomischer Alternativen die Haupteinkommensquelle im ländlichen Raum. Diese ist besonders bedeutend in landwirtschaftlichen Anbauregionen der Upper East Region in Nord-Ghana, wo seit einigen Jahren der Tomatenanbau betrieben und eine wichtige Beschäftigung und Einkommensquelle darstellt. Die Fokussierung auf marktorientierte Anbaumethoden hatte (logischerweise) nicht unerhebliche Konsequenzen für die entsprechenden Absatzmöglichkeiten, welchen eine Schlüsselrolle bei der Einkommensgewinnung der Landbevölkerung zukommt. Maßnahmen zur Handelsliberalisierung, deren Umsetzung an die Finanzhilfe durch die WB und dem IWF gekoppelt waren, hatten hauptsächlich starke Auswirkungen auf den ghanaischen Agrargütermarkt.

Subventionskürzungen, der Abbau von Importzöllen, Privatisierungen und der allgemeine Rückzug des Staates aus zuvor öffentlichen Aufgabenbereichen trugen zur Entstehung eines Marktvakuums bei. Neue Möglichkeiten eröffneten sich hier vor allem für lokale Marktakteure, wie zum Beispiel den Tomatensortiererinnen, den Zwischenhändlern oder den so genannten ‚Marktköniginnen‘, die vielleicht die zentralste Rolle im ghanaischen Frischtomatenmarkt einnehmen. Diese strukturellen Anpassungsmaßnahmen hatten eine beachtliche Auswirkung auf den Nordosten des Landes, welcher eine Region ist, in der die Tomatenproduktion schon zuvor lange als ein rentabler landwirtschaftlicher Entwicklungszweig galt. Anhand des Beispiels der Tomatenindustrie, möchte diese Arbeit die Komplexität skizzieren, die die Vermarktung der Produkte kleinständischer Tomatenanbauern der Region auszeichnet. Dabei werden die unterschiedlichen Interessen

der Akteure betrachtet, die für die Austauschprozesse und Vermarktungsstrategien eine bedeutende Rolle spielen. Es wird argumentiert, dass sowohl die Ressourcenproduktion, die Austauschverhältnisse sowie die Vermarktungsstrategien Ergebnis von Machtunterschieden der Marktakteure sind, die sich nach den Strukturanpassungsprogrammen unterschiedlich in den Wirtschafts- und regionalen Handelsräumen vermögen zu positionieren.

Der hohe Konsum bei gleichzeitig hohem Produktionsvolumen machen den Tomatensektor profitabel. Die nordöstliche Region Ghanas ist das einzige Anbaugebiet, das Tomaten auch in der Trockenzeit anbaut. Demnach wäre zu erwarten, dass die Tomatenproduzenten im Nordosten den Produzenten anderer Regionen einen wichtigen komparativen Vorteil voraus hätten. Allerdings ergab die dieser Arbeit zugrunde liegende Forschung, dass die Strukturanpassungsmaßnahmen und Handelspolitik lokale Vermarktungsprobleme auslösten, die diesen eigentlichen komparativen Vorteil der Kleinbauern überschatten. Maßnahmen zur Handelsliberalisierung schwächten die lokalen Produzenten in ihrer Position als Marktakteure (Kohr, 2006). Eingebunden in den globalen Markt, wird die heimische Produktion einem enormen internationalem Konkurrenzdruck ausgesetzt. Im Speziellen konkurrieren die lokalen Produzenten mit Tomatenproduzenten aus dem Nachbarland Burkina Faso, die von regionalen Handelsabkommen profitieren und sich in Ghana einen neuen Absatzmarkt erschließen. Der Rückzug des Staates und die weltwirtschaftliche Integration Ghanas führten vorerst zu einem Marktvakuum. Der private Tomatenhandelsverband, dem die sogenannten ‚Tomatenköniginnen‘ (TK) vorstehen, monopolisierte dieses Marktvakuum für sich. Die Handelsorganisation schaltet Zwischenhändler ein, die häufig zum Nachteil der Kleinbauern agieren. Trotz der vielen Nachteile für die Produzenten sind sie dennoch auf die ‚Tomatenköniginnen‘ und deren Handelsmonopol angewiesen, um ihre Erzeugnisse zu verkaufen.

Vor diesem Hintergrund möchte die vorliegende Arbeit im Besonderen auch die Motivation der Kleinbauern für die Tomatenproduktion untersuchen. Es wird hinterfragt, warum die Kleinerzeuger ihre Produktion nicht diversifizieren und nicht in den Anbau

anderer Marktfrüchte investieren. Weiterhin werden die Faktoren im verarbeitenden Sektor herausgearbeitet, die die Kleinbauern von der Verarbeitung ihrer Erzeugnisse abhalten. Im Detail soll weiterhin analysiert werden: die Auswirkungen von globalen und regionalen Handelsabkommen auf den Tomatenmarkt des ghanaischen Nordostens und die lokalen Erzeuger zu untersuchen; den sozio-ökonomischen Wandel zu verstehen, der aus den globalen und regionalen Handelsverflechtungen resultiert, um damit die sozialen Folgen der Strukturanpassung zu analysieren; die Schwachstellen in der Tomaten-Wertschöpfungskette zu identifizieren sowie entsprechende Empfehlungen zu formulieren.

Risiko, Macht und die soziale Einbettung des Marktes entlang des ‚Händlerdilemmas‘ sind die konzeptionellen Ansätze auf denen die vorliegende Dissertation beruht und zu deren sozialwissenschaftlichen Diskussion sie beiträgt. Der hier verwandte Risikobegriff orientiert sich an Arbeiten von Alderman und Paxson (1994), an Dercon (2000) und Holzmann (2001), welche alle Autoren sind, die sich in spezieller Weise mit Risikofaktoren im Agrarsektor auseinandergesetzt haben. Charakteristischerweise ist die Tomate eine leicht verderbliche Frucht und die Unvollkommenheit des Marktes birgt weitere hohe Unsicherheitsfaktoren. Die Risikotheorie der genannten Autoren trägt deshalb zu einem Verständnis der Risikofaktoren bei, denen sowohl Produzenten als auch Händler ausgesetzt sind und zur Analyse der Risikomanagementstrategien, die für das Funktionieren des Tomatensektors relevant sind. Macht wird theoretisiert als strategisch konstruierte Macht, indem sich die diversen neuen Akteure innerhalb des lokalen Marktvakuums strategisch positionieren (Evers and Gerke, 2005). Gesellschaft wird konzipiert als eine Arena sozialer Aushandlung, in der Macht - und Interessenskämpfe ausgetragen werden. Ein verallgemeinertes Konzept von Macht ermöglicht es, die Kontrollmechanismen und ausbeuterischen Prozesse des Marktes zu verstehen. Innerhalb der Theorie einer sozialen Einbettung des Marktes stellen Evers und Schrader (1994) die wichtige Rolle kultureller Werte und Normen für die Akkumulierung ökonomischer Produktion heraus, welches die Händler vor ein Dilemma stellt. Vor diesem Hintergrund befasst sich die Dissertation mit der spezifischen Betroffenheit von Produzenten, Händlern und Dienstleistern von dem so genannten ‚Händlerdilemma‘ und zeigt zudem,

welche Strategien diese Akteure aufwenden, um die daraus für sie resultierenden Probleme zu lösen.

Viele Studien zu Landwirtschaft und im Speziellen zum Wandel der Vermarktungsstrukturen von marktorientierten landwirtschaftlichen Erzeugnissen thematisieren im Besonderen die Strukturanpassungsprogramme als Ursache für die Probleme der Produzenten. Andere, wie beispielsweise Lyon (2003), Konings (1981;1986) und Clark (1994) haben verschiedene Untersuchungen zur Organisation des Handels in Ghana allgemein und der für den ghanaischen Tomatensektor im Speziellen durchgeführt. Dennoch existieren bislang nur sehr wenige Arbeiten, die die Autonomie der lokalen Marktakteure und deren dynamischen Handlungsstrategien in der Untersuchungsregion thematisieren. Diesbezüglich trägt die Dissertation zu einer ganzheitlichen Diskussion bezüglich der Auswirkungen von Strukturanpassungsmaßnahmen und regionalem Handel auf den lokalen Tomatenmarkt in Ghana bei. Die Arbeit verdeutlicht die Komplexität eines simpel wirkenden aber dennoch hochgradig regulierten Marktes. Sie macht darüber hinaus die Fähigkeit der Akteure sichtbar, einen agilen Marktsektor, der ein hohes ökonomisches Potential aufweist und ohne staatliche Unterstützung funktioniert, unabhängig zu managen und aufrecht zu erhalten.

Die Arbeit untergliedert sich folgendermaßen: Kapitel zwei dient der einführenden Darstellung der Auswirkungen der Strukturanpassungsmaßnahmen auf den Landwirtschaftssektor, die damit die Relevanz der vorliegenden Arbeit unterstreicht. Die Implementierung von Strukturanpassung führt zu einer Förderung von sogenannten ‚cash crops‘ für den Export auf Kosten von weiterem Nahrungsmittelanbau, der für die ländliche Entwicklung eine enorme Rolle spielt. Weitere Finanzkonditionalitäten von WB und IWF, wie zum Beispiel Maßnahmen zur Handelsliberalisierung, führten zu einem Marktvakuum. Die Ergebnisse der Strukturanpassungsprogramme begründen die Wahl der Forschungsregion und erklären die prekären Umstände der Tomatenproduzenten in der Vermarktung ihrer Erzeugnisse. Diese einführende Diskussion vermittelt dem Leser das nötige Hintergrundwissen über die

Vermarktungsfunktionen im Tomatensektor und damit ein Einschätzungsvermögen der derzeitigen Marktlage.

Das dritte Kapitel stellt den theoretischen Hintergrund der Arbeit dar. In diesem Kapitel werden Theorien unterschiedlicher Disziplinen zusammengeführt, um die Komplexität des Tomatensektors zu verstehen. Die konzeptionelle Integration von Risikotheorien, dem Händlerdilemma und theoretischer Erörterungen von Macht trägt zur Analyse des Forschungsthemas bei. Die Risikotheorie wird herangezogen, um die Risiken in der Landwirtschaft operationalisieren zu können und die generell risikobehaftete Natur des Tomatenanbaus und der angewandten Managementstrategien im Tomatensektor zu beleuchten. Das Händlerdilemma erklärt die Beeinflussung von Marktakteuren durch kulturelle Werte und Normen, die die ländliche Ökonomie prägen. Dadurch wird die wichtige Rolle herausgestellt, die die sozialen Strukturen für die wirtschaftliche Produktion im Tomatensektor spielen. Zudem verdeutlicht das Machtkonzept die Einbettung von Machtstrukturen in der Gesellschaft und damit die Inklusion beziehungsweise Exklusion bestimmter Gruppen oder Netzwerke. Bezogen auf den Tomatenmarkt stellen sich Ausbeutungs- und Kontrollmechanismen als sehr charakteristisch für die Branche heraus. Das Kapitel präsentiert die Ergebnisse der dieser Arbeit zugrunde liegenden Feldforschung auf deren Basis anschließend angepasste Empfehlungen formuliert werden.

Kapitel vier diskutiert schließlich die Forschungsergebnisse vor dem Hintergrund der lokalen Marktstrukturen. Faktoren, die die Aufrechterhaltung des Sektors beeinflussen und die Kleinproduzenten in ihren Möglichkeiten zur Produktdiversifizierung beschränken, werden hier eruiert. Soziale und ökonomische Bedingungen werden als mögliche Faktoren herangezogen. Zudem werden Kostenanalysen für Produktion und Handel präsentiert, um ökonomische Faktoren für den Erhalt des Sektors zu analysieren. Die Verfügbarkeit von Arbeitskraft stellte sich als bestimmender Faktor in diesem Zusammenhang heraus. Auch finanzielle Transfers, Netzwerke sowie Güterakkumulierung erwiesen sich als bestimmende soziale Faktoren. Diversifizierungsstrategien stellten sich als problematisch heraus, da der Anbau von

Gemüse, wie beispielsweise Chili und Zwiebeln, zwar lukrativ aber äußerst bewässerungsintensiv ist. Unter den gegebenen Bedingungen der Wasserknappheit ließe sich eine permanente Produktion nur schwierig realisieren. Weiterhin zeichnet das Kapitel die gesamte Tomaten-Wertschöpfungskette nach und bindet dabei die Rollen von Produzenten, Händlern und anderen Dienstleistern ein. Die Darstellung der Funktion der verschiedenen Akteure demonstriert die Manipulation von Macht, die Risikofaktoren sowie die Dilemmata, die diesen Markt auszeichnen.

Das fünfte Kapitel schließt inhaltlich an das dritte Kapitel an, indem es die Dynamiken regionalen Handels thematisiert und darstellt, wie sich Tomatenproduzenten aus Burkina Faso seit Öffnung des Marktes erfolgreich auf dem ghanaischen Produzentenmarkt plazieren konnten. Das Kapitel deckt die Komplexität des Marktes auf und vermittelt Einblick in eine weitere Konkurrenzsituation, mit der die lokalen Kleinbauern Ghanas seit der Handelsliberalisierung zunehmend umgehen müssen. Einführend dazu wird die Handelsbeziehung der beiden Nachbarländer – Ghana und Burkina Faso – historisch nachgezeichnet. Statistiken über grenzüberschreitenden Güterverkehr veranschaulichen dabei die Konkurrenzsituation des regionalen Tomatenhandels. Konfliktfälle werden ebenso dargestellt, wie sie die prekäre Situation der ghanaischen Produzenten widerspiegeln.

Das sechste Kapitel verdeutlicht nochmals die komplexe Einbindung der lokalen Landwirte in den Kontext globaler Handelspolitik. Die Analyse zeigt hier auf, wie makro-ökonomische Prozesse den heimischen verarbeitenden Sektor transformiert haben. Die Diskussion eröffnet Einblicke in den verarbeitenden Sektor und zeigt damit mögliche Gründe auf, die die Kleinproduzenten davon abhalten ihre Erzeugnisse selbst weiter zu verarbeiten. Abnehmende Grenzkontrollen, die Reduzierung von Importzöllen und die Förderung des Privatsektors werden als Ursachen für die hohen Importmengen von Tomatenmark für den ghanaischen Markt diskutiert. Die hohen Importzahlen in Verbindung mit den niedrigen Preisen für Tomatenmark schwächen die inländische Weiterverarbeitungsindustrie im Tomatensektor. Entsprechend werden lokale Investitionen in diesen eigenen Sektor vernachlässigt. Um die politische Dimension im

Tomatensektor zu verdeutlichen wird der Fall der Tomatenfabrik in Pwalugu analysiert. Die Vorgehensweise der verschiedenen Akteure zeigt, dass hier persönliche Interessen im Vordergrund stehen, welche eindeutig zu Lasten der Kleinproduzenten gehen. Zudem weisen Untersuchungen traditioneller Verarbeitungsmethoden auf viele weitere (kleinere) Probleme und somit auch auf wenig Expansionspielraum dieser traditionellen Methoden der Tomatenweiterverarbeitung hin.

Kapitel sieben bringt die Diskussionen der einzelnen Kapitel noch einmal zusammen, um daraus die spezifischen sozialen und ökonomischen Implikationen herauszuarbeiten. Auf Grundlage dieser Analyse werden Politikempfehlungen (auch in theoretischer Hinsicht) erstellt. Die in Kapitel vier bis sechs herausgearbeiteten Vermarktungsstrategien erweisen sich als mitverantwortlich für den ökonomischen und sozio-kulturellen Wandel der untersuchten Gesellschaft. Im Rahmen der konzeptionellen Analyse stellt sich heraus, dass die sozialen Folgen von Prozessen der Güteranhäufung vis-à-vis den sozialen Strukturen, wie zum Beispiel Normen, eine wichtige Rolle im Tomatensektor spielen. Der dargestellte Fall eines ausländischen Investors, gefördert durch Maßnahmen nationaler Politik belegt dies exemplarisch. Ein weiteres Licht auf diesen Sektor wirft das Beispiel des Gebrauchs freier Arbeit unter Kleinproduzenten, welches kein neues Phänomen ist. Dessen Relevanz wird in diesem Kapitel diskutiert. Ausserdem wird der Beitrag sozialer Faktoren zur Verbesserung der Lebensbedingungen thematisiert.

Das letzte Kapitel acht umfasst die Schlussfolgerung. Hierin wird argumentiert, dass die Strukturanpassungsmaßnahmen und die regionalen Handelsabkommen den Wandel des ghanaischen Tomatensektors mit beeinflusst haben. Dennoch sind gerade die lokalen Austauschdynamiken für den Tomatenmarkt in seiner heutigen Form ausschlaggebend gewesen. Das Konzept des Händlerdilemmas, angewandt auf den Tomatensektor, stellt die tragende Rolle kultureller Werte und Normen in ländlichen Gesellschaften deutlich heraus. Diese sozialen Strukturen tragen den Sektor trotz der hohen Risikofaktoren, die sowohl für die Produktion als auch für die Vermarktung identifiziert wurden. Nichtsdestotrotz, stellen die moralischen Aspekte, die die Austauschprozesse und ökonomische Akkumulation anleiten, auch Grenzen für die Entfaltung des Marktes dar.

So finden sich Marktakteure, je nach ihrer sozialen Position, manchmal gefangen zwischen ökonomischen und moralischen Zwängen. In ähnlicher Weise sind die Kontrollmechanismen, über die Händler und Dienstleister verfügen, Ausbeutungsmöglichkeiten, die die Kleinproduzenten in eine benachteiligte Position drängen.

Die Dynamiken der verschiedenen Ebenen des Tomatensektors sowie dessen Komplexität bedürfen praktischer Handlungsinterventionen der ghanaischen Regierung. Der Tomatensektor ist nur ökonomisch tragfähig durch die notwendige Unterstützung des Staates. Dennoch ist im Blick zu behalten, dass laut der Theorie strategischer Gruppen, sich in bestimmten Veränderungsprozessen im Zusammenhang mit dem Entstehen neuer Ressourcen auch neue Akteursallianzen formieren, um ein entstandene Machtvakuum für sich zu besetzen. In diesem Sinne bringt jede Intervention unweigerlich neue Allianzen hervor. Dieses kann allerdings nicht verhindert werden und sollte nicht als Begründung für eine Nicht-Intervention/ weitere staatliche Zurückhaltung dienen, denn das würde zur Marginalisierung armer Kleinproduzenten beitragen. Die gegenwärtigen Bedingungen halten den untersuchten Sektor auf Subsistenzniveau und tragen nicht zu dessen Entwicklung zu einem tragenden Wirtschaftszweig bei.

Abschließend wird das methodologische Vorgehen, welche der der empirischen Datensammlung zu Grunde liegt, detailliert im Anhang präsentiert.

Acknowledgement

The writing of this thesis has been very significant in my academic career. I thank the almighty God for the strength and guidance that has brought me this far. I owe my deepest gratitude to the German Ministry for Education and Research (BMBF), the GLOWA Volta project and the Katholischer Akademischer Ausländer-Dienst (KAAD) for the financial support that enabled me to undertake the program.

Without the support and patience of the following people, the study would not have been completed. I am heartily thankful to my supervisors, Professor Dr. Solvay Gerke and Professor Dr. Hands -Dieter Evers whose extensive experience, commitments and constructive comments inspired and motivated me. They were also extremely supportive when I needed financial assistance. I am indebted to my academic tutor and friend, Dr. Wolfram Laube whose comments and criticisms have been very significant in shaping the final thesis. He was also very much involved in my search for funding and made his house a second home for me.

I wish to express my profound gratitude to Dr Manske Gunther and Frau Zabel Rosemarie whose support made me enjoy my stay at ZEF. I would like to show my sincere appreciation to William Tsuma who offered very useful and constructive comments and Benjamin Schraven who provided useful data sources. I am highly thankful to Yudith Ehlert, despite the enormous work pressures we were facing she managed to do the Deutsch translation of my thesis. I also wish to thank the entire ZEF staff particularly Looman, Marijke, Wagener, Sonja, the librarians and my colleagues especially Stephen Mutie and Patricia Masikati who have contributed in various ways.

I am very grateful to all the institutions and groups in Ghana and Burkina Faso that assisted me during my field research. The following; MoFA, MoTI, the Navrongo DA and the Ghana Embassy in Burkina Faso were very supportive. Henry Crentsil Junior, the director of MoFA in Agona district has exceptionally been a mentor and encouraged me throughout the program. My appreciation also goes to the staff in the Glowa Project and IWMI especially Dr. Boubakar Barry the drivers and most importantly my research

assistant Jacob Afeliga whose dedication and rich knowledge was very vital in getting reliable data sources. I also wish to say many thanks to Godwin Ovie Bateren and John S. MacPhie of Training and Development Limited in United Kingdom who did a remarkable work by proof reading and editing the thesis despite their busy schedules.

To the Laube family: Grandma Käthe Laufenberg, Volker, Anne, Kubura, Jonas, Tobin and Marie Laube, I offer my regards and blessings, my stay in Germany was made profoundly warm and lovely by your friendliness and support. You did not only make me comfortable but improved my Deutsch by practicing with me whenever possible. Last but not the least my special thanks goes to my family who have been with me through thick and thin and for your practical and emotional support that has helped me to thrive here. Every little gesture from you has significantly contributed to the successful completion of this thesis. I am especially indebted to my mother Sarah Ayeribire and my brother Malex Alebikiya whose encouragement and support always make me believe in high achievements.

1 Introduction

The agricultural sector in many African countries has undergone numerous changes following World Bank (WB) and International Monetary Fund (IMF) recommendations on Structural Adjustments Programs (SAPs) (1981 and 2001 respectively). The effects of the resulting changes were also felt in many other sectors. For example, the focus on export-viable crops created a disadvantage for other important subsectors which were given less attention. In Ghana, for instance, public funds flowed to targeted crops such as cocoa, extensively grown in the south (Khor, 2006; 4). This had a negative impact on the food sector where the majority of the rural population are employed. The food sector remains a key area for rural people as alternative economic opportunities in rural areas are scarce. This is very significant in food growing regions such as the Upper East (UER) which is among the poorest in the country with poverty levels estimated at 78% (ISSER, 2005). For several years, tomato farming has been a major source of employment and income generation for farmers in the region. However, the SAP's focus on cash crops had a far-reaching impact on marketing a key income source for rural people. The food crop market in general was particularly affected due to the implementation of the trade liberalisation policies which were part of the structural reforms.

Policies such as the reduction of subsidies and tariffs to encourage imports; and the privatisation and withdrawal of state support, largely contributed to the creation of a vacuum in the domestic market. Such policies also provided an opportunity for local market players e.g. market queens, sorters and service providers, whose roles are key in the sector. These forces for change have had considerable negative effect in the UER where tomato farming has often been viewed as an economically viable sector capable of development. In this thesis I use the case of the tomato industry to unravel the complexities of marketing among small scale tomato farmers in the UER. I also demonstrate how various interests play a role in determining the mode and pattern of exchange. The thesis also argues that the resultant processes of resource production, exchange and marketing strategies are an outcome of power differentials between various market players, engaging or operating within the scope of post-SAP and regional trade processes.

The high levels of tomato consumption coupled with the wide production levels in the country make the sector appear economically viable, particularly so in the UER which supplies the country's tomatoes in the dry season. The expectation, therefore, is that tomato farmers in the region will have an economic advantage over other producing regions in the country. However, the research findings reveal marketing problems largely created by SAPs and trade policies. These factors have not only contributed to the collapse of the Pwalugu Tomato Factory (PTF) in the region but also to the disappearance of the farmers' marketing source (Kohr, 2006), thus weakening domestic production and marketing by creating competition at the global level. In addition, regional trade agreement policies have opened a market opportunity in Ghana for Burkina Faso tomato farmers, presenting further challenges for local farmers. Combinations of the above factors have created a restricted market monopolised by a strong private tomato traders' association that is well organised by leaders known as 'Tomato Queen Mothers' (TQM). Their activities are facilitated by service providers who play various exploitative roles to the disadvantage of small-scale farmers. An attempt to revamp the factory in 2006 was not successful. However, despite the multiple setbacks, the sector continues to achieve high levels of production.

It is against this background that this thesis investigates the motivational factors that encourage farmers to produce. It further attempts to find answers as to why farmers do not diversify into other marketable crops and, finally, it examines the domestic agro-processing sector to find out why farmers do not process their produce. Investigation of these concepts is accompanied by the following objectives: to examine how global and regional trade policies have influenced the local tomato market and to determine how farmers are affected: to understand the socio-economic changes resulting from the policies' impact in order to analyse the social consequences: to identify weaknesses and possible areas of intervention by offering suggestions and policy recommendations.

This thesis draws on theories on risks, power and the moral market in the context of traders' dilemmas in order to contribute to broad academic knowledge in social studies. Literature on risks reviews the works of Alderman and Paxson, 1994; Dercon, 2000 and

Holsmann, 2001 all of whom have written extensively on risks in relation to agriculture. Characteristically, with tomatoes being highly perishable crops exposed to a high incidence of incomplete markets, uncertainties are high in the sector. The theory of risks therefore helps to understand the risks factors faced both by farmers and traders; and the management strategies which could also explain the sectors continuing existence. The theory on power is contextualised within the concept of the strategic construction of power resulting from the creation of space in a social setting that enables other players to take advantage of the opportunities created (Evers and Gerke, 2005). Society is considered to be an arena for social competition in which power struggles exist. The broad ideas on power provide a better understanding of the controlling and exploitative processes of the market. Furthermore, within the macro theory on the moral market, Evers and Schrader, (1994) have observed the important role cultural values and norms play in posing a dilemma for traders involved in seeking to accumulate economic benefits. Against this background, the thesis examines how farmers, traders and service providers are affected by the traders' dilemmas and the strategies they employ in an attempt to resolve them.

Many studies on agriculture, particularly those examining changes in marketing of food crops, have strongly blamed the challenges confronting farmers on SAPs. Others such as Lyon, Konings and Cracia Clark have conducted various studies in Ghana on traders' associations and food distribution in both the tomato and the food sector. However, there exists little literature on the autonomy of local market players and the dynamics of their activities in the UER. In this regard, the different contribution this thesis makes in the field of social studies is to discuss collectively the outcomes of SAPs and regional trade on the local tomato market. It describes the complexities in what appears to be a simple but highly regulated market. Within a social context, it unravels the ability of players to independently manage and sustain a vibrant sector of the nation's economy.

This thesis is organised as follows:

Chapter 2 serves as the foundation from which the thesis emerges. It brings out the relevance of the thesis by giving a broader picture of how SAPs contributed to the

transformations in the agricultural sector. It explains how the recommendation of SAPs led to a focus on cash crops at the expense of food crops which are crucial for rural employment. It also highlights how the WB and IMF conditions such as trade liberalisation policies requiring the reduction of subsidies and tariffs to allow imports, and the privatisation and withdrawal of state support, contributed greatly to the creation of a market vacuum. The consequences of these policies are very important in justifying the focus on the region as well as explaining the critical situation of tomato farmers in the marketing of their produce. The discussion therefore gives the reader background knowledge about the marketing patterns of the tomato sector thus enabling an informed appreciation of the current state of the market.

Chapter 3 forms the theoretical framework. In this chapter, the thesis is placed within a scientific background where theories on particular disciplines are gathered to explain the complexities in the tomato sector. Theories on risks, traders' dilemma and power integrate concepts that underpin a broad knowledge of the topic under study. The theory on risk helps one to understand the inherently risky nature of the tomato sector and the management strategies employed. The review on traders' dilemma explains how market players are influenced by factors such as cultural values and norms that are embedded in rural markets. Through this, the important role such social structures play in economic productions gives a deeper understanding of the tomato market. Furthermore, in examining the concepts on power, the chapter makes clear how deeply embedded power structures in society raise the issue of who is included or excluded in certain groups or networks – an issue which cannot be avoided. It reveals the exploitation and control mechanisms that are very common in the tomato market. This chapter guides discussion on these findings through which possible suggestion and sound conclusions are made.

Chapter 4 gives a detailed description of the local market structure. The discussions provide answers to factors that support the sector's sustenance as well as the limited opportunities available to farmers through diversification. Factors contributing to the sustenance of the sector are examined within a social and economic context. Cost analysis on production and trade is presented to illustrate economic factors. For example,

major social factors that emerged were farmers' reliance on free labour, remittances, networks and asset accumulation. Diversification is a problem because vegetables such as pepper and onions are lucrative but due to their high water requirement in an area which experiences water shortages, makes their production difficult. The chapter also provides an illustration of the food supply chain which connects to the tomato market in order to describe the functions of traders', farmers and service providers. An outline of their functions demonstrates the manipulations of power, risks factors and cultural values which are the sources of these dilemma inherent in this market.

Chapter 5 links to the fourth chapter to describe the dynamics of regional trade and how regional policies have opened up a successful market for Burkina Faso tomato farmers in Ghana. The chapter reveals the complexities within the market thus giving a better understanding of another dimension of competition faced by local farmers in Ghana. An explanation of the history of trade relationships between the two countries is given. Import statistics on movements of tomato trucks across the borders are presented to show the competitive levels. Examples of conflicts are also presented to depict the frustration felt by the farmers in Ghana. The theoretical concepts are very reflective as the outcomes shows different levels of risks, power relations, and the dilemma associated with the trade.

Chapter 6 demonstrates an even more complex situation for farmers by examining global trade policies such as trade liberalisation. This gives a picture of how economic processes transformed the domestic processing sector. The discussion provides insights into the processing sector which helps to answer questions that may arise on why farmers do not process their products. The relaxing of border controls, reduction of import tariffs and encouragement of the private sector are discussed as reasons for the high volume of imports of tomato paste in the Ghanaian market. The high level of imports coupled with low prices consequently weakened the processing industry. Accordingly, local investment in the sector is not encouraged. In addition, a study of the processing factory highlights the activities of a foreign investor, namely an Italian firm, Trusty Foods Company Limited (TFL) and the State in order to explain the political dimensions of domestic

processing. Their activities demonstrate the use of the processing factory as a symbol to pursue individual goals at the expense of farmers. Further, investigations into traditional processing methods show multiple problems and little potential for expansion.

Chapter 7 integrates topical findings to examine the social and economic implications. The dimensions of outcome and the extent to which these affect society are explained. The discussions demonstrate that some marketing practices have contributed to economic and socio-cultural changes in society. Contextualising the social consequences within the framework of the theories, it is evident that the processes of asset accumulation vis-à-vis social structures such as norms play an important role in the sector. This is explained using the case of the foreign investor and internal politics. In another perspective, the use of free labour among small scale farmers is not new. The relevance of it in the study is discussed. In addition, the economic significance of the social factors that support the sector is looked at in terms of improved living standards.

Chapter 8 draws conclusions which demonstrate how SAPs and regional trade policies have influenced changes in the tomato sector. However, within a theoretical perspective, the local dynamics of exchange have largely contributed to the state of the market. The concept of traders' dilemma as demonstrated in the tomatoes sector shows the importance of cultural values and norms in rural societies. Such structure supports the sector despite the high risks factors identified in both production and marketing. This notwithstanding, the moral aspect that guides modes of exchange and economic accumulation pose a limitation in the market. Market players are sometimes caught up in making economic and moral choices which preserve their social standing. Similarly, the control mechanism of traders and service providers presents various levels of exploitation where farmers are in a disadvantaged position. The dynamics at various levels coupled with complex approaches to them raise practical issues that need government intervention. It is concluded that the sector can only be economically viable if given the necessary support by government and others. However, this is not to ignore the theory on strategic group formation that new players emerge in processes of change where a vacuum is created. Therefore, any intervention is likely to introduce new players but in any change process

this cannot be avoided and should not be used as a basis to justify neglecting poor farmers. The methodologies used to collect data are detailed in the appendix.

2 The Ghanaian economy and the study area in a broader perspective

2.1 Introduction

This chapter presents a background how economic adjustments in the early 1980s transformed the agricultural sector. It examines the influence of policies which were assumed by IMF and WB as a solution for the poor economic performance of developing countries. The effects were experienced in many areas of the economy but the focus of this study is on agriculture with an interest in the tomato sub-sector. It will show the extent of interference on the domestic tomato market. Discussion on the broad economy connects to the study area by presenting a brief history of the colonial regime, how it contributed to the underdevelopment of the region and influenced the socio-cultural and economic setting. The concluding section highlights the main key points the chapter hopes to convey

2.2 Economic crisis and policy implementation

In the early 1980s, Ghana experienced a number of economic shocks from both internal and external factors. Some of the major economic crisis included “budgetary deficits, adverse terms of trade, exchange rate upheavals, smuggling, corruption, socio-political, environmental and climatic factors (bush fires and droughts) (Oquaye, 2004; Sarpong and Asuming-Brempong, 2004; 117). As a result of the crisis, trade balance worsened from a deficit of US\$32.2 million in 1985 to a deficit of US\$321 million in 1991; real GDP growth fell from 6.25% in 1980 to a negative value of -4.56% in 1983; inflation reached a peak of 129% in 1983; the Cedi depreciated by 192% between 1983 and 1984, 40% between 1984 and 1985, 34% in 1986/87 and 11% in 1988/89; total debt service payments increased from US\$375 million in 1990 to US\$409 million in 1994; total government expenditure on social services declined from 39,9% in 1983-91 to 28% in 1992-94; and 1.2 million Ghanaian emigrant workers were expelled from Nigeria in 1983 (ISSER, 1994; Hutchful, 2002; Oquaye, 2004; Sarpong and Asuming-Brempong, 2004; Appleton and Collier, 1990; Harrigan and Oduro, 2000)

The cost of the impact of these changes was observed in many sectors such as health, education and social services as poverty levels worsened. “Real national income per capita fell by 7.7% between 1981 to 1983 and average earnings of workers declined from an index of 100 in 1977 to 21.9 in 1983” (Sarpong and Asuming-Brempong, 2004: 118). Furthermore, between 1987 and 1991 about 70,000 workers were dismissed from public service and the agency responsible for Ghana’s cocoa marketing (COCOBOD). During the droughts, energy dependent firms also recorded considerable figures of unemployment. Ghana’s energy source emanates from hydro power therefore enterprises dependent on energy had to fold-up leading to unemployment and drastic reduction in the production of commodities (Oquaye, 2004; Ibid; 117). An example is “Volta Aluminum Company which consumes 50% of the total hydro-power generated in the country. The company had to shut down 3 of its 4 operating pot-lines and dismissed about 38% of its workforce.

The mining sector also had its share of labour market adjustments. In 1999, a major gold producing company “dismissed more that 2,500 workers” (Sarpong and Asuming-Brempong, 2004; 119). As was the case in many African countries at the time, the devastating state of the economy attracted the international community’s (World Bank and IMF) enquiry into the causes of the economic recession. Following the investigations, a report by Berg in 1981 attributed the causes of the crisis to internal factors and blamed governments in the developing countries for initiating policies that militated against development (World Bank, 1981; Ponte, 2002). In the agriculture sector, the report identified the neglect of peasant agriculture and state intervention as some of the bad policies of the state. Similarly, Robert Bates (1981) argued that the ruling elites used their control of state powers to the benefit of themselves and, in consequence, undermined farmers. In response, there was a call for the retrenchment of the State involvement as a way of allowing poor farmers to take advantage of market opportunities.

In an attempt to address the problems, macroeconomic policies such as Structural Adjustments programs (SAPs) were promoted by the World Bank and IMF. SAPs are

shifts in economic policies from an interventionist stance, towards a neo-liberal position which aims to minimise state intervention, thus allowing the market to allocate resources' (Engberg, et al 1996: 3; Berry, 1997). Therefore, the World Bank and IMF idea of SAPs is allowing markets the opportunity to function with less government intervention (Hutchful, 1996).

The main goals were to promote efficiency in resource allocation leading to economic growth, poverty reduction through job creation and low commodity prices. However, these came with conditions for countries expecting financial support from these institutions. Governments were expected to reform their labour laws and to decrease public spending while reducing their control over state resources and to play a more regulatory and promotional role. In addition, adjustments in fiscal reforms such as devaluation of the national currency and privatisation of certain important sectors e.g. agriculture and mining, were recommended. In place of government control controls, the private sector and other market institutions were encouraged to come in to ensure efficient exchange and distribution of resources (Sarpong and Asuming-Brempong, 2004). SAPs targeted specific sectors deemed important to the economy; one such was the agricultural sector in Ghana where their implementation had far-reaching impacts in so far as the food production sector was concerned (Lipton and Ravallion, 1995; Yilma et al, 2007: 4, Fan and Rao, 2003). The most significant areas in agriculture were trade liberalisation, exchange controls and withdrawal of government subsidies.

Trade liberalisation is the opening of a country's borders to global markets to eliminate or at least decrease trade practices that prevent the free flow of goods and services between nations (IMF, 2001). Its approach includes dismantling of regulatory structures such as tariffs (duties or export subsidies) as well as non-tariff barriers e.g. regulation of licenses, quotas and arbitrary standards (IMF, 2001; Shafaeddin, 2005). The principal arguments for these reforms hypothesise that private players under the guidance of market forces would have much better opportunities for realising growth and diversification of export as against manufactured goods (Shafaeddin, 2005). It was however, assumed that the transformations, apart from realising economic growth, improve skills and enhances the production structure, through imported technology (Ibid). This notwithstanding, the

successes of SAPs have been received with mixed feelings although the World Bank reports continue to prove that the policies were successful.

It is argued that the high-performing Asian economies such as Japan, Hong Kong, South Korea, Singapore and Taiwan have grown rapidly because of SAPs (Chukwuma, 2002). The Bank asserts that, following the onset of structural adjustments in the 1990s, inequality declined and rapid economic growth has since been recorded in Vietnam, India and Uganda (IMF 2001).

In Africa, the success of Zimbabwe's small-scale maize sector in the early eighties and the improvements to Ghana's economy shortly after implementation, were attributed to the adjustments (Eicher, 2003). Contrary to these reports, wide ranges of literature criticise the WB/IMF for perpetuating the interest of Western markets at the expense of developing countries' domestic markets (Lamb, 2007; Khor, 2006). Raman (2006) for instance does not agree with the decline in inequality and acknowledges that developing countries fully embraced the reforms and opened their market to international trade. Whiles, market access is highly restricted, in developed countries where massive domestic support in agriculture have been sustained, limiting export opportunities for developing countries' (Ibid). In this respect, many developing countries are faced with dumping of cheaper imports, which often compete with and displaces local produce as will be seen in the subsequent section.

2.2.1 Economic adjustment: the performance of the agricultural sector

In accordance to the recommendations, trade regulations were relaxed and import tariffs reduced to low rates. This gave the international community the opportunity to flood the domestic markets with foreign products. Within the period, Ghanaian food markets were filled with international goods; notable among these are rice, processed tomatoes paste, chicken parts, cooking oil etc (ISODEC, 2004; Ochieng and Sharman, 2005). The products attract cheap prices because European farmers still enjoy subsidies from their governments. It is also believed that direct subsidies for EU farmers is about 300 Million

Euro and millions more indirectly (Bunte and Rosa, 2007). Subsidies appropriations for 2004 refunds on fruits and vegetables is said to be at Euro 41,000,000 and production aid for processed tomato products at Euro 298,000,000 (Knottnerus et al, 2007; Pendleton, 2002). Additionally, discussions in the theoretical chapter show support from insurance companies and the well regulated commodity markets while farmers in Ghana receive no such support. Ghanaian farmers were only assisted prior to the adjustments when financial institutions supported agricultural production. The sector was then among the top priorities for credits acquisition at very low interest rates by the Agricultural Development Bank (ADB). “In addition to the ADB, Commercial banks were obligated to lend not less than 25% of their loan to the agriculture sector at reduced interest rates” (Yilma et al, 2007: 5). The withdrawal of the financial support saw increases in interest rates for agricultural loans and a total eradication of loans to small holder farmers. (Ibid)

The outcomes of trade liberalisation have been received with mixed feelings. At the international level the powerful institutions were concerned about macro- economic indicators. These concerns were without concrete links to rural livelihoods “such as other key elements of livelihood strategies that are being reshaped by trade liberalisation and other reforms” (Ponte, 2002). It is in this regard that many economists like Rodrik (2001) argue that trade liberalisation does not necessarily link to economic growth. Rodrik has shown that there hasn’t been any difference in economic development between countries that implemented trade policies and those that did not. In reiterating the point, the 2004 Africa Economic Report concludes that growth and poverty reduction in Africa does not rely only on trade liberalisation (UNECA, 2004).

This is however, not to give a gloomy picture of trade liberalisation and global market integration. As some schools of thought will have it, a country opening its borders to the global world is not negative per se. The idea behind these frameworks had promises for households in developing countries; growth and income generating activities, new opportunities and job creation are some of the areas that were seen as beneficial. At least one can still link some areas of success to global market integration. In the Ghanaian economy, “It brought its fiscal situation under control and adjusted its exchange rate. The

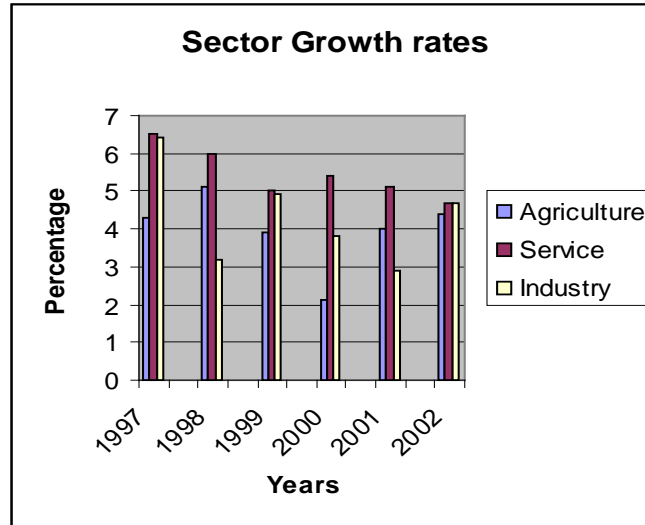
cocoa sector which, was virtually neglected for almost a decade, started to recover in production and exports due to multinational support” (Oquaye, 2004: 458). Production started to increase, cumulative purchases for 1985/86 was 166,264 tons as against 136,955 tons for the same period in the previous season, the most significant measure was the four fold increase in the producer price of cocoa (ibid). In this respect, Ghana was often promoted as an African success story after the implementation of trade liberalisation.

It must be noted that factors such as droughts, changes in rainfall patterns and socio-political also contributed to the sectors decline. For example the 1970 and 1977 are reported as low rainfall years likewise, the 1983 draught which hit the whole nation and affected rice production in the Northern region. Rice production was reduced from 56 metric tons per year in 1978/1980 to 27 metric tons by 1983 is believed to be partly due to severe drought which affected the regions agriculture. Furthermore, the deportation of thousands of Ghanaians who fled the country during the crisis to Nigeria in the 80s also added up to the already critical economy (Bruce and Asuming-Brenpong, 2004). These not withstanding, the major effects of trade policies were at a high cost to majority of Ghanaians. Other literatures show that results on negative impacts are inconclusive but agree that the effects on agriculture are distinct (Fan and Rao, 2003).

In Ghana, the general mass exercise to cut back on employment in the civil service (Berry, 1997) destabilised the agricultural sector. For instance, in the manufacturing sector employment fell from 78,700 in 1987 to 28,000 in 1993 (Ochieng and Sharman, 2005). Governments’ subsidy on agriculture was terminated as budgets for vital agricultural services were cut back. The resulting reduction in employment is particularly felt in agricultural service delivery: extension farmer ratio now stands at 1: 1500, majority of who are small scale farmers who have no access to extension services at all. The processes generated low interest in agriculture, as the steady decline in the economically active population was estimated to be about 45% in 2001. Subsequently, “agriculture's share of aggregate output growth averaged 12.78% per annum during

1990s, and -27.8% and -7.1% in 1990 and 1992, respectively”. Real GDP of agriculture fell by 7% in 1983; per capita food availability in 1983 was 30% lower than in 1974.

Figure 2.1 Economic sectors



Source: ISSER 2003

During the period, the services sector and industry performed much better than agriculture as shown in figure 2.1, the services sector in particular, recorded high growth rates. Despite the fact that the food sector in developing countries is very significant for economic development. It is the largest sector that offers employment in rural communities and a potential area for poverty reduction. “According to the World Bank, agriculture and other labour-intensive products represent more than half of low-income countries’ exports and about 70% of the least developed countries’ export revenues”. In Ghana, besides directly employing the majority of the rural population, the sector also indirectly employs many of the urban population example; traders of agricultural commodities, input dealers, and processors. Despite the sector livelihood support, budget allocation to agricultural food crops during the economic reforms was drastically cut back.

2.2.2 The changes in the food sector following SAP

Development programmes introduced under SAPs were biased towards the promotion of exportable crops, particularly cocoa and oil palm. This was because most of the foreign aid was channelled towards crops that the international community could not produce. The attention focussed on cocoa, for example, led to an increase in cocoa production from 0.8% of total crops in 1880/89 to 5.7% in 1990/99.

The food crops sector was significantly ignored as the budget allocation to agriculture fell to levels that could hardly support it. In a study carried out on economic challenges conducted by African Studies Centre in the University of Pennsylvania in 1991/92, a general decline in poverty levels was observed in many sectors. However, the agricultural sector was found to be adversely affected. The report indicated that food crop farmers are the poorest with 68% of them living in poverty (Ali, and Ali-Dinar, eds, 2009). The decline in poverty in the other sectors is believed to come from the high growth in the cocoa sector due to the government support it received. Thus the benefits of this growth in cocoa production are seen in the cocoa producing localities and Regions (Ibid). The factors largely responsible were the removal of agricultural subsidies, privatisation of input markets, elimination of state marketing agencies and the easing of price and exchange controls (Oquaye, 2004; Reardon et al, 1994; Berry 1997: 1226).

This was also followed by the liberalisation of the financial sector in an attempt to make it more efficient and to conform to the new reforms (Clark, 1988, 1994). Therefore, interest rates on financial lending were raised to levels of over 45% per annum. Furthermore, loans were given primarily to businesses perceived to be less risky. The food sector, being largely rain fed and characterised by changes in climatic and environmental conditions is perceived as high risk. For this reason financial support to agriculture, particularly the small-holders who constitute the bulk of food producers in Ghana, was removed. The reduction in government subsidies and encouragement of the private sector led to a rise in agricultural inputs. Increases in the price of simple implements continued to be painful for the poor farmer. In a 2003 report, ISSER noted

that the cost of the most basic tools, for example a hoe, used by Ghanaian farmers, rose by 30.8% whilst the cost of cutlasses and machetes rose by 15.1% and 14.3% respectively. Increases for fertilisers and chemicals ranged from 2.5% to 32.2% (ISSER, 2004).

2.3 The effect of agricultural policies and market interference on inputs and outputs

The process of trade liberalisation proceeded to gradually eliminate the incentive system in order to comply with the IMF and W/B regulations. Tariffs were progressively lowered to the rate of 20% by 2001, subsidies on input and output of farm products were eliminated to promote efficiency, and the majority of import and price controls were relaxed (Berry, 1997). In Ghana, government support for agricultural inputs such as farm implements, fertilisers and agro-chemicals was gradually cut back to allow private sector investment. These actions facilitated the monopolisation of the inputs supply sector which is focused on export crops. An example in Ghana is the fertiliser market that is dominated by one single company (WIENCO) (Heerink et al. 1997). Although the objective was to ensure economic efficiency in the supply of agricultural inputs, rural farmers did not benefit. Suppliers found rural farmers poor and therefore risky to deal with. Before the changes, production was encouraged through agricultural extension support services; input supply, credit facilities, marketing and the formation of agricultural co-operative activities were encouraged (Hinderink and Sterkenburg, 1985: 79). MOFA, (2005: 9). The new situation led to a drop of almost 90% in the use of insecticides and fungicides (Konings et al, 1998). Farmers were not motivated to use such chemicals because their returns on producer prices did not match up with production costs.

For instance, a report on the cotton industry in parts of West Africa show that cotton production fell due to high prices of agro-chemicals. An example is found “in the savannah region of Togo, the difference between the price received by farmers for first quality cotton and the price they paid for agro-chemicals decreased by 15% between 1991 and 1995; in the same period, the area of land under cotton decreased from 15,141 to

12,683 hectares” (Ibid: 1). These reductions are also observed in the declining use of fertiliser in the food crop sector Konings et al, (1998). In a value:cost ratios analysis, Gerner et al. 1995 and Koffi- Tessio 1998 showed that, in many West African countries, the “value added” has fallen below the minimum at which fertiliser use is feasible for the farmers. Similar research by the World Bank (2000) for all food crops in West Africa concluded that fertiliser use decreased from 15 kg/ha in the 1980s to 12-13 kg/ha in 1995 and 1996. According to Hutchful, in 1988 Ghana used less than 5kg of plant nutrient per hectare of arable land compared to 6.4kg for Mali, 21.5kg in Malawi and a world average of 98.7kg. Further studies by the Food and Agricultural Organisation show that out of nineteen developing countries, Ghana had the lowest level of chemical fertiliser application (Hutchful, 1996: 163). As already explained in the previous sections, due to the exceptional attention given to cocoa, the crop benefited significantly. Currently, the government still supports the cocoa sector by providing fertiliser; and the use of chemicals to control diseases such as swollen shoot and capsid has been reintroduced (ISSER 1995).

Regarding the output market, Ghana’s membership of the World Trade Organisation (WTO) since 1995 makes it obligatory for her to reduce agricultural tariffs by 24%. Guaranteed prices, which existed for staple foods such as maize and rice through marketing boards, were discontinued, and the output market was liberalised (Asuming-Brempong, 2006). On paper, it would seem that the country has a flexible tariff ceiling of 99%. This, according to MoTI, implies that they are able to increase tariffs on agricultural commodities between 0-99 percent. However, international policies on increases in tariffs make domestic adjustments difficult. For example, the tariff on agricultural products such as tomatoes, poultry and rice has remained at 20%. In the case of tomato paste imported for repackaging in Ghana, the tariff is even lower at 10%” (Issah, 2007). The low tariff, together with the negative impacts of trade liberalisation has encouraged the importation and dumping of food items like rice, poultry products and tomatoes making these sectors the worst in terms of domestic market performance.

Literature indicates that domestic rice productions in the northern parts of the country alone in 1978-80 were 56,000 tons. However, this fell to 27000 tons for the whole country in 1983 (Khor, (2008) and Bassey, (2008). Total imports of rice in 1998 increased to 250,000 tons and by 2002 imports had increased from 64% to 79% in 2003 (Ibid). The domestic poultry industry was also affected with the EU's chicken exports to Ghana and other West African countries enjoying subsidies of 254 Euros per ton. (Shafaeddin, 2008: 2). Such distortions were identified by Bassey (2008) when, in Cameroon, after import tariffs were reduced to 25%, poultry imports more than doubled. Similarly, in Senegal, Shafaeddin (2008) found that about 70% of the local production of poultry was wiped out, while in Cote d'Avoire there was a 23% reduction in domestic poultry production between 2001 and 2003. In Ghana, imports made up 89% of domestic supply of poultry in 2001 as compared with 5% in 1992.

In 2003 the devastating effects on domestic farmers generated protest particularly among the Ghana National Association of Poultry Farmers, farmer-based organisations and NGOs. "Accordingly, in 2003, the government of Ghana indicated in the budget they would increase the tariffs on poultry and rice from 20% to 40% and 20% to 25% respectively" (Issah, 2007: 9, MoTI, 2008). However, the changes were not carried out so, in 2005, the protest group, together with the assistance of the Centre for Public Interest Law (CEPIL), filed a writ against the government for failing to implement the increases in tariffs. The court found in favour of the protest group but this did not yield any result. Instead, the government, in the same year, repealed Act 641 which included the law on imports and tariffs. The continuing low percentages have generated interesting developments in the tomato sector and they continue to be the subject of much debate, as shall be seen in the next section.

2.3.1 The destabilisation of the tomato sub-sector

As noted in the introduction, the high consumption levels of tomatoes in Ghana make it appear as an economically viable sector. Large quantities are regularly consumed in every household, poor or rich. Production varies with the seasons throughout the country and is

based on smallholder farming. The Southern parts of the country produce in the rainy season and the North, notably the UER, produces only in the dry season by using irrigation. The employment potential and income generation for both rural and urban dwellers also gives the impression of a viable sector. However, the neglect of the food sector led to a reduction of tomato production from 92% to 57% from 1998 to 2004 (Asare-Bediako et al, 2007: 459, FAO, 2006). Meanwhile, imports of processed tomatoes from the EU countries increased by 628% between 1993 and 2003, going up from 3,713 tonnes to 27,015 tonnes (Barroso, 2008; Yerfi, 1991). The imported products are comparatively cheap thus attracting consumers, while local farmers pull back. It is estimated that about 90% of the tomato paste presently consumed in Ghana is imported from the EU' (Khor, 2004: 37). The major exporters to Ghana are Italy, China, USA, Spain, Turkey, Greece, Portugal and Chile. Italy and China are dominant with almost 54 brands of tomato paste¹. According to a story published by a local newspaper, "Public Agenda", on March 20th, 2006, Ghana is the world's second largest importer of tomato paste, Germany² being the largest. The country has become the recipient of tomato pastes from many countries as shown in figure 2.2. Currently, among the eight EU countries exporting to Ghana, Italy is the highest with 39% while Portugal and Chile compete at 6% (Figs 2.2 and 2.3).

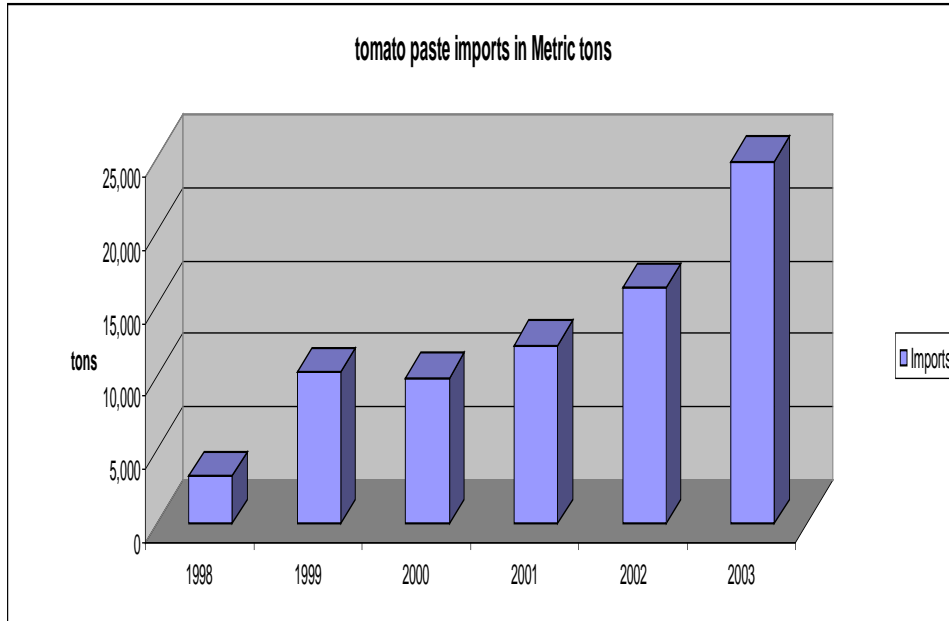
In 2001, the effects of the increasing imports on domestic markets and on farmers' incomes prompted an intervention by United Link, a Ghanaian company. With the support of Unilever, food distributors, and a German Development Cooperation (GTS), an attempt was made to re-establish a tomato processing factory in Wenchi, in the Brong Ahafo region. This gesture reignited the spirit of farmers in the Wenchi catchment area and production resumed but it could not be sustained due to the high level of imports so the factory had to be closed (FAO, 2006). The domestic market is not only affected by

¹ Field interview, with personnel at the Ministry of Trade and Industry, Accra, (2008)
Can also be found in www.actionaid.org

² Public Agenda, 2006, "Ghana is 2nd Largest Importer of Tin Tomato. March 20th edition, Accra, Ghana
allafrica.com/stories/200708201105.html
Ghana News Agency, Business/Finance Wed, 11 Mar 2009

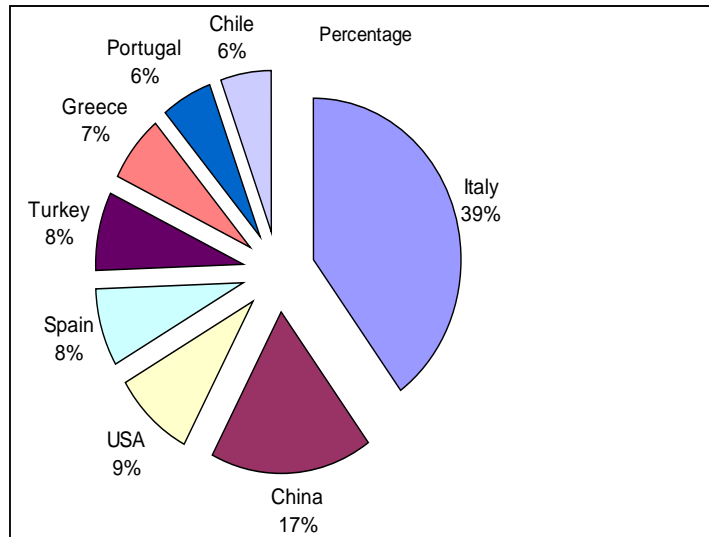
the high level of imports caused by international trade policies, it is challenged by trade agreements between ECOWAS member countries³.

Figure 2.2 Tomato paste imported into Ghana



Source: Asuming-Brempong et al., 2006

Figure 2.3 Major exporters of tomato paste to Ghana



Source: FAO 2006 MOTI (2007)

³ See Introduction

2.3.2 An overview of ECOWAS trade policies

The cause of the problems in the tomato sector is not limited to global policies. The current state of the local tomato market has been greatly affected by the regional trade situation. Regional organisations are recognised under UN frameworks as attempts to strengthen North-South trade and establish efficient economic links. The rationale for such co-operation among developing countries is the fact that it takes cognisance of the varying degrees and stages of development involved. For example, the low industrial and resource base, the under-utilised productive power and dormant resources (Aderemi, 2002). These factors, together with the failure of developing countries to fully integrate at international market levels, strengthened regional agreements to motivate efficient economic growth. Against that background, the establishment of cooperatives such as the Association of South-East Asian Nations (ASEAN), the Central American Common Market (CACM), and the Latin American Integration Association (LAIA) became important. Therefore ECOWAS, aimed at stimulating regional cooperation within the West African Sub-region was viewed as a vital institution for stimulating economic development.

However, since its inception in 1975, it is alleged that the main focus has been on governance and “the resolution of crises in Sierra Leone, Liberia and Guinea Bissau, without much economic integration being achieved” (Abdulai and Egger, 1992). Therefore, there are increasing concerns about wasting the potential for successful economic development through intra-regional trade. The initial hopes were that the production of dissimilar agricultural commodities in the coastal and Sahelian countries within the West Africa sub-region indicated a potential for regional trade. This was based on the record of regional trade within the West African borders in the 1960s and 1970s. During this period, products such as cotton, livestock, groundnuts and groundnut oil were exported from the Sahelian regions to the coastal areas and maize and salt from coastal to the Sahelian (Abdulai and Egger, 1992).

The main regional, agricultural trade Ghana was involved in was the importing of cattle from Burkina Faso and Niger. Other coastal countries like Nigeria and Cote d’Ivoire also

imported large quantities of livestock from the Sahelian countries. Therefore, livestock became the most popular commodity of exchange across the borders. Considerable amounts of maize were also transported to the Sahelian countries. For example, in 1989/90 50,000 tonnes of surplus maize were exported from Ghana to the Guinea, Niger and Togo markets (Ibid, GNA, 1990).

Despite the successful history of this trade, recent studies reveal that “production structures and trade patterns in most developing countries tend to be competitive rather than complementary” (Ibid,: 278; Radelet 1999). For example, Ivorian plastic goods compete against their Nigerian counterparts in the Nigerian market and Nigerian plastic products compete against Ivorian ones in Côte d’Ivoire. A limiting factor is that there are little or no records of any significant linkages to the agriculture which makes up the bulk of these countries’ economies (Aderemi, 2002). However, Ghana and Burkina Faso have historically traded in agricultural goods among which tomatoes and onions remain predominant. Cross border trade between the two countries is very easy as only a thin border-line separates the two countries. This is further facilitated by the regional trade policies on free movements of goods and services.

As previously stated, the collapse of the tomato factory in UER created a potential market for Burkina Faso tomato farmers. The increasing numbers of Southern traders exporting to the North attracted Burkina Faso farmers to take advantage of the market for their products. The available market for tomatoes led to increased productions and high imports of fresh tomatoes into Ghana. An interesting aspect of this trade is Ghanaian traders prefer tomatoes from Burkina Faso, thus creating problems between the two countries. This consolidates the fears about the risks to regions trading in the same goods. According to customs officials, the trade boosts the Burkina Faso economy. The economic and social benefits of export have been acknowledged by many writers. For example, Rams (1985) concluded, on the evidence of exports and economic growth in developing countries, that their export performance was extremely important. In Guatemala, Segre (1998) reports that proceed from the export of vegetable had a positive impact on household income and food security. It also accounted for increased on-farm

employment and new employment opportunities for non-cooperative-member households. Findings from Malawi also reveal that, due to the income generated for small-holders by exporting vegetables, the Ministry of Agriculture there is increasingly supporting them, for example by carrying out research and training people in vegetable production (Mkamanga et al, 1990).

In Ghana, the officials at the border indicated that the country loses 300 to 400 Million Cedis to Burkina Faso during the season apart from the fatal accidents which add a further cost to the nation. In an interview at MoFA, it was stated that imports from Burkina Faso increased from 1,797 tonnes in 2004 to 7,890 tons in 2006. This situation is threatening to displace Ghanaian tomato farmers who are finding it extremely difficult to compete with their neighbours. In view of the benefits to Burkina Faso, it is no surprise that the government is investing in research into higher quality varieties of tomatoes. Since this situation is covered in detail in later chapters, a look, first, at the research area is required to provide background information and describe the setting within which tomato farming is undertaken.

2.4 The research area

This section presents a brief overview of the Upper East Region and a description of the Kassena Nankane District (KND) and the communities (Kandiga, Mirigu and Doba) where the study was undertaken. The social organisation of the area, its demographics and the local economy will be discussed. This is followed by an explanation of the environmental and climatic features involved as well as a history of tomato production in the district.

2.4.1 The Upper East Region

The UER, one of the ten regions in Ghana, is located in the North-Eastern corner of the country. It is bordered to the North by Burkina Faso, to the East by the Republic of Togo, to the West by Sissala District in Upper West Region and to the South by West Mamprusi which is in the Northern Region. The region's strategic location makes it the gateway to

other parts of Africa through Burkina Faso, which also served as the traditional route for the Trans Sahara trade in colonial times. On entry into the UER from the Southern part of the country, one immediately encounters a striking Sahel terrain which is continuously flat with a vegetation characteristic of savannah grassland. It has a diversity of ethnic groups with about twenty-two languages spoken in the region (Blench, 2006; Barker 1986). The major ethnic groups are Gurunsi (Frafra), Kassena, Nankani, Builsa, Kusasi, Mamprusi and Busanga. The Frafra's are the largest group (30.5%), followed by the Kusasi (22.6%) and the Nankani (9.2%). With a population of about 920,000, the UER covers 8,842 sq km of the country's land (GSS, 2002). It comes after Greater Accra as the second smallest region in Ghana with 84% of the population living in rural settlements containing less than 5,000 inhabitants.

As mentioned earlier, it is one of the poorest regions in the country, the local economy depending largely on agriculture. Together with the upper west,; the two regions have less than 20% urban population. The high poverty level also has historical roots in colonial times namely, the influence of the Trans Sahara slave trade, slave raids and biased colonial administration. Sociologists and anthropologists have often explained the low educational levels and general under-development in these contexts (Perby, 2004; Konings, 1986; Bening, 1990; Plange, 1978/79 and Luabe, 2005) Relics of the slave trade can still be seen at the slave camp in a community called Nania in the KND.

During the British colonisation of the Gold Coast - now Ghana - the Northern part of the country was excluded from development plans and rather reserved as a labour force for the Southern parts, the seat of the colonial administration. Educational and economic policies were deliberately structured to neglect the region and to ensure continuous migration of the labour force to the South. "Kumedsro, (1970) found that the low population growth of the Kassena Nankana District between 1948 and 1960 is attributable to the emigration of about 26,000 people, i.e. "...almost 20% of all people born in the district." (Laube et al, 2008: 9). However, people later began to migrate voluntarily for various reasons as will be seen in subsequent sections. The colonial masters did not only refuse to establish schools in the North as was the case in the south

but prevented missionaries from doing so. The region's religious roots in Catholicism date back to the 20th century, symbolised by the building of the cathedral in 1909 in the district. Yet, during the regime, the missionaries who introduced Christianity were restricted in the implementation of their development plans. This was done to retain high levels of illiteracy so as to guarantee the availability of unskilled labour, particularly as the need for military recruitment became apparent.

These processes created vast inequality in terms of development between the Southern and Northern sectors of the country. The lack of education for the people in the region has become a blemish which the people have to deal with to this day. The Southerners have a perception of superiority so look at the North with scorn. The poor education of the people limited their participation in the country's politics and administration (Saaka, 2001). This offered an opportunity for political elites to continue to be biased against the North in terms of their development policies. The region has, since Independence, remained the poorest in the country. According to the 2000 census figures, the three regions located in the Northern part of the country have the highest rate of illiteracy with the Upper East being the worst with 76.5%. Greater Accra region has the lowest illiteracy rate of 18.4% followed by the Western region with 41.8%, Central 42.9%, and Brong Ahafo 48.5% (GSS, 2002).

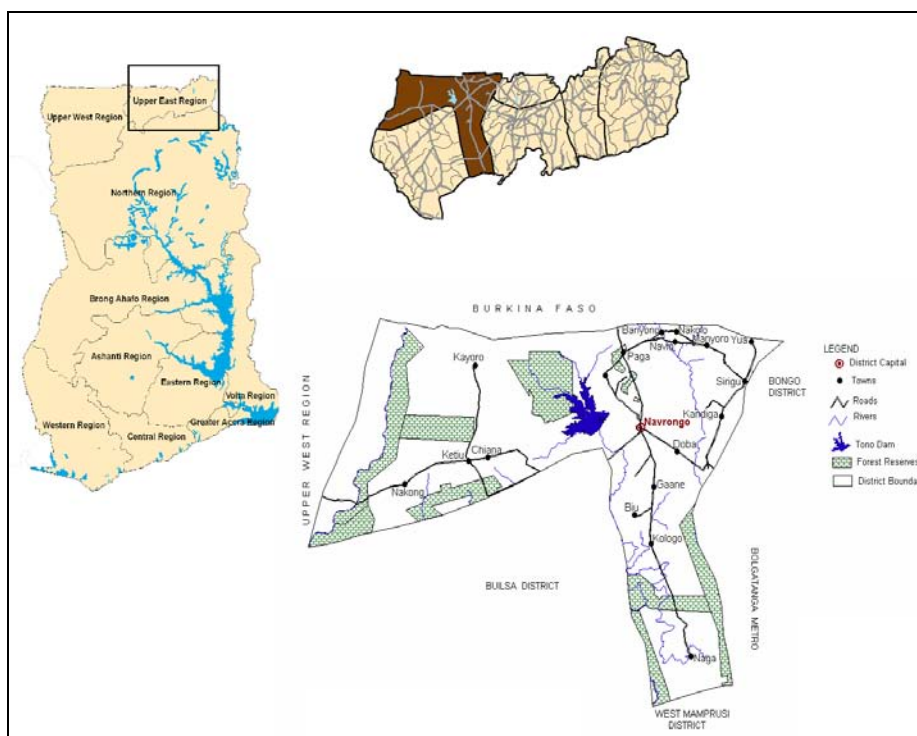
However, it is famous for its rich historical and diverse cultural background which, unfortunately, is not well documented (Blench2006) Biographic interviews are the major sources of information although they are very subjective (Schott, 1977). This part of the country is well known for its handicrafts industry producing straw hats, baskets, traditional textiles and leather goods which are fast gaining a place on the international market. In addition, the region's architecture - round huts built from mud - is very attractive and quite different to other structural designs in the Southern parts of the country. Their design is not only very suitable for the extreme weather conditions but has, for generations, created a special identity that is traditionally and culturally unique to the people. This artistic architectural design has gained the support of an international organisation resulting in the formation of a women's group known as Sirigu Women's

Organisation of Poetry and Art (SWAPO) and the area has become a tourist site. Another very popular tourist attraction is the crocodile sanctuary located in Paga. With the assistance of native custodians of the ponds, visitors from around the World have taken many memorable pictures of the reptiles. In 2008, the Region was divided into 9 administration districts: Bawku Municipal, Bawku West, Bolgatanga Municipal, Bongo, Builsa, Garu Tempene, Talensi Namdam, Kassena Nankane East, and Kassena Nankane West. The regional capital, Bolgatanga, has a population of 49,162. The capital was the meeting point during the time of the trans-Saharan trade routes from Mali, through Burkina Faso, to Southern Ghana. Now, it is the market centre for the handicrafts which attract many visitors to the town. The KND was, until 2008, the second largest district in the region.

2.4.2 A Study of the Kassena Nankane District and Communities

The KND has a population of 149,491 and covers an area of 1,657 km² (GSS, 2002). It shares boundaries with six Districts as shown on the map; below it is primarily rural with highly dispersed settlements giving a population density of 92 people per square kilometre. Illiteracy rates are high, especially among females, with almost 83% of them being illiterate. Each District is administered by a District Assembly (DA). In 2008 a new District, Kasena Nankane West, was carved out of the original.

Map 2.1 Upper East Region and Kasena Nankane District



Source: Glowa Volta Project (SEF), 2007

The study was conducted in three of the 326 communities, namely Kandiga, Mirigu and Doba.. Kandiga and Doba are located towards the Eastern part of the District and Mirigu is more to the North. They are all between 20 to 28 kilometres from the District capital, Navrongo. Kandiga and Doba are between 30 to 38 kilometres from Bolgatanga, the Regional capital which is closer to Mirigu. During the commencement of the research, the areas under study, Kandiga, Mirigu and Doba, were located in the KN East. Through the process of creating a new district, Mirigu is now located within the KNW district, bringing the total number of Districts studied to two. However, the administration of the new District was not well established during the period. The division is part of the Government’s decentralised system of development where the District Assembly is designated as the planning authority. It is therefore expected to initiate, coordinate and implementation District plans and projects. The communities are accessible via the main feeder road from Bolgatanga, which passes through the District to BF. The people in these three communities speak a dialect called *Nankane* and are therefore known as the

Nankana. However, an appreciable number can speak other dialects and languages such as Kasim, English and Twi (spoken in the southern part of Ghana), are also prevalent

The communities are situated throughout the rural areas in the District and commonly referred to as “villages”. Villages in this context are settlements containing a number of dispersed compound houses. Compound houses are occupied by patrilineal families of about 6 to 8 members, with each compound containing between 10 – 12 households. Compound houses, known as *yire*, are usually named after the family head. They are extended by the sons of the household head moving out of the family area when they get married and building their own rooms within the compound. However, a few will prefer to move about 500 metres to settle. The houses have compound farms i.e. the land immediately surrounding a house is allocated to the household head to farm. These farms are just supplementary as the main farming areas are far off in the bush. The houses are accessed by foot or bicycle through connecting paths. There are generally no distinct boundaries between communities and compounds in adjoining villages often overlap. The communities attach great importance to social capital and a cultural consistency is noticeable in the norms and values that govern the social scene. As Helliwell and Putnam (2004) indicate, the amount of social capital in a community directly influences the efficiency of production, happiness, life satisfaction and wellbeing. Social ties and networks are very powerful and important assets in all activities and are most evident during farming, building, marriage ceremonies, and funerals and even in the market arenas. With a strong and rich cultural background, the highly heterogeneous society possesses similar cultural, socio-economic and political traits (Laube, 2005). There is not much difference between the communities in terms of geographic, economic and socio-cultural features so the subsequent discussions will refer to KND as encompassing the three communities in general.

2.4.3 Social Organisation in the KND

The predominant ethnic groups in the District are Kassena, Nankam and Bulis. Most of the people in the communities speak Nankam or Kassim (a dialect widely spoken in the district capital). Though the illiteracy rate is high, large proportions of the people

understand and speak English fairly well. There are a few migrant workers from other regions in the country who are either civil servants or engaged in small businesses. Following tradition is the people are ruled and governed by Chiefs with the support of *Tindanas* who function as custodians of the land and are therefore responsible for land allocation. However, “power generally resides in the elders, particularly earth-priests, who are believed to be guardians of the land, (Blench, 1999: 7, in Laube 2005)

The social structure traditionally dwells on a patrilineal family system. The “families form part of lineages and these in turn compose clans” Blench, (1999: 7), in Laube (2005) and Norton (1987). The traditional organisation favours male dominance and limits women’s access to resources such as land. This practice is reflected in resource acquisition and position in the household. Males are seen as the head and they dominate in most areas of decision making. In this structure, the patrilineal system of inheritance allows the eldest son to inherit from the deceased father in trust for the family. As such, most households are headed by men and female household heads are predominantly widows. There is no form of ownership of family assets by daughters within this traditional system. Men are expected to take control of inherited assets including materials of worship believed to protect the entire family.

Symbols of gods can be found in the entrance or in special rooms within the compound house. The symbols represent the spirits of ancestors and are believed to give protection to all members of the house and to be capable of giving solutions or explanations to an omen. They are therefore appeased by worshiping them from time to time through the sacrifice of chickens or, in some cases, goats or sheep. When solutions are not convincing enough, according to the judgement of the senior male, being the only one who confers with the spirits, a “diviner” (Laube, 2005) is consulted. These beliefs are entrenched in the economic life of the people. Diviners are consulted about any economic activity where there seems to be no progress e.g. death, sickness, business or crop failure (Ibid). Nonetheless, in addition to the traditional beliefs, the people believe that there is also an overall God who rules the world (Laube, 2005).

Though Christianity was introduced by the early missionaries in 1906, which accounts for the majority of Christians being Catholics, the strong influence of traditional beliefs is noticeable in almost every compound house. Traditional religion dominates in the region with 46.4% of the population, followed by Christianity at 28.3% and Islam at 22.6%. These religious affiliations at the regional level are reflected in the Districts except for Bawku Districts where the majority are Muslims. Women are the dominant members in the churches on Sundays except in the Catholic churches where one can find a balanced gender representation. The large number of women could be explained by the fact that they participate in fewer social activities in their communities, except during marriage ceremonies and funerals. Another reason could be the fact that women are unable to connect to their ancestral spirits because they are not allowed by tradition to give sacrifices to the ancestors. The influence of emigration patterns and the integration of immigrants into the district could also be a contributing factor. Apart from the churches serving as environments for spiritual comfort and interaction with a Supreme Being, they also serve as entertainment and social meeting places with some churches hosting drumming and dancing to refresh their members after a tiring week. After church most members can be seen hanging around making friends, chatting or making plans for the next economic activity.

2.4.4 The Local Economy

Agriculture is the mainstay of the District's economy, employing over 70% of the total, economically active population. However, it is mainly rain-fed and at subsistence level. Produce such as millet, groundnuts, sorghum, guinea-corn, corn and different varieties of beans are produced. Livestock production, which is common in many households, is a very important source of support for household needs. However, the majority of the people, especially the women, are also involved in other income generating activities. Such activities are undertaken on a small scale in the community markets but on a larger scale in the District with its market days being operated on a three-day cycle. Trading primarily revolves around agricultural food products such as rice, millet, groundnuts, groundnut oil, Shea butter oil, and 'pito' (an alcoholic beverage brewed locally from

millet). Being a District bordering another country with an undeveloped money market, some individuals engage in black market⁴ money exchange at the border (Paga). This is particularly important during the tomato marketing season when the exchange rate of the Burkina Faso currency, the CFA Franc, goes high. Southern tomato traders need the currency to be able to trade in Burkina Faso. Other people take advantage of the proximity of the District to Sankase, a suburb of Togo bordering the region, and indulge in illegal businesses, evading customs checks and tax by smuggling motorbikes, bicycles, television sets, sound systems and many other electrical gadgets into the District.. Other business activities that are of economic importance are private enterprises such as dressmaking, repairing bicycles, motorbikes and vehicles, vulcanising and welding of local agricultural implements e.g. hoes and sickles.

These sectors are the main contributors to the Districts entire revenue and the main source of employment. For an economy to survive on such informal ventures is a manifestation of low levels of education, high unemployment rates and poverty (Walther Baur, 2004). Reports show that poverty levels vary among various economic sectors in Ghana with the most significant sectors being agriculture and the informal sector. It is also estimated that 29% of the people engaged in micro and small enterprises live below the poverty line of \$1USD a day (Ali, and Dinar, eds, 2009). This is particularly significant for a country like Ghana which is promoting economic policies aimed at poverty alleviation. Agriculture, which is the main employer, is challenged by a high incidence of environmental degradation and climatic changes. Declines in agriculture continue to increase and, in addition, the Uni-modal rainfall pattern together with small land-holdings, makes it impossible for food produced in one farming season to sustain a family to the next (Konnings, 1986). In many incidents of drought in Ghana, as evidenced during the 1975/77 and 1983 droughts, the North East is usually affected by acute food shortages (Ofori-Sarpong, 1980; Konnings, 1986). In a survey on land holdings conducted in Kandiga, it was shown that 27.5% of the population has land holding of up to 2.5 acres while 55% had between 2.5 to 4.5 acres (Ibid; 247). The situation has led to

⁴ Black market refers to an informal money exchange system which is not regulated and rates are determined by the seller.

perennial food shortages that have become a common phenomenon especially among farming households in the District (Hunter, 1967a)

Such constraints compel most economically active youths to migrate to the Southern parts of the country as a coping strategy. After the forced migration during colonial regime, many migrants to the south were motivated Kumedsro (1970) by grounds such as fleeing from evil spirits or witches and, in a few cases, men eloping with women. Gradually, people began to migrate for economic reasons with most of them migrating to the South during the dry season and returning home to commence farming in the rainy season while others remained permanent emigrants. The economic crises were further complicated by socio-political issues when thousands of Ghanaians expelled from Nigeria had to be relocated. The changes created a reverse in the migration pattern as jobs were cut back and industries and private enterprises were closed, resulting in competition in the job market.

Against this background, economic migration was seen as “unprofitable, migrants frequently report that they find it difficult to get jobs in the South and may have to give incentives to agents to help them find employment” (Luabe et al, 2008; 9). Although population growth in the research area has not kept pace with the overall development in Ghana, the local population certainly experienced a significant growth (Ibid: 7). The population of the District grew to 149,680 in the late 1970s and early 1980s compared with 93,397 in 1960 and 99,006 in 1970, an increase of 51% (Kumedsro, 1970; GSS, 1989/2002a) Therefore, pressure on agriculture begun to rise in accordance with Boserup’s (1965) findings that “population pressure will lead to an intensification of agriculture”. This means that the family has to make domestic adjustments, so lands had to be redistributed into further fragments to cater for in-immigrants (Ellis, 1993). Affected by this and the effect of environmental and climatic changes, production levels are seen to be decreasing.

2.5 The Impact of Environmental and Climatic Changes

The Uni-modal rainfall distribution in a growing season is crucial, particularly for rain-fed agriculture. The annual rainfall varies between 700-1200 mm while the annual mean daily temperature averages 28.6°C. However, this can be as high as 32.8°C with evapotranspiration reaching 2,000 mm per annum (Kranjac-Brisavljevic et al., 1999, Webber, 1996, Laube et al, 2008). “The increasing temperature records indicate higher evapotranspiration for agricultural crops, while declining and erratic rainfall patterns reflect threats on climate change” (ibid). Studies have showed temperatures all over Northern Ghana rising and rainfall decreasing in the period 1931 to 1990 (Kunstmann & Jung, (2005) and Kranjac-Brisavljevic et al., 1999). Seasonal changes vary locally between the wet and dry seasons making rainfall patterns very unpredictable. Traditionally, land preparation started with the first rains between January and March marking the onset of the rainy season. However, due to significant climatic changes, land preparation now begins in April, and the dry season may extend well into May, or even June or July as was experienced in 2005. Other studies have identified human activities as contributing to the degradation of the environmental factors.

According to Songsore (1996:55), the region has experienced high population growth since colonial rule. The population density rose from 91 persons/km² in 1960 to 104 persons/km² in 2000, a figure which is above the national average level of 79 persons/km² (GSS, 2002; GSS, 1989; Laube et al 2008; 8). This high density puts pressure on the limited resources so, in an attempt to make a living, forest lands are encroached upon. Bush burning, over grazing, and the indiscriminate felling of trees have further exposed agricultural lands to environmental hazards. In the period between 1990 and 2000 alone, the forest area in the Kassena Nanakana District was reported to have decreased by an annual rate of almost 5% (Ardey Codjoe, 2004; Laube et al 2008; 8). The only forests remaining are the fragments of sacred groves in most villages where they serve as symbols of ancestral attachments. Although a few of the groves still retain a variety of tree species and wildlife they are under threat as farmers continue to encroach on the boundaries every year (Blench, 1999; CIPSEG, 1993). The extent of the degradation is portrayed in the use of farm residue after harvest. For example, millet or

guinea corn stalks are being used as fuel-wood by many households. This has a devastating effect on soil fertility as this organic matter is fast diminishing and erosion is on the increase (Kranjac-Brisavljevic et al., 1999). The growing fear of food insecurity resulting from these actions, has attracted stakeholders e.g. NGOs and government institutions, to engage in ways of rectifying the situation. The establishment of the Savanna Agricultural Research Institute (SARI) aimed at devising soil fertility management strategies that will help combat the threat of advancing desert conditions in the region is one Government intervention. In its 2002/2004 report on desertification, EPA, (2005: 23) outlines the following developments SARI's research has produced to combat further degradation in the region.

SARI developed high yielding and early maturing food varieties for rice, groundnuts, cowpea, cassava, pearl millet, sorghum and soya beans. High yielding and early maturing rice, namely Digan (IR 12979-24-1) was released in 2003; and IRAT 262, IRAT 216, upland varieties which do quite well in drought prone, hydromorphic areas, are yet to be released. An early maturing variety of groundnuts - JL 24 - with low oil content but suitable for soup and confectionery, is yet to be released. Two varieties of cowpea - Marfo-tuya (Sul 518-2) with 70 days maturing and a yield of 2.5 tons/ha and 4.0 tons/ha as well as Apaagbala (ITxP-148-1) with a maturing period of 65 days and high yields - were released to farmers in 2003. Two varieties of soya beans, namely Jenguma (T9X-1448-2E) and Quarshie (TGX-1445-2E), were selected for their resistance to shattering plus their high yielding and early maturing qualities.

In its efforts to improve soil fertility, MoFA has been promoting the rotation of cereals with legume and the use of soybeans in the cropping system as well as encouraging contour farming technologies (Ibid). The 2003/2005 project on Bushfire Management and Rural Livelihoods in Northern Ghana (BURN), collaboration between both local and international organisations, was an attempt to combat the increasing bush fires in the region (Ibid). In addition; the Forestry Research Institute of Ghana (FORIG) extended its office to Bolgatanga in the Upper East Region in 2004. The aim is to rehabilitate degraded savannah woodland,. Some of the activities undertaken are the planting of trees

within settlements, and research into improving seed technology and water harvesting technology.

Trials which have been established include tree species like Khaya Senegalensis, Ceiba petandru. Studies on Gum Arabic are ongoing. Research aimed at protecting sacred groves is ongoing in the three Northern regions. It is reported that about 60 communities have re-enacted traditional bylaws, rules and regulations as well as enforcing taboos to protect over a hundred sacred groves (Ibid). The Irrigation Company of Upper Region ICOUR, the institute managing the irrigation project in 2002/2003 established about 77,523 seedlings of various tree species and fruit trees to support forestation programs. It is interesting to note how the combined efforts to improve agriculture and enhance food security are not matched in the tomato sector. Research activities to improve food varieties there focus on cereals, neglecting tomato farming - a key sector that supports the majority of households.

2.6 Irrigation, Tomato Production and Marketing: Historical Perspectives

In 1968, Ghana invested in the agricultural industry by constructing Tono, one of the largest agricultural dams in West Africa, and creating VEA irrigation projects in the region. This was aimed at creating jobs and encouraging the production of food and cash crops by small-scale farmers. The major crops grown under the scheme were rice and tomatoes. A market outlet was also created by establishing the Pwalugu processing factory to can the tomatoes. These projects, under the management of the Irrigation Company of Upper Regions (ICOUR) covered areas of 2,490ha and 850ha respectively (ICOUR, 1995).

State marketing boards such as the Ghana Food Distribution Company (GFDC) protected the local sector against world markets by controlling prices and distribution channels in order to minimise the amount of local surpluses thereby avoiding a glut in the market; and by promoting peasant agriculture in general (Duncan and Jones, 1993). Farmers were

supported with subsidised inputs such as land (Konings, 1981: 294, Yilma et al, 2007). Arrangements were also made to put farmers under contract to sell their produce to the factory. According to Konings and Fosu Yerfi (1991: 325) the scheme encouraged tomato production; in 1976/77 an area of 220 acres realised about 387 tons of tomatoes. Contracting farmers restricted private traders' access to the few surplus farmers who were not on contract with GFDC (Ochieng and Sharman, 2005).

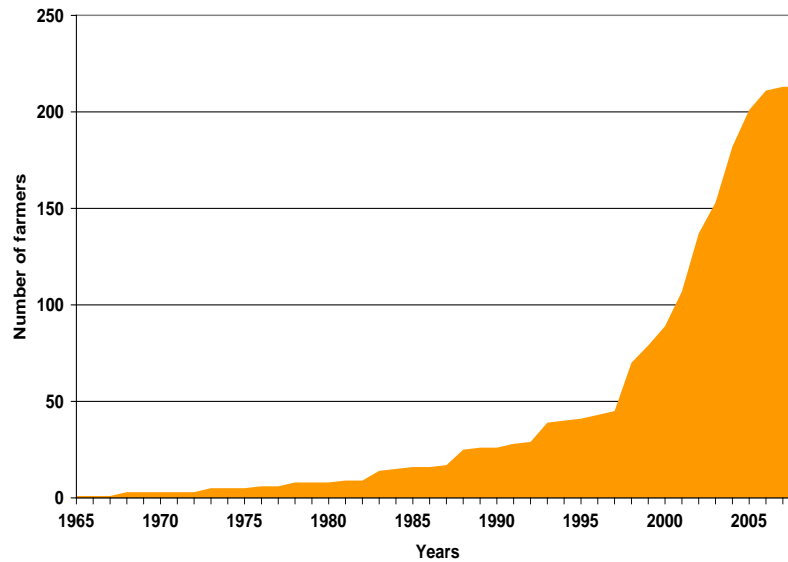
Tomato cultivation was a very significant economic activity in the region. It is reported to be more profitable than rice, maize, groundnuts, yam, pepper or dairy (Ochieng and Sharman, 2005). Many people at the time made a fortune from tomato sales. It is believed that most of the motorbikes in one of the communities in the district (Biu) were bought through the production of tomatoes (Laube, 2005). A case is reported by Ochieng and Sharman, (2004;15) about Samuel Abora who started tomato farming part-time in 1978. He finally resigned from his job at the University of Ghana, Accra in 1981 to concentrate solely on tomato farming. He was a very successful farmer and used his proceeds to invest in a tractor and the education of his seven children. He also achieved national honours, winning the 1994 best Tomato Farmer award in the Upper East Region and Best Overall Farmer, Upper East Region in 1999". Tomato farming was one of the most lucrative sectors that provided employment and generated income for the people in the region.

The success of many farmers attracted other small scale farmers who were not within the irrigation site but had access to water sources in their communities to practice shallow ground water irrigation. This paved the way for the spread of small scale production especially in the KND. "Most shallow rivers, smaller dams, wells and seasonally flooded lands are presently used for dry-season gardening. In addition, where 'dugouts' (small reservoirs for trapping water for livestock in the dry season) have been excavated, gardens are established on the edges" (Blench, 1999: 15). It is reported that the majority of tomato production around Navrongo is derived from these smaller sites, accounting for, on average, half of the total income in the area (Okali and Sumberg, 1998). Shallow ground water irrigation is mainly carried out along rivers, streams, ponds or wells. The

method involves traditional well digging and using water lifting devices such as ropes tied to buckets or creating dugouts and using pumping machines. The surge in production marked the reintroduction of shallow ground water irrigation in the country. The method of irrigation is not new in Ghana. It is said to have been introduced in the 1930s but, until the 1990s, the sector was not well patronised, as illustrated in figure 2.4. Factors causing the low level of patronage could be the low population level and a self-sufficient agricultural sector. Though population data for the area in the 1930s is not available, data from GSS (1989) shows that, in 1960, the population of the district was 93,397 inferring lower populations in the 1930s. This meant that land was not a limited resource and farmers were free to practice land conservation practices such as fallowing (Konings, 1986). Environmental stability and a predictable climate provided favourable conditions to support rain-fed agriculture; hence harvests from one farming season could sustain members of a household through the next. However, the recent climatic changes resulting in longer dry seasons and shorter, erratic rainfall patterns coupled with environmental degradation have now created a need for support in dry season irrigation.

Notwithstanding the success of the projects, tomato farming in the region has historically been unstable. The processes of trade liberalisation influenced many changes in the industry. Furthermore, technical problems, inadequate supervision and management, lack of inputs, and erratic water supplies have variously presented problems which adversely affected operational costs (Konings, 1981: 294). Subsequently, the closure of the factory gave farmers the opportunity to produce for the outside market, mainly Southern tomato traders. It also opened up employment opportunities for service providers. The upgrading of the Tamale to Navrongo road in 1997–98 improved accessibility to the markets in the area.

Figure 2.4 Shallow groundwater irrigation in the KND



Source: Glowa Volta project, 2008

2.7 Players Involved in the Tomato Market Sector

This section is included in greater detail in a later chapter therefore only a brief background of the market structure is presented here. It is worth noting that the tomato market is of interest because of its significance in the dry season and the number of people whose livelihood is dependent on the sector. In the marketing chain it is easy to identify players in the following categories: production, harvesting, packaging, and marketing with numerous service providers. The producers are mainly small scale farmers who mostly rely on family labour and local networks for production as government support is almost nonexistent. During production, farmers hire labour for harvesting. Although family labour is employed it is not enough, particularly at the peak of harvesting when traders are in a hurry to transport the goods due to the high perishability of the crop. The hired labour is mostly paid in kind by way of tomatoes which they can take home and sell. As mentioned in the introduction, the trade is undertaken by an association of women traders who are led by “tomato queen mothers” from the Southern parts of the country. The queen mothers play protective roles in the markets as well as ensuring the welfare of their members. Buying at the farm gate is done

by itinerant traders who sell to bulk buyers and retailers. Service providers include: women who sort and package the tomatoes, drivers, and loading boys, as well as translators who additionally function as middle men. The activities of these groups are diverse in nature but also somewhat connected, as shown in Chapter four.

2.8 Conclusion

This chapter aims to give a background of the research area as well as historical perspectives of the tomato sector. The colonial regime, whose administrative processes were biased against the region, has contributed to underdevelopment and the high level of poverty. It is also clear from the discussions that agricultural policies on food crops as well as environmental and climatic changes contributed to migration as a livelihood option for the people in the UER. Thus, the historical evidence confirms the need to refocus attention on supporting dry season irrigation for tomato production in particular to make the sector economically attractive. It is anticipated that contextualising the social and economic characteristics within a theoretical perspective will contribute to a better understanding of the problems in tomato production in the region. Therefore, theories on power, risks and the dilemma traders' face are examined. Agriculture in general is a risky venture which in many cases leaves farmers no choice other than to operate within an uncertain environment. This is particularly so with tomato farmers who are constrained by weak institutional systems, unfavourable weather conditions and high transaction costs due to market failure but also the self-interested manipulations of some powerful players. In addition, the moral and social attitudes plus the influence of networks and cultural values are discussed to help understand the extent of their effect in the market.

3 The Discourse in Agricultural Risks, Traders' Dilemma and Power Relations

3.1 Introduction

This chapter is a review of the literature on risks, traders' dilemma and power theories within the context of the tomato industry. The chapter broadly makes use of secondary data and connects to the research area upon which the conceptual framework is built. Risk is looked at from the broader agricultural context and is narrowed down to explain the sources of risks in the tomato sub-sector. The discussions on the cultural setting in Chapter 2 show the important role social structures play. However, their interference in economic functions remains unknown. It is in this direction that a review of the concepts of traders' dilemma explained in the introductory chapter will be interesting since the various players in the sector perform different functions and are affected differently. This is followed by discussions on power dynamics. Power relations exist in any social environment therefore the extent to which participants are able to manoeuvre and implement their individual control systems, will be shown. The concluding part gives a summary of the chapter.

3.2 Risks and Risk Factors in Agriculture

Risk is a word commonly used in both academic and non academic circles. There seems to be a general understanding of risk judging by the extent of its global use. Nonetheless, variations in definitions and concepts exist. The lack of uniformity in literature, the debates about definition among experts Hillson & Murray-Webster, (2006) coupled with institutional structures and approaches, attest to the fact that risk is perceived differently by many people. Todaro, (1981) argues that "economists regard risk as a situation in which the probability of obtaining some outcome is not precisely known. In a similar perspective sociologists refer to it as the unintended consequences of rational action" (Evers and Mehmet, 1994:1). The 2007 agricultural policy forum held in Damascus, defined risk in economic terms as "anything that leads to the reduction of consumption below sufficient levels" (Nehme, 2007:4). Risks in the tomato sub-sector are understood in this perspective, though it takes cognisance of the contrasting definitions. It does not

consider possible risks which do not occur but only recognises actual reduction in consumption (ex-post view) (World Bank, 2008). It has been argued that risk needs to be understood before it even occurs (ex-ante view) (ibid). Though it is believed that assessing the cost of risk is complicated, this should not be at the expense of its importance. “Since the very presence of risk and the feeling of insecurity it generates is a discomfort, there is a value in reducing the risk whether it materialises or not” (Nehme, 2007:6). This is particularly important in agriculturally oriented economies where poorly resourced farmers depend on nature and uncertain markets for their subsistence.

Agriculture in developing countries is largely dependent on nature. Considering the ongoing climatic and environmental changes the World is experiencing, the sector is inherently risky. This situation is particularly crucial for Ghana where rain fed agriculture is dominated by poor, small scale farmers with highly fragmented farming systems. Factors such as droughts, floods and poor market structures are historically key areas that have had negative impacts on rural livelihoods. Negative impacts on production processes, price fluctuations and changes in policies also present unavoidable risks. In the production process, risks are often attributed to natural causes such as climatic changes bringing floods or droughts, pests and diseases. These “pure risks” are believed to be “the act of God” because they are beyond the control of humans (Nehme, 2007:6); in such circumstances poor farmers assume a fatalistic attitude because they have no control over the source of the risk. A recent study found that, in Ghana, production risks among farmers, particularly in the Northern parts of the country are very much related to climatic changes (Laube et al., 2008). The unreliability of rainfall is a cause of concern and complete crop failures can be expected in most Northern areas. This occurs about once in every five years but the incidence can rise to one in every three years during low rainfall periods (FAO, 2009). The 2007 floods in Ghana, when the United Nations World Food Program (UNWFP) had to intervene in its food security and farmer assisted program, is an example. The risks caused by pest and diseases can be as devastating as extreme weather conditions and the high cost of it can rob farmers of their entire yields and overall household income.

In addition, market risks have to do more with human intervention and especially to price fluctuations. It is asserted that farmers still perceive such risks as “pure” because it is exogenous in nature and affects society as a whole (Nehme, 2007). Market risks are more policy oriented and the degree of impact depends on the nature of a particular country’s market policy with the global world. For instance, international markets are becoming increasingly consumer driven due to an attempt by buyers such as the supermarkets to satisfy consumer taste. They control production by dictating quality standards to farmers thereby eliminating poor farmers who cannot meet such specific standards (Hallam and Sarris, 2006). These standardisations are entrenched in export policies therefore the inability of local producers to meet such specification has ended in the dumping of foreign products in the domestic markets. This is true of Ghana where trade liberalisation has resulted in the flooding of domestic markets with cheap foreign products e.g. tomato paste.

The idea of free trade or of relaxing borders controls to facilitate export and imports is not negative per se because it can be used to balance food shortages in times of natural risks. It also allows for the benefits of comparative advantage. Nonetheless, there is no doubt that such markets are asymmetric in nature and are responsible for an unfair distribution of market revenues. The benefits are limited to selected group of traders and retailers in exporting countries at the expense of large numbers of small growers in importing countries (ibid: 13). The inherent nature of risks in agriculture makes it very difficult to manage. Farmers may attempt to reduce the high incidence of risk by observing strict cultural and management practices. For example, planting at the right time i.e. the beginning of the onset of the rain, planting the right amount of seeds at the right spacing are all good practices which, however, cannot guarantee the right amount of rain or a good market. Interventions from governments in developing countries are not only limited due to the fact that they are bound by international trade policies but also by the fact that rain fed agriculture is fraught with unavoidable risks. Governments prefer to support crops such as cocoa or timber that have the potential for foreign exchange rather than just being food crops. There is no doubt that farmer in such vulnerable situations need the support of government in order to cope with risky situations. Government

support in identifying risk factors and adapting management strategies is important especially in countries where agriculture is vital for the economy.

3.2.1 Risks Management Strategies

The high risk nature of agriculture has led to the employment of measures to manage and reduce the shock when it occurs. Against this background, households have developed a number of mechanisms to manage risks. Risk management, or coping, is any action undertaken by an economic agent with the aim of minimising risk before or after the occurrence of a negative event (Nehme, 2007:8). “It is recognised as an essential contributor to business and project success, since it focuses on addressing uncertainties in a proactive manner in order to minimise threats, maximise opportunities, and optimise the achievement of objectives” (Hillson & Murray-Webster, 2006:1). To achieve an appreciable level of risk reduction, agents engage in cost:benefit analysis to identify the most efficient and cost-effective tool that can be used. Risk management strategies are classified under “ex-ante and ex-post strategies” (Holsmann, 2001; Alderman and Paxson, 1994).

Ex-ante strategies are those employed to avoid or reduce exposure to risks before a shock occurs. According to Holsmann, (2001) risk prevention strategies are aimed at decreasing shocks because of their ability to increase profits or reduce income fluctuations, which can have positive effects on household consumptions. Ex-ante prevention strategies include economic policies, and investment in education or health (Tesliuc and Lindert, 2004; Holsmann, 2001). Similarly, Dercon, 2002 explains ex-ante mitigation strategies as those that are employed by members of a household to reduce the risk before its occurrence e.g. diversification.

Ex-post strategies are mechanisms that are employed to cope with the consequences once the risk has occurred. Self-insurance, either formal or informal has been widely used as an ex-post strategy (Holsmann, 2001; Dercon, 2002; Hoddinott and Quisumbing, 2003). Asset sales, migration, labour re-allocation, and credit are typical insurance responses for

households (World Bank, 2008). The problem with risks management is that the process of risk management itself is seen as a risk because it involves committing resources to change the setting where the action will occur. This poses a challenge to many households as they have no means to pay for these mitigation measures due to their high poverty levels (World Bank, 2006). Non-income activities such as handicrafts have been reported by Christiaensen and Subbarao (2004) as an assured means of risk mitigation among rural people in arid and semi arid regions in Kenya. Studies carried out by Hoddinott and Quisumbing, (2003) confirm that households grow a variety of crops that can withstand climatic changes as a risk mitigation strategy. Remittances by migrant family members as a risk mitigation strategy have also been reported in Botswana (Lucas and Stark, 1985) and In Burkina Faso (Barrett et al., 2001). Among rural communities in Ghana, farmers have, from experience, coped with risks in various strategic ways such as migration; however, diversification and insurance remain common practices in risks management theories.

Diversification: Diversification is a common practice among farmers worldwide with the intention of spreading risks and thereby protecting themselves against low consumption rates. In a broader perspective, agricultural diversification involves the employment of unrelated production practices that ensure one product against the risk of another; this is usually referred to as the 'Portfolio Theory' (Nehme, 2007:8). The underlying principle behind this technique is that a portfolio with varied ventures will yield higher profits and reduce risk than a single investment on its own. The practice is geared towards economic growth where steps are taken to move into market oriented products influenced by rural improvements instead of subsistence agriculture (Rosegrant and Hasell, 1999). Diversification can occur at the micro, regional, and macro level (Goletti 1999).

Insurance: Insurance is the major and the most popular means for risk transfer worldwide. "It is a contract by which one party (the insurer) agrees to pay a compensation (the indemnity) to another party (the insured) if a certain event occurs, in exchange for a fixed payment (the premium). This can come in several forms but the basic concept remains that the insurer provides the insured the possibility to transfer his or her risk" (Nehme, 2007:9). In agriculture, insurance is mainly used to spread the risks

in production by either insuring the crops themselves or the marketing of the crops (market based insurance). There are, however, several challenges that insurance companies face. These include asymmetric selection arising from incomplete information, which fails to take account of individual risk characteristics, adverse selection or moral hazard e.g. insurance fraud; and, systemic risk, the possibility that an event that has systemic impact might result in an imbalance between premiums and indemnity (ibid: 9). Despite these challenges, the practices are effective and well sustained in developed countries with government-supported, large scale agriculture as against developing countries where subsistence agriculture dominates. Countries such as the United States, Japan, Brazil and Mauritius have several decades of experience of support from crop insurance programmes (Hasell et al 1986). These countries have well regulated and organised commodity markets, where “the price risks facing producers are effectively diffused through forward contracts, futures markets or a combination of the two” (ibid:10). However, in developing countries where such markets are lacking, the consequences of risks can have severe effects. In the context of these uncertainties, producers and traders resort to various other measures in an attempt to minimise risks.

3.2.2 Reasons for the Absence of Insurance Companies in Rural Societies

Insurance companies and contracts are not fully developed in the rural credit market and are therefore not accessible to poor farmers (Binswanger, 1986). The reason is that these institutions are faced with asymmetric selection (moral hazards and adverse selection), making it difficult for them to enter into contracts with risk-averse farmers (ibid). Scholars have observed that the problem with asymmetric selection is that one party, in transacting a contract with another, may choose to withhold any relevant information that may jeopardise what he or she stands to gain, if the other party gets to know about it (Binswanger, 1986; Nehme, 2007). In this case the insurance firm is saddled with the problem of adverse selection. This is because it is difficult for two transacting parties to distinguish and screen between high and low risk clients (ibid). High risk individuals will find insurance more of an incentive than low risk individuals if insurers get all the

information about them, their terms of contract will be more restrictive and their premiums will increase. Some insurance companies have tried to find solutions to these problems by requesting high interest rates or collateral e.g. valuable assets such as land or houses but which rural farmers lack. In the absence of these, they may employ screening criteria such as gender, age or type of business which may be seen as biased (Binswanger 1986) or may exclude the poor.

The problem with moral hazard is that insurance fraud is not only costly but difficult to monitor because it deals with the (sometimes dishonest) actions of people. It is argued that “insured parties with attractive compensations may give false information in order to make claims; farmers have been known to burn their insured yields, knowing that the insured value is higher than the market value” (Nehme, 2007:9). They may even choose not to be so caring or will not commit required amount of inputs as they would have done if their farms were not insured (Binswanger 1986). Financial institutions have sought to reduce moral hazards. For instance, the Agricultural Development Bank (ADB) is known to reduce the incidence of deceit by investing in monitoring and supervising the behaviour of farmers; or, insuring just a fraction of the risk e.g. share cropping or contracts in agriculture (ibid). Another common practice is mutual insurance. This involves a group of farmers who are prepared to make regular financial contributions to a fund which is then used to compensate individual members in time of disaster e.g. a cooperative of producers, association of traders, processors, etc (Nehme, 2007). In such situations, the members are both the insurers and the insured hence group members check each other for fraud and have information about others, so a degree of honesty is guaranteed (ibid: 10).

Managing strategies differ in the tomato sub-sector where farmers, constrained by climatic changes, take up dry season irrigation as a hedge against lower yields. Their actions are oblivious of the fact that agricultural commodities in general have specific risk factors due to the characteristic nature of crops, the influence of environmental conditions and general market uncertainties.

3.2.3 Risks Related to Tomato Production and Trade

Ghana's agriculture is characterised by low yields and productivity due, in particular, to natural factors plus a high incidence of market failures. Averages are said to range from 20% to 30% of the potential yield for traditional staples. However, due to data scarcity such estimates are unavailable for vegetables but there is no doubt such low yields exist (Al-Hassan and Diao, 2007). A recent study has reported that environmental damage from drought, pests and diseases accounts for the low productivity and that these constraints are compounded in vegetables than in other crops (IFPRI, 2008). This observation falls in line with an earlier report that horticultural crops tend to be riskier than staple crops, since the higher production costs, market volatility and perishability impose a greater income risk (Lumpkin et al, 2005).

Studies from the Glowa river basin show that the consequences of climatic changes, for example, the floods that occurred in parts of Ghana in 1999 and the droughts in 1983 and 1995, can be very distressing for tomato farmers because the effect on yields is very crucial (Kasei et al 2008). Against this background of threats posed by climatic variations, the uncertain availability of water compels farmers to resort to shallow ground water irrigation. Droughts make it difficult for farmers to have access to water leading to difficulty in land tillage, plant stress and crop failure. Flooding also presents a host of soil and crop diseases. It is known that the "devastating Tomato Yellow Leaf Curl Virus (TYLCV) disease and a fungal complex in the Upper East Region had major consequences for farmers in 2002" (Daniela, 2008:1). Farmers' reaction to environmental and climatic changes such as floods is heavily dependant on personal knowledge and experience. According to Mofoke, (2000) farmers have historically relied on their personal perception of plant water requirements which lack scientific proof. These include reliance on soil surface cracks, folding of the leaves in response to incipient mid-day stress; or simply determining the need for irrigation shortly after water dries off from the soil surface (Kushwaha et al, 2007:2). An earlier study by Doorenbos and Kassam (1979) reports that over irrigation of tomato plants at the flowering stage promotes flower drop and poor fruit set. Most farmers understand this signal to imply the crop is stressed due to lack of water and therefore needs to be irrigated. Another risk is related to the

tomato market and farmers' decisions. Historically, poor farmers are said to have taken risks by investing their limited resources in production with a strong hope for good markets. However, their knowledge in marketing patterns remains rudimentary, thus increasing the risk factors. This is one reason for scientists' indifference to traditional agriculture. According to Bay-Petersen, (1985) an agricultural scientist believes that:

Traditional farming practices appear inadequate, almost a failure, since he compares their productivity with the potential yields of new technology. According to him, the success of traditional agriculture has been demonstrated by the fact that it supported his ancestors to survive and gave rise to surviving descendants, as he hopes to do himself. The traditional farmer has inherited his farm practices, and the social structure which goes with them, as part of a cultural tradition which has roots in the distant past, but which has been constantly modified to adapt to changing circumstances. It is true that some traditional farming systems, in particular slash and burn farming, are at the point of collapse, but in general terms the traditional farming economy could reasonably be viewed as a composite of successful adaptations and decisions carried out over a long period of time, a system which incorporates the information gained by centuries of farming experience.

Despite the experiences gained over centuries in production, farmers are unable to grasp the opportunities for controlling the marketing of their products. On the contrary, traders and middlemen have accumulated marketing strategies that enable them to bargain for lesser prices at farm gates. The goods are then sold at high prices in towns and city markets, benefiting the trader or the middleman rather than the producer. Producers are almost isolated from the market due to poor market information and weak bargaining power against powerful networks of traders (Bay-Petersen, 1985). Jaleta, (2007) has observed that among small scale farmers, poor market channels and information asymmetry were contributing factors that hindered farmers' interest in cash crops production. Similarly, low commodity prices, the controlling power of intermediaries,

weak market institutions and lack of farmer cooperation were further identified by Emanu & Gebremedhin (2007) as key limitations on the marketing of horticultural crops in Ethiopia. The highly perishable nature of tomatoes presents a market risk. Due to lack of processing and storage facilities, farmers are compelled to sell at low prices rather than lose the entire product. In addition, transactions in the tomato market are conducted in social settings therefore cultural values and norms are intrinsically unavoidable features. In many instances, farmers sell on credits to traders based on pure trust with the hope that they will be genuine enough to pay when they get the money but this practice has often resulted in defaults. Traders, on the other hand, are often faced with the dilemma of having to compromise their moral values in order to make a profit.

3.3 The Traders' Dilemma

Institutions may be seen as providing the rules and restrictions that shape social interaction. They include formal laws and rules and informal norms and traditions. While it is stated that formal institutional instruments such as policies, rules and laws are vital, Hyden (2006:1) notes that informal institutions and practices remain a vital aspect of social and economic life in Africa. These institutions are sometimes reinvented and at other times adapted to changing circumstances. In rural economies, informal norms and traditions are embedded in the social setting, serving as a guide in various aspects of life. The terms “moral economy” and “economy of affection”, are often used to explain such informality in traditional markets since they are interlinked.

In close-knit societies, moral norms are generally very stable, based on the principles of mutuality, and operate in the form of reciprocity. These norms of “reciprocity were often referred to in terms of friendship and obligation to others where each party may try to build up these links in order to have better safeguards based on a common understanding of moral behaviour and obligation to friends” (Lyon and Porter, 2007:4). The key elements of social norms are altruism and benevolence but these are deliberately applied with sanctions attached. The sanctions, or incentives, may come in the form of shame, peer pressure, damaging reputations, physical threats or drawing on obligations (Scott,

1976). It is believed that in economic circles the moral and cultural elements rooted in local societies is usually neglected. Nonetheless, some sociological and anthropological researches have shown that traditional societies are challenged by the conflict between profit maximisation and the economic assumptions of markets and their cultural settings (Evers and Schrader, 1994). In this regard, there is no doubt that for households to successfully participate in trade they are faced with a considerable dilemma - how do they take advantage of the opportunities for wealth accumulation, based on economic principles which conflict with the cultural values that are vital in the social setting?

“The ‘traders’ dilemma’ paradigm elucidated by Evers, (1994) centres on moral principles, on the embeddedness of social ties which is highly appreciated and respected in close social systems. It looks at a market environment from the perspective of individuals or groups of traders and further investigates the mechanisms employed by traders to resolve the moral issues (ibid). It may be accepted that the welfare of societies and social standing might be improved by productive economic activity but that is only one of many factors and whatever contribution the economy might make, it is entirely regulated by the norms, prospects and ethics of a group in a ‘moral universe’ (Scott, 1976). However, in explaining markets in economic terms, the concept of the traders’ dilemma does not arise because economists do not consider moral values to be relevant in an economic setting.

However, it is also known that differences exist between how economic and purely social institutions work: they are well dependent on context but the common thread between them is that goals and practices are influenced by the non-economic (Polanyi, 1957, Scott, 1976). There is no doubt that, in theory, the influence of the market on socio-cultural and political settings make it one of the most important economic institutions (Polanyi, 1957). Nonetheless, the prevailing factors, both effectively prevents pure economic enrichments and puts a premium on other strategies to become a person of substance (Evers, 1994). A central strategy is the transformation of material wealth into symbolic capital. By accumulating symbolic capital one becomes both a politically and an economically dominant person. In short the embeddedness puts a premium on a strategy that combines political, economic and religious elements, a strategy that leads to

the characteristic hybridisation of the respective groups pursuing their way to complex power positions (Ibid)

These dynamics have been observed in many settings. For example, Evers and Schrader (1994) found out that “modern Southeast Asian societies by and large still have some criteria of embeddedness; the characteristics’ of hybridisation are still seen as the efforts and successes of strategic groups. They realised that, in such situations, if traders do not submit to what the social system expects of them, which is to be generous and kind with their, profits in their social environment, they will be perceived as immoral. These social norms and expectations are very strong in peasant economies and pose a challenge for traders as well. In such situations buyers who want to buy on credit will expect no rejection from the trader and others will expect low prices or to be given extra when they buy. In close societies everybody wants to remain as pious as possible hence will do everything to avoid a dent on their social esteem. However, as already mentioned, submitting to such norms which stress the need for solidarity is a big setback for successful trade in such environments. Creditors will either not pay or take a long time to pay and traders will find it difficult to demand payments especially if they are aware of the debtors financial constraints (Ibid). The true aspect of the dilemma comes in when they find themselves in a fix between maintaining social esteem and losing profits (Ibid). Therefore social ties and norms present difficulties for successful trade and capital accumulation.

3.3.1 Solutions to the Traders’ Dilemma

So far, the discourse on the traders’ dilemma portrays an informal market economy fraught with cultural and moral values. However, with the success of some petty traders, Evers and Schrader (1994), it is important to look at the strategies they employ to solve the problem. Evers and Mehmet (1994), and Evers and Schrader (1994), have identified some means through which traders are able to circumvent the dilemma they face. Though they provide numerous approaches, only those that can be contextualised within the framework of this study are discussed here. These include defining a boundary between

peasants and traders, creating a cultural distance, cash and carry system of trade to avoid the risks of credits, and solidarity among traders. More often than not, traders in moral societies who take a strict business approach to trade and who are not ready to compromise on their profits or refuse to be generous with their goods, are discriminated (Ibid). They are viewed in the society as outsiders whose values do not conform to their host's. In such circumstances, they may avert their low status in society by identifying with a moral institution such as a religious group (Ibid).

According to Evers and Schrader, (1994), through this affiliation they are able to justify their monopolisation and right to profits. They also note similar observations by Geerts (1963) on Chinese, Javanese Santris (alumni of Islamic religious schools) traders, and Arabs in South East Asia (Ibid). Traders' association with religious groups is not uncommon in Ghana. This can be found among all categories of trade including tomato traders. Some Christians even wear religious symbols such as the catholic rosary or the cross of Jesus in the form of a necklace, a ring or bangle. Such symbols do not only show one's religious affiliation but are a sign of trustfulness and genuineness. In that case, a degree of trust is already established in transacting business with such a person. As observed by Evers and Schrader some members even go beyond the bigger church to identify with smaller groups, for example a Christian women's group who may donate to hospitals or children's homes. Evers and Schrader refer to such acts as strategies of capital accumulation where traders are convinced that a respectable image of them is established. In Ghana, the act of capital accumulation is not limited to Christians. Moslems who have been on pilgrimage to Mecca and use the title *Alhaji* (men) and *Hajia* (Women) could be likened to Javanese Santris and Arabs in South East Asia (Ibid). An *Alhaji or Hajia* is perceived as a holy person who commands respect and high status in society and is therefore an honest person with whom to transact business.

It is also the case that traders themselves create a cultural distance (Ibid) that distinguishes them from the broader society. This clearly describes the tomato traders as they usually migrate to the UER during the season and live in groups. This practice of the traders is broadly discussed in Chapter 4. Their status may not match the description by

Gees as strangers due to the fact that years of trade has made the community very familiar with their temporary stay, however, they are still identified as “women from the south” which differentiates them both culturally and ethnically (Ibid). Another important and practical solution Evers and Schrader talks about is selling goods on cash and carry system as an option to avoid debts. In contrast to Rimbayu trans-migrant traders, the bulk tomato traders have to sell to retailers on credit but for a short period. This is probably the reason why they engage Gao men to supervise sales and collect money from retailers as described in Chapter 4. This could be a strategy to safe face since collecting debts from their counterparts can sometimes lead to moral consideration or conflicts when the debtor in question is not able to pay on time. It is therefore not surprising that, when traders buy on credit, farmers demand short-term payments and choose a fellow farmer to follow the traders to the South to collect payment. This practice is common because of the incidence of traders defaulting on payments. The explanation in Chapter 4 shows that the situation is even more ruthless among Burkina Faso farmers in their attempt to avoid bad debts. In a summary, Evers and Schrader, (1994: 10) admit that “trade requires solidarity among traders”. This suggestion is very useful in the next section where we are introduced to the tomato traders’ association. The traders’ successful formation of an association together with strategies they employ to have access to the formal sector confirm Evers’, (1992) observation on the gradual formalisation of the informal sector.

3.4 Power: an important tool in rural markets

The topic of power has been a difficult issue for development practitioners, particularly civil society organisations and researchers in various fields of study. Although power is a key element in any form of change, it is one of the areas containing a variety of concepts and definitions. It is believed to be a win-lose relationship, perceived as a zero-sum game which entails taking power from someone and preventing others from having it. Lorensi is of the view that the fundamental perception of power in social contexts is that player A is able to have a considerable influence over player B; that is, A is able to get B to behave in a way contrary to the interests of B (Lorensi 2006). A player in this case is seen as an individual who has the power to change the course of action and affect issues in his own

interest. This notwithstanding, it is worth noting that the players' "ability to act depends on their social position, role or identity and the institutional bias afforded by the social system they are part of" (Laube 2005:18). In the same vein, Foucault observed that power relations are rooted deep in the social nexus, not reconstituted "above" society as a supplementary structure. He is of the view that the exercise of power is a way in which certain actions may structure the field of other possible actions (Foucault, 1982:208). Various platforms, be they social, economic wealth or political, present players with varying degrees of power for social transformation (Laube, 2005). Power per se does not necessarily portray a negative connotation but when it suppresses others, especially the poor in society, then it becomes a cause for concern. Similarly, Laube is of the view that power is not seen as an obstacle to freedom or emancipation but the concept of power implies structures of domination and control as well as conflicts that arise out of power struggles.

Power is part of our lives and people may find several ways of controlling and managing a sector where they have an interest. This is very important in rural households with "diverse livelihood strategies" encompassing a range of activities where, for most, agriculture and markets are key elements" (IFAD, 2003:3). Theoretically, markets are believed to be the most important economic institutions and promote a way of life that forces communities to undergo social cultural and political transformations (Polanyi, 1957). It is for the significant role of markets that the Millennium Development Goals (MDG), among its specific strategies, emphasise market access for developing countries. However, power dynamics in the market arena are complex, ranging from forming alliances, groups, attaching oneself to influential people in society, or simply taking a less powerful position. In many market environments, players draw their power from forming associations that are used strategically to "set the conditions that other groups have to reckon with" (Evers and Gerke, 2005:5).

3.4.1 The power of market associations

As markets emerge and continue to expand, players have adopted ways of integrating yet still achieving their own objectives amongst other competitors. Most of the approaches are in the form of groups who aim to promote and create a convenient niche for their activities or undermine the existing market structure (Evers, and Gerke, 2007; Evers, 1980). In most markets, these groups come in the form of associations who may control the supply of certain goods in the market. According to Gagné, (1985) an association is part of a business that describes the affiliation between two units of objects based on common attributes where the relationship can be two individuals or many. He further describes a trade association as an organisation made up of business competitors, not individuals. Market traders' associations are not uncommon; they are highly prevalent around the world, though the success of such associations in rural markets is not well documented. Ample literature exists on the various forms of market associations and many authors such as Mittendorf, (1993) have noted the significant roles such associations play in agricultural marketing. In an FAO report, Shepherd (2005) shows that such associations are widespread in a majority of wholesale markets in Latin America. In Asia, Harriss-White (1993) has surveyed the grain associations in India and Bangladesh. In West Africa, Smith and Luttrell (1994) have examined the wholesale food traders in Nigeria. Recently, Lyon (2003) carried out a study on traders' associations in Ghana, while Baden (1998) has studied women traders in a number of African countries (Shepherd 2005). Agricultural market associations are significant in managing markets and agricultural sub-sectors. They may be responsible for "maintaining the infrastructure of the market, providing security guards, allocating land or licenses, lobbying local government; and in some markets they collect revenue for the local government" (Lyon and Porter 2007:9; Shepherd, 2005:3).

Several associations work to provide marketing knowledge, such as information on procurement, transport infrastructure, potential buyers, prices, and availability in distant markets (Ibid). Dispute resolution, provision of security, and employing measures to ensure the welfare of members, are ways associations use to reduce transaction costs (ibid). There is, therefore, no doubt that these associations are very important in

agricultural markets. However, this is not to refute the power of associations to exclude poor producers, petty traders and consumers, to their detriment. (Cleaver, 2005; Smith and Luttrell, 1994). The importance of market associations to farmers has been reported by some researchers. For instance, Lyon and Porter, 2007 have reported that in Nigerian vegetable markets, the association makes sure that farmers are paid and traders who default are punished. Lyon, (2003) also observed in Ghana that wholesale traders were providing long-term credit to supplier farmers, though the interest rates were higher than the banks and farmers paid interest by reducing their prices. This notwithstanding, “increase of wealth, power and prestige is the ultimate aim, and long-term strategies are followed which may support or hinder market expansion” (Evers, and Gerke, 2007). Such acts are easily carried out by traders due to market imperfections and they also exclude farmers or capitalise on their limited knowledge of the market by restricting access to vital information. Most development programs in agriculture emphasise increased production. However, exclusive crop production will not increase rural incomes without markets. Participating in agricultural markets is important, particularly for areas where consumption depends on production and selling. But for rural producers equal participation is limited because they are disadvantaged by lack of market information.

3.4.2 Power asymmetry within market Associations

Unfortunately, extreme inequality exists among farmers, traders and intermediaries in rural markets and “such market relations are not only unequal but characteristically uncompetitive and unpredictable” (IFAD, 2003:3). It is believed that power inequalities are intrinsically part of human life, as observed by Foucault, whether in politics, organisations, households or market places. As a result, many individuals will adopt strategies to control sectors that are of particular interest to them. In the context of trade, abundant literature indicates that traders take advantage of the power they have for resource acquisition, due to their good knowledge of the market. As stated by Evers and Gerke (2005:5): ‘knowledge is power’, “the power of being able to make sense, that is, giving meaning to actions and objects was just as important as the acquisition of land, temple treasures or other values”. By virtue of their strong associations, traders are able

to manipulate other players to their advantage. For example, among building materials market associations, Lyon and Porter (2007) observe in a Nigerian market that the leaders have the power to stop people coming to sell or to force others to move out of the marketplace. Similarly, they have reported that among the Dillali⁵ traders in the same market, the farmer does not get the money until after the sale and does not always know the price at which the Dillali sells the goods. In addition, the farmer has no right to sell to another Dillali unless a problem crops up (ibid:8). The power of cooperative action by such associations is a remarkable feature of West African trade (ibid); in most instances, deliberate actions are taken by other market players to control the entry and supply of agricultural commodities to markets. It is reported that the poor in many parts of the world are usually constrained by market access, a reason for their low living-standards (IFAD, 2003). The poor are usually challenged by their lack of market information and poor knowledge of the market. They are also constrained by the “lack of a collective organisation that could give them the power they require to interact on equal terms with others; for example, larger and stronger market intermediaries” (Ibid: 10). The “provision of market and price information to assist producers with farm-gate marketing decisions as well as helping them to acquire better approaches for stable prices for their produce”, cannot be overemphasised (ibid). However, due to their inexperience, lack of information and weak organisational structures, planning a market-oriented production system or negotiating market prices becomes a problem (ibid). In such circumstances, the situation is compounded when the only source of information is the trader. They capitalise on the disadvantaged position of producers to play the roles to their advantage. In their work, Smith and Luttrell (1994) have reported that in Nigeria, traders manipulate the supply of goods by restricting access to other market players with the compliance of market authorities. Similarly, Shepherd reports in Baden’s work in parts of Africa that associations of women traders were quite powerful in influencing “policy on matters such as regulatory frameworks, in gathering and disseminating market information” (Shepherd 2005:7). It is against this background that the study is conceptualised within the theoretical perspectives of the above.

⁵ commission traders in Nigeria they are the only traders vegetable farmers are allowed to sell their products to

3.5 Conceptual framework

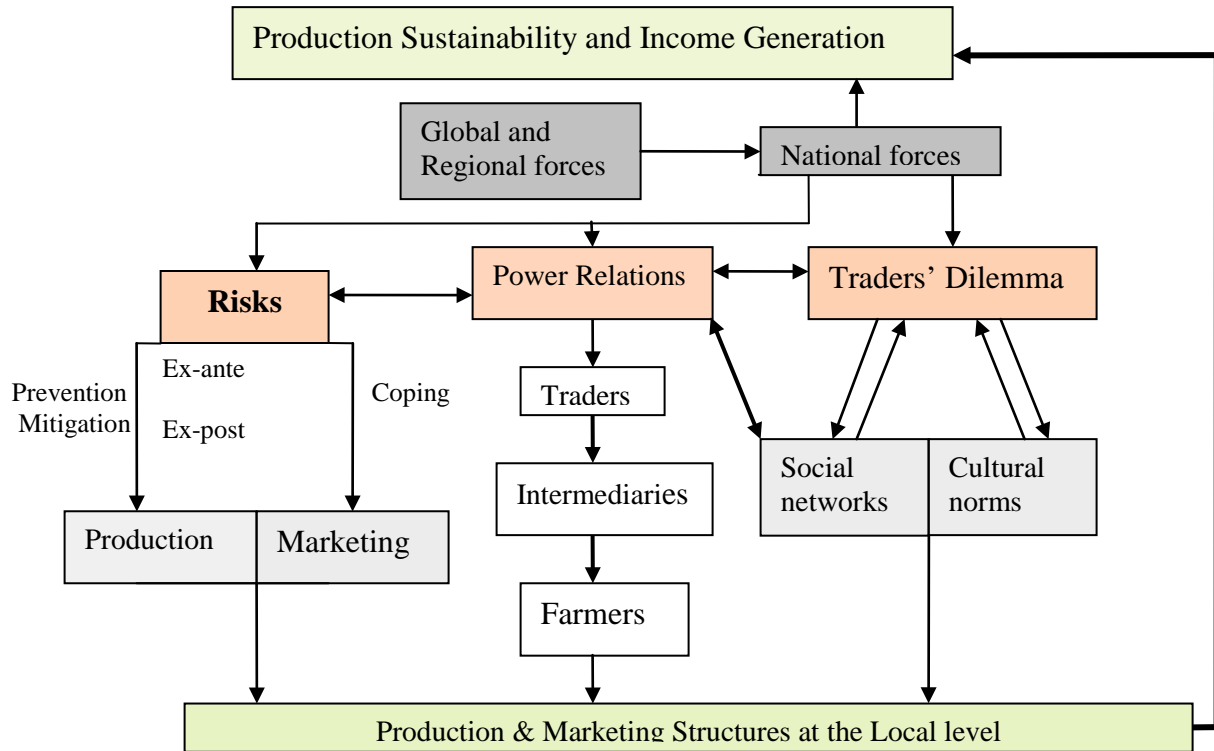
This section illustrates the framework within which the paper is contextualised. It attempts to systematically link the impacts of international and regional trade policies to the current state of the national tomato industry in a much broader perspective. The illustration in Figure 3.1 depicts market influences discussed within the context of three levels of forces: global, regional and national. Drawing from the discussion in Chapter 2, the explanations assume that the changes caused by international and regional trade policies are largely responsible for the changes in the tomato sector. The causative factors are discussed in the framework of the theories reviewed in this chapter, that is, risks, traders' dilemma, and power relations emanating from traders' associations. It also implies that the structures at the national or local level have direct impact on production and income generation and, consequently, on farmers. Through these discussions, a clear picture will emerge of how policies and other factors have systematically influenced the structure of the tomato sector, resulting in its present state. In order to present a clear understanding, a brief examination is undertaken of the causalities at the global and regional levels.

3.5.1 Conceptualisation of the study within a theoretical perspective

As already argued, the link between the implementation of trade policies and economic growth is not well established in the agricultural food sector. In many countries, the effects of trade policies on agriculture, particularly Ghana's tomato sub-sector, are devastating thus adding to the already existing natural and environmental risks factors farmers are confronted with (Berry, 1997; Bruce. and Asuming-Brempong, 2004). The removal of government support to agriculture due to trade liberalisation resulted in a collapse of the sector as farmers were unable to compete with the high imports. In addition, regional trade policies, in an attempt to bring about better cooperation, created a market opportunity for Burkina Faso tomato farmers. Through such processes, farmers in BF have succeeded in competing strongly in the Ghanaian markets, almost displacing local farmers. Ghanaian tomato farmers are constrained by the powerful influences

exerted on them from both external and internal sources. These limit their access to productive resources and restrict their ability to compete effectively.

Figure 3.1 Framework of theoretical concepts



Source: Author's creation

The multi-dimensional problems caused by the policies have not only led to the increase in market players but created a structure where traders have the controlling power (Hutchful, 2002, 1996, IFAD, 2003). Currently, the market is dominated by a strong women's association which, through social structures and cooperative arrangements, is able to manipulate other players in order to achieve their aims. The active nature of such associations, which were established through gaps created by external factors, clearly describes what the theory of strategic groups assumes. This supports Evers and Gerke's, (2005:4) observation that "any time resources within a society become available as a result of a power vacuum or through technological progress, organisational change or a change in the geopolitical structures, there is the possibility that new strategic groups will be formed". Unlike Ethiopia where Watson (2006:78), reporting that traders are marginalised, notes that:

“Nowhere else is the marginal position and relative powerlessness of traders so clearly demonstrated”. In her work, she found that, if a discussion concerns a trader directly, and he or she has to contribute or give evidence in a public discussion, the trader can only enter the forum where the discussion is taking place with a farmer who acts as a sponsor; and throughout the procedure the trader keeps one hand on the shoulder of the farmer. In this arrangement he is described as being ‘as if he were a farmer’.

Contrary to the above, studies have shown that traders generally employ coercive means that oblige other market players to consent to their demands (Lukes, 2005 Shepherd, 2005; Smith, and Luttrell, 1994). In the light of the powerful position of traders, the sector has recently attracted the attention of the local media (GNA, 2007; Public Agenda, 2007). Research published by (Knottnerus and Francisco, 2007; ISODEC, 2004; Lyons, 2003) contains further examples of this. The intermediaries who serve as a link between traders and farmers seem to be in an even more powerful position as compared to farmers. Poor cooperation amongst farmers puts them in a weak position from where they are unable to influence the market structure.

From another perspective, players are confronted with a dilemma which is influenced by the embeddedness of informal norms and cultural elements in the market arena (Evers, 1994). In such circumstances, cultural and moral norms take precedence over economic market functions in market interactions. These informal norms are compounded by networks and close social relations which are entrenched in traditional societies. The importance of social networks is strengthened by moral values in the form of reciprocity or generosity, for example, gifts and affection (see Evers, 1994) (Lyon and Porter 2007). As Tilman explains; “Gifts, for instance, create bonds and not only confer honour to the person giving the gift but bind the beneficiary with obligations” (Tilman 1994:18). Gestures of this nature are perceived as symbols of honesty, trustfulness and therefore held in high esteem (Evers, 1994,). The effects of such beliefs were observed to be diverse in their nature, for example, presenting a dilemma when making decisions. In

many cases, such acts could be interpreted as the protection of one's moral status, religious belief or as simply satisfying societal expectations (Ibid). However, as will be discussed in later chapters, some players find ways of satisfying both their economic interests as well as meeting their social obligations irrespective of the limitations that these informal laws may pose. In summary, the framework of theoretical concepts depicted in figure 3.1 (above) shows that the factors affecting the tomato sector at the national level are responsible for the current structure and can have a direct influence on production and marketing. It is also clear from this illustration that production and marketing opportunities determine the performance of the sector in terms of its ability to sustain livelihoods through employment and income generation.

3.6 Conclusion

This chapter discussed theories on risks, traders' dilemma and power inequalities in the tomato sub-sector. The review on risk was limited to risks in agricultural production and marketing. It showed that the risks in production were more of natural sources and shifts in policies. Market risk which is experienced by both farmers and traders has a high degree of human influence yet farmers perceive it as pure because of its exogenous nature. The chapter explained ex-ante and ex-post risks management strategies such as diversification and insurance common in agriculture, which is diversification and insurance. However, it was clear that while diversification is a common management strategy among rural farmers in developing countries, insurance is well established in developed countries. The discussions on the traders' dilemma explain how moral and social networks are an intrinsic part of rural markets. It further portrays how traders in particular are constrained by these social norms when pursuing their livelihood in the market. On the part of power relations, it demonstrates the powerful nature of traders' associations. In addition, it gives details of the nature of power relations in the tomato market. The strong association of the traders makes them more powerful than the farmers who are disadvantaged because of inadequate knowledge of marketing strategies.

4 Tomato Marketing in Ghana, the Dilemma, Risks and Power Structures

4.1 Introduction

This chapter presents the findings at the national market level. Empirically, it makes extensive use of primary data from personal interviews and employs secondary data to support findings. Case studies are presented and a general overview of the food supply system is given along with a more detailed description of the tomato market structure. It explains in context localised problems such as risks and power structures as well as moral values that are embedded in the cultural background. It contains discussions on the important role such factors play in rural market transactions and how they affect market players. The explanations are linked to the effect of global and regional policies discussed in Chapter 2. In addition, social factors, cost analysis on production and trade are illustrated to elucidate factors that support the survival of the sector. The concluding section summarises the discussions by highlighting the important issues in the chapter.

4.2 The structure of the food market in Ghana

Ghana has a traditional custom whereby all land is owned by tribal chiefs and is known as ‘stool lands’⁶. This can range from small rural areas to large townships. A chief has complete authority over the use of his land and is responsible for its fair stewardship. Markets in Ghana come under the ownership of these traditional authorities. Government only provides the infrastructure through common funds at either regional or district levels. Most marketplaces are also constructed by development partners such as NGO. Others are informally created through development projects such as the construction of roads and lorry stations or due to a population increase. Ownership of the land entitles the chiefs to a share of the revenue generated in the marketplaces. An example would be the Kumasi Central Market (KCM) which remains under the ownership of the Ashanti King ‘*Ashantehene*’⁷.

⁶ Stool land is a tribal land owned by the community. Its under the custody of tribal chief therefore the chief directs the allocation and its use.

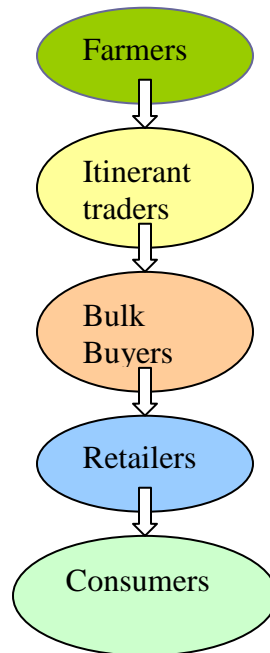
⁷ Field interview with Uncle Ebo in Kumasi Central Market on the 4/02/08

For most of the traders, the marketplace is a second home where they find not only their economic livelihood but their social lives as well.. Spaces or stalls, rented by the traders, are usually passed from generation to generation. Others may start afresh from childhood, hawking goods for a retailer on a commission basis and eventually acquiring their own space in the marketplace. This way of life persists not only in Ghana, but can also be observed among the Minangkabau traders in Indonesia where trading also provides part of their social lives. (Limbago: Effendi 2005). It is common to find social activities in the market place. Even some government institutions and NGOs hold programmes on topics such as gender, politics or health issues in the market because they find it the best place to reach out to a large group of women. Some participants come to the market to visit family members and friends and not necessarily to buy goods. In contrast to rural markets which have specific market days, the urban markets in the regional capitals are very crowded throughout the week, except for Sundays. On these days, participants may take a rest after church or take care of domestic and social responsibilities; nonetheless, one can still find the market bustling with activity. The various commodities are each allotted a particular section of the market. This makes for ease of management such as the collection of stall rents and market levies and it also facilitates trader organisation. It has also made it easier for the many researches who have, over the years, taken a keen interest in studying various aspects of market associations in general and the food sector in particular.

In general, the distribution of agricultural food commodities in Ghana is controlled by women although some sub-sectors e.g. fresh meat, are exclusively the domain of men. The food-supply chain begins with production by small scale farmers scattered across the country in rural communities. These farmers, constrained by the distance to urban consumers as well as poor road networks, are reached by itinerant traders locally known as *Kwansofo*⁸. They travel to the rural hinterlands buying food stuffs from farm gates which they sell to bulk buyers who then sell to retailers who sell finally to consumers as depicted in figure 4.1.

⁸ *Kwansofo* used in the context of the market literally means traders who travel to the hinterlands to buy foodstuff to city markets

Figure 4.1 the food market chain in Ghana



Source: Author's own construction

The traders are organised into associations, depending on the type of commodity they deal in (see Chapter 2). An association is made up of itinerant traders, bulk buyers and retailers so the number of members relating to a particular commodity is usually quite high. “For example, the Bolgatanga maize market features an association of 200 female traders and retailers, whereas the Techiman maize association features an association of 800 wholesalers” Peppelenbos, (2005). Each of these associations is coordinated and controlled by women leaders known as ‘Queen Mothers’. It is therefore very common to find associations such as the tubers women’s association controlled by ‘*bankyi or bayere hema*’ (*cassava or yam queen mother*); the plantain women’s association controlled by (*plantain queen mother*); and the vegetables women’s association controlled by tomato queen mother (*ntoose hema*) who are important players in this study). Following tradition, the queen mothers have a great deal of control over the markets. They are elected by the traders but the traditional authorities mentioned above still exert considerable influence, having the final say in who is elected.

4.2.1 The making of a market queen

Historically, the institution of the market queen mothers is said to have been established by the first president (Dr. Kwame Nkrumah) for political reasons. During an interview⁹, it was disclosed that he engaged market queen mothers to rally other market women to support his political agenda. However, the establishment of the market queens' institution had to be done with the consent of the traditional authorities since they are custodians of the market. In Ghana traditional authorities are made up of chiefs and queen mothers selected from the royal family. With the support of the council of elders they see to the smooth administration of a village or town. They are vested with the power and authority to preside in all affairs hence they enact laws and regulations and decide on all public matters which concern the welfare of community members. In the past, market queen mothers had to be related to the royal family, for example, the current tomato queen mother in KCM (Nana Ama Serwaa), who succeeded her late mother, is from the royal family. In order to ensure conformity in the marketplace, traders were guided by traditional market laws although, as an association, they also had their own rules and regulations. Those who were found to be guilty of any offence were punished according to traditional laws. Depending on the magnitude of the offence, culprits would be banished from the market or, in cases of gossip; their lips would be pierced and held together with an iron object '*Sepo*'. Through changes in government coupled with modernisation, many of the traditional laws are no longer observed. For instance, punishment now may be in the form of fines, compensations, apologies, ridicule and shame or defamation of character depending on the process used to resolve the conflict. In addition, an association now has the right to elect its own queen mother. Selection is usually based on qualities such as years of experience in the trade, ability to resolve disputes, good social relations with the members, skills in external negotiations, and a stable financial standing.

⁹ Field interview with Nana Ama Serwaa the Kumasi Central Market Queen mother and an overseer in the tomato offloading point on the 5/02/08

It is customary that the chosen queen mother is introduced to the traditional house (The Ga or Ashanti traditional palace as in Accra or Kumasi). The instalment and other process are handled by the office of the traditional queen mother. These take the form of introducing the one chosen by the association and seeking the approval of the traditional queen mother and her close advisers. Following her approval, the association performs the necessary traditional rites, for example, sending drinks and money to the queen mother's office in the palace. Thereafter, an inaugural ceremony is organised by the traditional authority to formally introduce the chosen market queen mother to the public. In every region, each agricultural commodity has only one queen mother and her office is in the regional capital's marketplace. Except in Accra, the premises are not well established. A market stall, otherwise allocated to a trader, is used as office space where meetings and conflict resolution takes place when required. The responsibility of the market queen mother is basically to see to the smooth running of the business. She also serves as a liaison between the association and the traditional house. When there is a ceremony at the traditional house, it is her responsibility to send some of the commodities. This would normally be a contribution from all members of the association, providing food for guests who are attending the ceremony. She also represents the association at Government level where she commands respect and recognition.

The queen mother is assisted by certain members of the association who hold various positions e.g. secretary, welfare officer, and elders who serve as advisors. All lesser markets in the region are also under the jurisdiction of the chosen queen mother e.g. the Greater Accra tomato queen mother Julia Naa Mensah (pictured below) controls thirty-one markets in the region. These smaller markets have leaders who also may be called queen mothers, but they are only recognised as such in that small circle and report to the officially chosen one. Market queen mothers are not paid in cash but in kind. For instance, in the tomato sector during the offloading of tomatoes, four tomatoes are removed from each crate on her behalf. She either sells them for cash or keeps them for consumption in her household. Once a market queen mother is installed, she stays in office until her death. For example; Julia Naa Mensah was installed in 1989. She is currently inactive but her responsibilities are undertaken in her name by her daughter,

Madam Afoley¹⁰. She is very popular in the tomato industry in Ghana and people refer to her as the Accra tomato queen mother. During a visit to the queen mother's house in Accra to conduct an interview, the author was interested to see 'Navrongo House' written boldly on the front of the building. Julia explained that it was the tomato business in Navrongo which had enabled her to build the house, hence the name. Alongside the traditional affiliation which gives them the support they enjoy they also associate at official levels, this combination giving them the power to control the markets.

Photograph 4.1 Accra tomato queen mother (Julia Naa Mensah)



Picture taken during field work (15/8/07)

4.2.2 The strength of the association of tomato women

Traders' associations have been described in the theoretical chapter as very crucial in any marketing environment. Associations of this nature are characterised by a high degree of power asymmetry. According to Evers and Gerke (2005), some groups take advantage of

¹⁰ Madam Afoley is well educated; she previously worked as a civil servant but had to abandon her job for the tomato industry.

this in order to protect their own interests. In Ghana, the organisational strength of the associations varies from Region to Region and commodity to commodity. The associations are stronger in the Southern sectors as compared to the Northern parts of the country. In terms of commodities, they are very sturdy in the vegetables sector and to some extent cereals such as maize (Peppelenbos, 2005:9). This may be because maize is an important staple grain in Ghana and vegetables, of which tomatoes dominate, are widely eaten and highly perishable. The tomato women's association is a highly powerful institution sometimes referred to as a 'cartel' or a 'mafia' group.

Members of the association are guided by set regulations which are largely based on trust and moral norms. According to Madam Afoley, through the efforts of her mother the association has been formalised at national level under the Ghana, Agricultural Producers' Tomato Organisation (GAPTO). GAPTO, formed in 1992, is formally registered as a cooperative with a statutory board and a board of directors with the queen mother as the president (Ibid). It was inspired by the need for traders to improve their dialogue with important offices and to improve access to supporting institutions. GAPTO is a multi-sectoral business platform which represents all sectors of agricultural food crops. It claims to formalise and modernise the Ghanaian food marketing system. The mission is to "provide effective leadership and to bring all producers and distributors under one ethical group, thus providing a common front for addressing the issues of transportation, storage, processing, credit facilities, market information, socio-economic factors and the supply of farm inputs" (Peppelenbos, 2005: 13 and GAPTO, 2004). However, this multi-purpose mission weakens its ability to help, making it difficult to focus on the welfare of any one group of commodity traders (Ibid). Despite the good intentions of the association, there is no evidence of its support having benefited members.

Itinerant tomato traders, in particular, complained that for so many years they have had to source financial support on their own. The traders have not had any assistance from GAPTO since its inception. According to them, making any necessary arrangements; for example, paying for the hiring of trucks or raising capital for trekking falls to them. More

support for business is given by members within the tomato association than by GAPTO. For instance, it is easier for traders to approach fellow members for support than leaders of GAPTO. Similarly, a large group of the retailers mostly depends on itinerant traders buying the goods on credit and making payments after the sale. This gesture of financial support by the itinerant traders for retailers is without formal contract but is simply based on moral values and pure trust. Most retailers employ young girls as hawkers who sell a large proportion of their goods. They are paid on commission. Against the background of GAPTO's weakness, the association has thrived, with its recognition at traditional and government levels considerably strengthening its position. At government level, they have managed to achieve this through a rather more social approach. For example, giving gifts and donations at ceremonies as described in Chapter 2 on the moral economy. The women utilise a combination of traditional power as well as the powerful government institutions to ensure the smooth running of their business. While some problems are handled through official means in the court the women prefer other cases to be solved at the traditional level by the chiefs. A case in point involved the CMB tomato market traders who were taken to court in order to stop them unfairly disrupting the tomato market in Accra. In addition, the women gain power from their role as sole distributors thus controlling the flow of tomatoes from farm gate to consumers. This situation clearly reflects Foucault's thoughts on power as a social construct where certain actions structure the field of other possible actions. Contrary to the traders, farmers are less organised therefore their activities are more individualistic, putting them at a disadvantage.

4.3 The weakness of the farmers' cooperative

Since the removal of government support for agriculture, small scale farmers have had to fund their own means of production. The increased prices of agricultural inputs, lack of credit facilities and reduction of extension advisory services have become a problem for farmers (MoFA, 2005: 9). Production is undertaken individually making it difficult for them to form a strong cooperative. Farmers' are not formally organised into permanent groups but only come together informally when the need arises, for example when they are finding it difficult to sell their products. The cause of this weakness was clearly

identified as being this system of individual investment which in turn is influenced by poverty and lack of external support. This is in contrast to the support given to rice farmers in Ghana by Chinese or Japanese companies. For example, the American company Prairie Volta Limited (PVL) is currently supporting the Aveyime rice project in the Volta region. Pepper farmers in Tamale in the North are also assisted by the Savannah Agricultural Research Institute (SARI) under the Centre for Scientific and Industrial Research (CSIR). Tomato farmers are disadvantaged by the high level of imports and the characteristic, perishable nature of the crop, making the sector unattractive to external support. The majority of the farmers finance the production of tomatoes by selling livestock and food crops from the previous harvest, although some are supported by remittances from migrant relatives or raise money by borrowing. Against the background of these limitations, if farmers study the market and realise they may lose out, they will sell at any price that to at least enable them to replace the household resources they have used. In such situations, they do not try to negotiate with others in the group but make individual decisions based on the market trend. According to Frank Ellis (Ellis, 1993), these behaviour confirms the farmer as the individual decision maker who has to answer questions such as which crop to grow, how much labour to use, what inputs are needed and how much should be sold.

Farmers may only come together when they are unable to sell and there is the need to organise for traders. This usually happens during marketing when the tomatoes are ready and buyers are not coming to buy. Farmers in a particular farming zone informally gather as a group and elect one of their numbers to go to the *Ouahigouya station*¹¹ in Navrongo to arrange for traders. This process usually requires the contribution of money since it may take the elected farmer a week or more to succeed in arranging for buyers. During such periods there is high competition as farmer representatives come from other farming communities to also make arrangements for buyers. In such situations the elected farmers may adopt strategies to motivate or win the favour of translators who pose as middle men, as stated in the introduction, or drivers who are capable of convincing traders. Some

¹¹ *Ouahigouya station is where all tomato traders gather with the tomato truck to either go to BF or buy from Ghana*

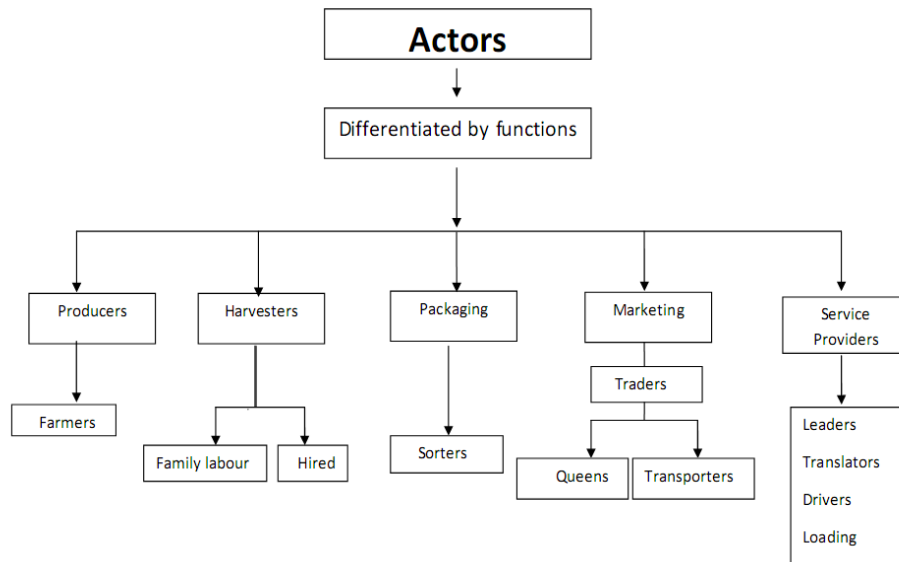
farmers from Burkina Faso have even had to come to Navrongo to compete with local farmers in search of traders.

When a farmer is successful in getting a buyer, he has to further negotiate with the translator for his payment. On reaching the farm, the translator inspects the tomatoes and the process of price negotiations takes place and, as accurately noted by Mittendorf (chapter 2), this is where the importance of cooperation and unity among farmers becomes evident. Farmers may start price negotiations on a unified front but when an agreement is not reached and traders adopt the usual boycott strategy of pretending to be no longer interested in buying the goods and walking away, the previous cohesion of the farmers begins to crumble. It is common to see farmers go behind their colleagues' backs to sell to traders at a price the farmers had jointly refused. This is the stage where the individual decisions described above are manifested. In this case, as observed by Cleaver, Smith and Luttrell, the traders have the power to manipulate and influence the structure of the market to their advantage. Many market players can be seen to take advantage of farmers' weak cooperation.

4.4 Identification of the market players and their functions

The tomato market is one of the better organised sectors where each player has a well defined function at specific stages in the marketing chain as illustrated in figure 4.1. Tomato production varies seasonally between the Northern and Southern parts of the country, thereby influencing marketing patterns. In the wet season, tomato marketing is limited to the South while in the dry season it takes place only in UER. The absence of market support coupled with weak formal institutions means that there are opportunities for service providers to exploit the farmers. This may explain the reason for the complex marketing chain, shown in figure 4.1, and the unfavourable impression of tomato marketing in the UER as compared to other producing regions.

Figure 4.2 Players involved in the tomato market chain



Source: Author's construction

Opportunities for other players at the local market level were created by itinerant traders who benefit from their activities, although to some extent farmers also benefit. In this regard, marketing is structured according to a normal marketing chain involving *producers, harvesters, packers, traders* and *service providers*. The following discussions explain the market functions of the players.

Producers: The farmers are engaged at subsistence level in small scale operations where the system of production is the digging of wells and using buckets for irrigation. During marketing, both family and hired labour is engaged for harvesting when the traders arrive. Aside from the harvesters, farmers also have to share payment for the services of interpreters. Traders do not speak the local dialect of the farming communities, therefore the need for translation. However, some farmers can speak the *Twi* language spoken in the South due to either permanent or seasonal migration. However, this ability does not eliminate the interpreters from the marketing chain.

Harvesters: Harvesting is usually undertaken by members of the family, hired labour or community self help. As depicted in photograph 4.2, it is a very tedious job involving bending over for hours and then carrying heavy loads of tomatoes, on their heads, to the

buying centres which are usually about 0.5km from the farm site. The mode of payment for hired labour is commonly in kind, that is labourers take some tomatoes home to sell or for home consumption. It is a traditional duty of the farmer to provide food for any form of hired labour.

Packers: This activity is the main domain of women, known as “sorters”. Experience in tomato sorting and arranging is one criterion a trader will look for before engaging a sorter. Therefore, skilled sorters have their jobs secured and guaranteed since they become permanent sorters for their employers. The activity is normally undertaken alongside harvesting. When loads of tomatoes are brought to the buying centres it is the responsibility of the sorters to remove any which are unripe, rotten or punctured to prevent contamination and spoilage during the traders’ journey to the South. Sorters are very skilful in arranging the tomatoes one after the other as the photo in 4.2 shows. Such arrangements ensure that a crate is heaped up in such a way that traders can get extra kilograms in each crate. It is believed that from every three crates of heaped tomatoes, traders get an additional full crate. In this form of arrangement, the farmers are usually being cheated because, although the crates are standard boxes they are not weighed after they are filled so the actual weight of tomatoes sold is not known. The sale price is based on numbers of filled crates. Sometimes, farmers plead with sorters to be flexible in sorting so that they are not cheated. At other times, they get so furious that they quarrel with the sorters. The sorters are paid in kind by the farmer and in cash by the trader. She also takes with her the rejected tomatoes and sells them for extra money.

Photograph 4.2 Harvesters and sorters on a tomato farm



Picture taken during field work (2008)

Traders: The actual farm-gate buying is solely undertaken by itinerant traders (*Kwansofo*). Before they embark on their journey to the farms they go round to collect money from their creditors, the bulk buyers and retailers who bought the previous consignment from them. This exercise can take days or weeks and it is common in many regions unlike in Kumasi central market where the tomatoes are entrusted to ‘*Gao men*’¹² who are responsible for selling them and collecting the money for the traders. This mode of business is built on the trust between the two parties which has developed through years of engaging with each other. Building trust through processes of this nature has been studied by, Gabarro, (1978) for example, who observed that as “two players interact over time, their trusting relationship will become more concrete, and the players are more likely to perceive each other as trustworthy”. On the day of the traders’ departure to the farm gates, the women, usually in groups of five or six, share the space with the wooden tomato crates on the back of the trucks. One or two of the older women sit in front with the driver. This is a gesture of respect for the elderly which is a significant aspect of Ghanaian culture. Depending on the country they intend to buy from (Ghana and Burkina

¹² *Gao men* are migrants from Mali and Niger who historically worked as security men in the market. They watched over traders’ wares and shops in the night. As years went by they have earned the trust of traders who now engage them directly in their business.

Faso), they make two or three stops. For example, during a journey from Accra to Ashanti region they will make a stop at Koforidua; and on a journey to the North and Burkina Faso they would stop in Kintampo and Navrongo respectively.

Before the traders set off they would have calculated the number of days they have to spend buying and when to return because special schedules are made for them to supply the market. Amedo, (2005) and FAO (2005), for example, report that the Agboghloshie market association in a suburb of Accra, with a membership strength of eight hundred traders, have about forty itinerant traders who are scheduled in such a way that while some groups are out of Accra buying from the farms others are arriving in the market. In the KCM, traders explained that if, for instance, a group of traders have their scheduled day on, say, Thursday the itinerants have to set off on Monday or Tuesday to Burkina Faso and UER respectively so that they can arrive back in the market on Thursday. If, for some reason, they are not able to make it to the market on their scheduled day they lose their chance since, on the following day, it is the turn of a different group to supply the market. The best they can do then is to negotiate with the wholesalers. These measures are put in place to give equal opportunity to the women but the main objective as stated by Madam Afoley, is to control supply in order to ensure maximum profits.

Service providers: This group of market players is made up of *interpreters, drivers, loading and offloading boys and porters.*

Interpreters: Those who interpret are mostly from the UER and they acquire their position by virtue of the fact that they are multilingual. Interpreters speak at least five languages; English, the *Twi* spoken in southern Ghana, a local dialect in UER (mostly in Kasim or Hausa), French and Mori (a local dialect spoken in Burkina Faso). The interpreters learn these languages not by formal education but through migration or social interaction. In the case of French and Mori, some trace their roots back to Burkina Faso and still have relatives there. They are very important people in Burkina Faso where the farmers and traders do not speak a common language. It is normal for one interpreter to control about three or four tomato trucks. That means that each time the traders of those

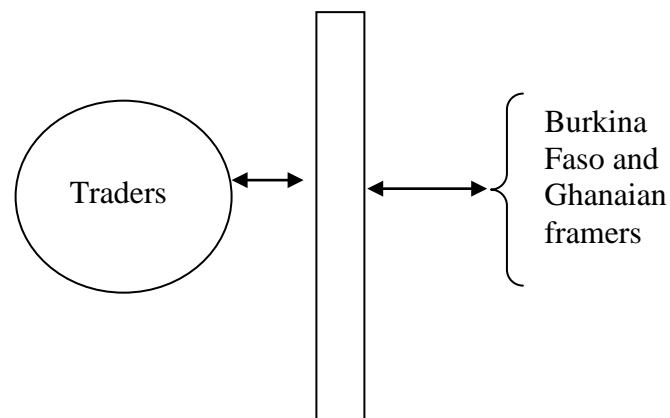
trucks come they deal only with that interpreter. They additionally function as middlemen, thus creating a wall between the trader and the farmer as depicted in figure 4.3. Their powerful position can be frustrating for farmers as they have to go through a process of negotiating and bargaining in order to have the traders brought to them. Usually, before the traders arrive, the interpreter would have done some homework, consulting his colleagues to find out where the tomatoes are ready so that he can take the traders straight there when they arrive on the scene.

Interpreters have very good negotiation and bargaining skills and some depend totally on this business for income generation and survival so they are very careful not to jeopardise their relations with the traders who could easily get them dismissed. In this regard, to ensure the safety of their jobs, they try to negotiate prices at lower levels in favour of the traders. One interpreter in an interview disclosed that “for the past seven years, I have depended on this job for my livelihood; I have two wives, a motor bike and have built a house thanks to this job. I do what the traders want and cooperate with them to secure my job¹³”. The relationship between interpreters and traders is very cordial, with interpreters sometimes assisting traders financially if they get to the buying points and find prices are unexpectedly high or when they just run short of money. Sometimes they will serve as guarantors for traders when they have to buy on credit. Their mode of payment in BF is described in Chapter 5 but in Ghana they charge farmers based on the number of crates harvested. It is believed that their fees, raising farmers’ transaction costs, are another factor keeping farmers’ incomes low.

¹³ Personal field interview with John Addah, an interpreter to tomatoes traders in Navrongo on the 11 of August 2007

Figure 4.3 the powerful position of Interpreters

Middlemen



Source: created from field research (2008)

Loading boys: The responsibility of this group is to load the filled crates onto the trucks at the farm gate, offload at the destination (which may be done by a different group) and pass them on to porters who distribute to various retailers. Loading at the farm gate has to be done with care and skill so that the tomatoes do not crush. Therefore, only those with experience in loading will be taken on. . The loading boys are paid by the traders, usually on a 'per crate' basis. It is a very aggressive environment, as the boys try to outwit or double-cross their colleagues, resulting in widespread conflicts and fights. There is heightened rivalry between boys from the South and those in UER. In almost every season it is common to see clashes between these two groups as they violently compete to maintain their positions and to reap the most out of the chaotic situation. The head porters, popularly known as '*kayayos*'¹⁴, roam the markets and are mostly found at the offloading points. They distribute the goods to bulk buyers and retailers as well as helping consumers carry their heavy shopping in the market to lorry stations. The head porters are less violent, probably because they are migrant young girls working in a different region or due to the fact that they do not face any competition.

¹⁴ '*Kayayo*' refers to head porters; they are dominated by migrant young girls from Ghana's Northern region to the Southern markets.

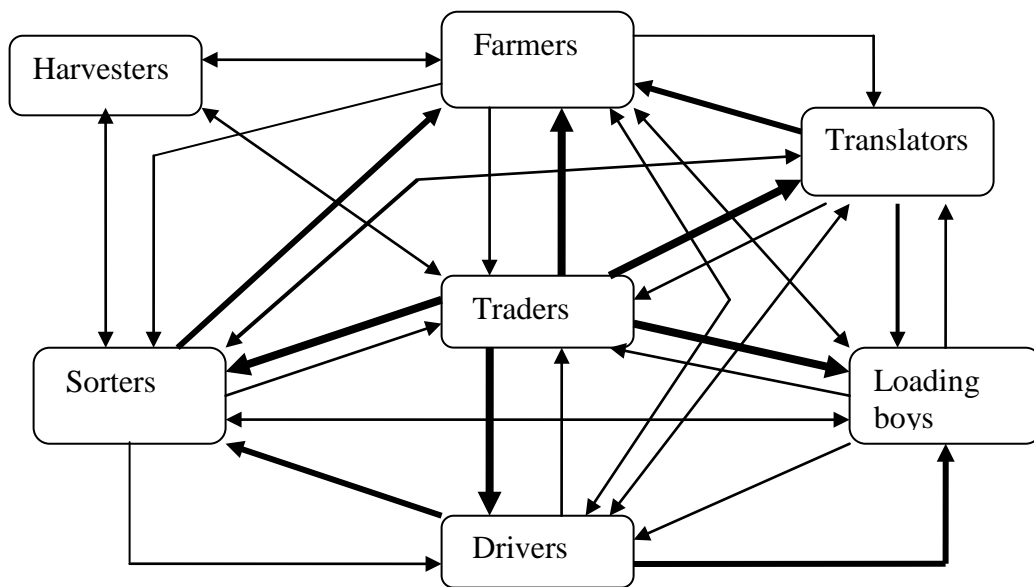
Drivers: The groups of drivers are mainly those who drive tomato trucks. Generally, there are no trucks specifically designed for tomato transportation. The types of trucks used are meant for general goods but they are preferred because of their large payload, being capable of carrying between 100 or 400 crates, depending on their size. The truck drivers charge for hiring the truck based on the distance involved. In many instances, they are advanced half of the costs of hiring from the traders before they set off, receiving the balance on return. Some drivers have particular traders they work with every season creating a longstanding, cordial relationship. To ensure they take care of their cargo during the journey and have a safe trip, the traders treat the drivers well, sometimes providing them with food and advising them to sleep when it becomes necessary.

In the above descriptions, a market scene with well delineated activities is depicted. However, this is not the case in practice. As explained, there exists a constant power struggle and there are many strategies used to exploit others. Therefore, in order not to mislead the reader by presenting a picture of a clearly defined and uncomplicated market structure, it is necessary to explain how the various functions overlap, as represented in figure 4.4. This depicts the important roles of all the market players, the power dynamics and the high interdependency among members striving to survive. The arrows show power, with the darker arrows indicating higher levels of power. From the diagram, it is clear that traders exhibit a tremendous amount of power. It can be seen how they control everyone they deal with apart from the harvesters who are employed by the farmers. The next most powerful groups are the translators and sorters whose power is derived from their close association with the traders. They are able to maintain the support they get from traders by exploiting farmers to the benefit of traders. The arrows from farmers to other players depict a lesser power which was clearly observed during the study. Previous discussions on power and the disadvantaged position of the farmers are vividly depicted in this diagram.

Despite these clear lines of power, a significant level of conflicting roles and complex interactions exists. Some double-cross their colleagues in an effort to earn more money. This they do by performing multiple roles when an opportunity is presented, normally by

performing additional jobs that are not within their usual domain. For example, a farmer in Doba disclosed that in 2004 and 2005 he stopped farming and worked as a loading boy but started to farm again because of the revamp of the factory. Fred is a well known translator who goes to Burkina Faso with traders. In an interview, he affirmed that he has acquired land in BF and contracts farmers to farm tomatoes for him. Some translators also function as loading boys. The level of interdependency is also clearly illustrated in figure 4.4. Farmers, for instance, keep the traders and other players in business by producing and traders keep farmers and other players in business by providing the market outlet. Although farmers and traders seem to be the most important they can not effectively achieve their aims without the service providers. In every way there is mutual benefit.. Market transactions are facilitated by networks and trust as formal institutions and support mechanisms such as contracts are absent. These informal institutions encourage high levels of interdependency, particularly in the marketplace. However, the level of participation differs between markets. Farmers have relatively better and more equal opportunities in district markets than in regional markets where strong associations exist.

Figure 4.4 Interaction among market players



Source; created from field research (2008)

4.5 Tomato marketing at the district level

On entering KND, it is easy to tell it is a market day. The atmosphere is exciting as both men and women from the communities trek with goats, sheep or poultry while others are tied on bicycles and wheeled to the market to be sold. Women carry all sorts of goods; vegetables, cereals, chickens, livestock or fuel wood for sale as well. A similar observation is made by Alexander, (1987) in rural Java markets and Effendi, 2005 in Tanah Datar markets in Indonesia. The market is at the heart of the district capital Navrongo. It takes place every three days and on such days one can barely find an empty space. It is very busy and crowded but, by contrast, is relatively quiet on ordinary days. The already narrow, major trunk road running through the capital is shared by pedestrians, vehicles, motorists, cyclists and donkey carts. The nature of the crowd depicts the “importance of rural markets in sustaining social and economic life” (Effendi, 2005: 33). Similar studies by Rajab and Limbago, among the Minangkabau in Indonesia, portray these scenes as evidence of the importance of markets on rural livelihoods and describe them as an environment for entertainment and social interaction (Ibid).

Usually, the first two or three tomato harvests produce only small quantities so the women are able to carry the loads on their heads and trek between three to ten kilometres to the district market. The women have to get to the market early enough to sell to the bulk buyers and retailers. This enables the bulk buyers and retailers to sell to consumers when the market opens to them at noon. According to these women, at the beginning of harvests prices are good but around the peak of the harvest season prices reduce drastically because the local market becomes flooded with tomatoes. At this point the women usually decide it is not worthwhile carrying heavy loads and walking long distances so, instead, they sell to the Southern traders who come to the farms to buy.

Another marketing opportunity for farmers at the beginning of the harvest season is to sell their tomatoes at the side of the major road that links the district to the regional capital (Bolgatanga) and BF. The tomatoes are arranged in basins and bowls¹⁵ and the women wait at the roadside for passing vehicles. Occasionally, a private vehicle will stop

¹⁵ Basins and Bowls are standard containers used to sell tomatoes (basin is 20 kg and a bowl is 2.2 kg)

and its occupants will buy in large quantities. Farmers make reasonable profits here because most of their customers are the ‘elites’ who have neither the experience nor the time to bargain and reduce prices like the traders do. Furthermore, many buyers of this type find it morally difficult to beat down prices since they understand the impoverished situation of farmers.

Photograph 4.3 Basins of tomatoes brought to district market and roadside trade



Picture taken during field work in 2008

The district market is the only place where tomato farmers can have direct access to the market and sell their produce without interruption by middle-men. This is partly because the tomato traders’ association at the district market is not as strong as the association in the South. Also, the tomato queen mother in the district, Madam Osman Alowa, is old and inactive so Madam Helen Kwogia¹⁶ is acting in that position. She revealed that her main responsibility is problem solving so she is not actively involved in controlling the market.

The association is a fairly flexible one and does not restrict access to the market making it easy for farmers to sell their produce. At the district level, it has no clear power relations,

¹⁶ Interview with Madam Helen Kwogia (a nurse at the district hospital) on the 7/08/07

unlike its counterparts in the South. However, the acting queen mother was not happy about its seemingly powerless position. This was observed when she lamented over the ability of the Southern traders to influence sales by setting farm gate prices even for the local traders. These market strategies are not uncommon among strategic groups. Evers and Gerke (2007: 17) have shown that “these groups aim at maintaining or changing the social and political order in such a way that their own group interest in gaining access to the societies resources is taken care of.” In contrast to the traders in the district, local traders in Burkina Faso buy at a lower price compared to non-Burkinabes. Unlike in the South, there are fewer bulk buyers in the district market. Two of them are particularly popular. One is Madam Kwogia, who comes early on market days to buy in bulk and later sells to retailers. Another is fondly known as ‘*Tomato woman*’. She is renowned for supplying other vegetables e.g. cabbages, garden eggs and okra (vegetables which are produced in rather smaller quantities in the region) to an agent in Accra. because she would not be given direct access to sell in Accra market herself. When tomatoes are not in season in the district, she transports tomatoes from the South to retailers in the district market. This is usually during the rainy season and at this period, ‘*Tomato woman*’s husband is very supportive. Traders from the capital of the Northern region (Tamale) also depend on the district market in the dry season to supply retailers in Tamale.

4.5.1 The marketing structure and power dynamics

Although farmers can make fair profits from local sales, the market is unable to absorb the products during the peak periods hence the need for the Southern traders. As described in Chapter 2, some of the Southern traders migrate to live in the district during the season in an urban-to-rural migration, in contrast to observations in numerous research works by Williamson, (1988); Banerjee, B. (1981) Bhattacharya, B. (1993) of the high incidence of rural-to-urban migration. The purpose of the traders’ migration is, however, different from that of the farmers, as explained previously. Migration by the traders is also well documented by Effendi (2005); Kato, (1982) and Naim, (1973) among the Minangkabau, as facilitating trade and influencing important aspects of the social

structure. During the tomato marketing period, communication and information sharing is very important for the majority of those who travel within and beyond the borders of the country. The key role communication plays in trade cannot be overemphasised. Information on prices at the farm gate and Southern markets are communicated between translators and traders at both ends of the country, using mobile phones. They inform their callers of the market situation at the farm gate, whether the products are in abundance or are scarce and where they can conveniently buy enough quality goods. So, when the traders arrive, they are well informed about the situation. As information asymmetry is historically very common in rural areas, mobile phones have become very important tools for sharing knowledge on market prices. According to Bayes, (2009) mobile phones have been very useful to banana and grain farmers in Uganda and Niger respectively, by helping to reduce marketing costs and raise incomes. In a similar report the “*e Soko*” project undertaken by the Rwandan government is aimed at giving farmers access to market information. With the cooperation of the service provider MTN, the government is selling 3,500 mobile phones to farmers at subsidised rates for both the purchase price and cost of calls¹⁷. Cross-checking of information is very important to avoid unnecessary losses. It also enables the farmers to make informed decisions when deciding on the best tactics to adopt. However the potential use of such information is limited for the tomato farmers in Ghana. Although they communicate on mobile phones with their relatives in Accra or Kumasi for market prices, they are rarely able to use the information to their advantage because of the powerful position of the traders.

The traders from the South enjoy a relatively high amount of power during marketing in contrast to their counterparts in the UER. This is exercised in a practical way as they control market supply by physically limiting the direct market access of other competitors e.g. the farmers who normally sell at low prices in the market and are perceived as a threat to their business. In an attempt to maximise profits, the traders control the movements of the trucks from the farm gates to the market. Supply control is a customary practice in marketing chains the world over. In European countries it is termed “effective consumer response” which is monitored using modern technologies such as the Internet

¹⁷ <http://allafrica.com/stories/201002040063.html> accessed 2/03/2010

(Peppelenbos, 2005: 14). The processes in Ghana may lack such advanced technologies but the principle remains the same as supply and demand needs to be coordinated to ensure business survival and profitability (Ibid). If traders see that the prices of tomatoes are getting high at the farm gates, they simply reduce the number of trucks that move to the farms that day. For example, a normal, daily number of thirty or forty trucks might be reduced to ten or fifteen. This strategy creates an unexpected glut at the farm gates thus putting farmers in the desperate situation of having to sell at prices the traders are willing to pay. Similarly, the contrived scarcity at the marketplaces enables them to make high profits. In a recent report, one of the local radio stations described them as:

“Troublesome and garrulous tomato traders who throng Navrongo central like bees around this time of the year, outsmarting each other in the move to rush early to Accra to make a good market while farmers, who sell off their cows after years of saving and investment in order to raise money to farm the vegetable, find it difficult getting a decent return for their money”¹⁸

Manipulative strategies are widespread methods that traders employ to protect their business and sustain profits. Extensive work on market restrictions has been carried out in most African markets by IFAD, Luttrell, Lyon and Porter discussed in Chapter 2. One such strategy is to get members, trading in a particular commodity in a geographical area, to register with their respective associations. The regulation restricting market access is well respected and understood among the traders. A bulk buyer or retailer is aware that she cannot sell her goods in a different market unless she sells to an agent who is recognised in the association of that market. This is the reason why ‘*tomato woman*’ cannot sell directly in Accra but have to send the goods to a bulk buyer. This approach prevents farmers from bringing their produce directly to sell in the marketplace. Attempts by NGOs and Government to help farmers have direct access to the market, have been met with resistance by the association. In one instance, an NGO that was focused on

¹⁸ <http://www.modernghana.com/blogs/208975/31/> Published: Tuesday, March 31, 2009 (accessed 15/04/09)

small scale support in Bolgatanga in the UER organised farmers to hire a truck and bring their produce to Techiman market (Brong Ahafo Region). On arrival the itinerant traders organised themselves and prevented retailers and consumers from buying and imposed a condition that farmers could only sell to the itinerant traders . A similar example is reported by Peppelenbos, (2005) when the authorities in Accra established a special retail space in the market for farmers to sell to consumers. This did not go down well with the traders who asked that the market be closed. They got their way because itinerant traders threatened to stop supplying food to the city if the authorities did not consent to their request. These examples give a clear picture of the powerful nature of the association within and beyond the market. Such control measures and other market strategies send signals to the general public that traders make outrageous profits to the disadvantage of farmers.

Farmers, however, seem to have an advantage when considering their actions during the market crisis in 2006 (as discussed in Chapter 6). The fact that they are the main producers for the country during the dry season puts them in an important position. Farmers could capitalise on this advantage to form a niche market where they would have control over the market. Although they are unable to exploit this to their benefit in day to day market transactions, when the need arose they took stance which sent significant signals of their importance. They were able not only to resist the aggressive and rude behaviour of the traders and their accomplices but also showed their solidarity, defied state regulations and got government officials to listen to their grievances' Though their actions came at a cost to them at the time, it was of great benefit the year after. Even given that their actions were spontaneous, they still managed to attract the attention they needed. It would have been advantageous if the farmers could have capitalised on the opportunity created within that period to unite and press for a lasting solution. An underlying cause of their inability to do this during marketing could be their poverty and mutual distrust. The poorest of them are probably able to harvest only a crate or two. However, the possibility that they, too, could benefit from collective price negotiations is usually met with scepticism, leading to separation from and betrayal of the remainder of the group.

Their inability to cooperate is not the only challenge facing farmers. The inherently risky nature of agriculture is a major challenge in itself. In fact, despite the importance of their different roles, all the players are faced with risks peculiar to their particular function.

4.6 Risks experienced within the tomato sector

Environmental and climatic changes together with agricultural policies which fall short of rural needs and overlook the capabilities of local farmers are major areas which affect production. In this regard, many aspects of agriculture, especially in rain fed economies, are left in the hands of individuals who are subjected to different risks depending on their roles. This section focuses on risk factors that confront different players in the tomato sub-sector.

Farmers;

The risks that the tomato farmers face include climatic and environmental changes, pests and diseases. In terms of diseases, due to the farmers' lack of knowledge and in the absence of government support for agricultural, they consult among themselves or depend on local agro-chemical sellers who have no knowledge of the chemicals they sell. Many of them refer to any pesticide, for example "karate" which is a popular chemical used by many farmers, as 'Dichlorodiphenyltrichloroethane' (DDT). Although this chemical has been banned from the markets since the 1970s due to its adverse health and environmental effects, it is rumoured that some farmers still use it. In addition, vast changes in climate affecting rainfall patterns have become an important concern for the future; According to Schoengold and Zilberman (1999), larger populations in developing countries run the risk of food insecurity due to the decreasing supply of water. Climatic changes resulting in water scarcity and longer dry periods increasingly pose a threat to irrigation. It is an indisputable fact that farmers are able to minimise risk factors when water supply and availability is predictable. They are able to plan their cropping pattern or adapt diversification methods and so reduce risk. In the study area where water scarcity and longer dry periods continue to increase, farmers' crop production options are limited.

Diversification has traditionally been the farmers' strategy for risk management worldwide. However, nearly 80% of farmers in an interview stated that their current inability to diversify was due to climatic and environmental factors. This is because the recent increase in prolonged dry periods coupled with a general water scarcity, limits them to producing tomatoes rather than other vegetables. For example, green and hot pepper, cabbage, okra, onions and garden eggs require much greater volumes of water. While they are equally very profitable, they are grown only in smaller quantities for local consumption. Another reason for not growing more of these crops is that, in contrast to tomatoes, they take more than three months to be ready for the market this poses a problem because increasing evapo-transpiration means they begin to run out of water during the third month making it impossible to grow such crops in large quantities. This is the main reason why they have to dig wells and dugouts (see photo in 4.4) to reach the water table during the hot season. During field visits, the problem of water scarcity was evident as most of the farmers began to experience water shortages in the final phase of production.

Photograph 4.4 Tomato Irrigation through wells and dugouts



Picture taken during field work in 2008

In addition to the risks inherent in tomato production, the farmers' position is further exacerbated by the uncertainty of the market situation. Farmers usually hope for the best and will strive to put a favourable interpretation on the various economic and political promises made, for example, during elections. They allow these signals to guide their decisions about production levels despite the generally accepted view that it is risky for farmers to rely on unreliable statements presented as an economic incentive (Yilma et al 2007).

Tomato farming therefore becomes very risky, especially for poorer farmers who lack agricultural credits and are compelled to sell household resources to invest in tomato production. As discussed in Chapter 2, most of the problems affecting incomes in the sector emanate from market uncertainties. An example of the serious consequences resulting from over-optimism and market uncertainties is the case in 2007 where some farmers were reported to have committed suicide when they could not sell their produce. Farmers sometimes risk selling to traders on credit and purely on trust without any formal agreement.. Some farmers have experienced loss of income due to traders defaulting on payments. When asked how farmers could overcome such risks, the ICOUR project manager was of the view that the market needs government intervention. He stated that farmers are disadvantaged by the lack of other employment opportunities and the disappearance of the historical incentives to migrate and find work. Therefore the only means of making a living in the dry season is tomato production and, as long as government stays away from the market, their buyers will continue to manipulate them.

Traders

The traders are particularly vulnerable to risks associated with marketing. Their main concern is accidents but other factors such as the bad road network, increases in the cost of fuel and spare parts, the poor state of trucks, overloading and speeding were also mentioned. Most of the tomato trucks are not roadworthy so it is risky to go on the long journeys they have to undertake but, due to weak institutional policies allowing them to remain in the roads, they are still used. Information on roadworthy trucks at the transport department is limited leaving traders to unknowingly commit huge sums of money to pre

finance un-roadworthy vehicles for their trips. Cases of breakdowns and accidents related to the use of such trucks are numerous. According to traders' records, in 2005 they encountered twenty-one accidents in which twenty-nine people died. An example is shown in Figure 4.5. Three people (the driver and two traders) lost their lives in that accident. When there is a breakdown, the trader has to incur the cost of hiring another truck to transport the goods.

Photograph 4.5 Tomato truck accident on the way to Accra



Picture taken by Author during field work in 2008

In the event of the death of a service provider in Ghana, the traders provide financial support to assist with the transporting of the body to the family members as well as giving donations to the bereaved family. If an accident occurs in BF, the traders make sure that the body is brought to Ghana for burial no matter how much the authorities might want to refuse for health reasons. In such an incident, the consulate officer¹⁹ at the Ghana embassy in Burkina Faso was unhappy about the women's attitude in such circumstances. He recounted a case he was involved in as:

¹⁹ Interview with the consulate officer in BF on the 1/05/08

In one of such accidents there were three deaths of the service providers and the incident was reported to the Ghana embassy in Burkina Faso. The embassy consulted the leaders in the community in which the accident occurred for burial. After all the necessary traditional protocols were observed, three graves were dug. Suddenly, a message came from the tomato queen mothers in Ghana that the deceased should not be buried in Burkina Faso but the bodies brought to Ghana. Madam Afoley confirmed the incident; her reasons for their refusal were rather superstitious and based on traditional beliefs. She said they have had experiences of such burials in Burkina Faso where the souls of the deceased refuse to rest in a foreign land. According to her the ghosts of such people continue to hunt them anytime they are in Burkina Faso causing more accidents. When the embassy decided to transport the bodies to Ghana the community leaders also insisted that it is a taboo for them to dig a grave and the burial not taken place. For the three bodies the community leaders asked the embassy to buy 3 sheep, 3 fowls and 3 pots of pito (local alcoholic beverage) to be buried before they will be allowed to transport the bodies. This made the embassy to incur extra cost purchasing the animals and transporting the deceased to their destinations in Ghana. The women promised to reimburse the embassy but have refused to honour their promise. According to the officer, the women's refusal to pay is because they believe the embassy is financially supported by Ghana government to handle such issues but they have no funds to handle problems of such nature.

Another risk traders' face is increases in the cost of fuel and spare parts. This has a direct impact on traders' costs when, according to them, an announcement of fuel increases is always preceded by the hoarding of fuel at gas stations in anticipation of the increase. During the hoarding period, drivers are compelled to buy at a high price which, in turn, increases the costs of hiring a truck. Traders also complained about harassments which include highway robberies, price heckling, extortion and being detained at police barriers. As discussed previously, itinerant traders, when setting out on their journeys, carry millions of Cedis on them. This practice has been studied by armed robbers who get information about their movements and ambush and rob them on their way to the farm gates. At other times, robbers come to Ghana on motor bikes, posing as farmers from

Burkina Faso who needs buyers, while their armed colleagues hide in the bush. When a truck is allocated to them they force the driver to stop in the bush where their colleagues are and rob them. There have been cases of rape in some instances. They also stated that until the ECOWAS introduced a policy to limit checkpoints there used to be many unauthorised police barriers where they would be detained for no good reason and money would be extorted from them. There are also instances resulting in serious injuries and death due to disagreements over price. According to the women, bargaining with farmers in farms located in forest areas is risky because they tend to be violent and aggressive when the price they want is not agreed upon. Usually when these issues result in violence the men accompanying the traders are also at risk because an attempt to fight back to protect the women or restore peace situations can often end with fatalities. The women showed pictures as evidence of drivers or loading boys who died during such hostilities.

The traders also face the problem of moral hazards reviewed in Chapter 3. This is associated with the uncertainties involved when giving goods on credit to a retailer whose economic or financial state is not always known. The retailers work with two or three regular itinerant traders at a time so, in times of financial constraints, they can decide not to pay one of them knowing that the others will continue to bring them goods. The traders agreed that failure to pay and late payments are the problematic areas they have with retailers. Traders are also confronted with fast growing illegal markets due to the population increase. In these markets, illegal tomato associations are formed and they operate contrary to the established rules of the legal association. They even collect revenues in the name of the recognised association but it never gets to the right source. Traders in this group are referred to as “*floating traders*”, they capitalise on the free trade regulation of ECOWAS to establish contacts with Burkina Faso farmers. They then negotiate with them by phone and send drivers to collect the goods, thus cutting down on other expenses. This allows them to sell the tomatoes cheaply. One such case, in the CMB tomato market in Accra, is currently being handled through “the alternative judiciary system” i.e. the issue is being resolved by the traditional authority. According to Madam Afoley, they prefer this system because it is faster in handling disputes. She

added that “we needed a quick solution to this problem; the formal government judiciary system is very slow. Sometimes they drag simple cases over many years”.

According to Evers and Gerke (2007), elements of conflict and competition in a business enterprise are believed to be common features in times of market integration among strategic groups so it is not surprising that, in another development, there is growing conflict within the national association.

For example, during one interview, increasing tensions were observed between Nana Ama Serwaa and Madam Afoley. Madam Afoley was not happy about the situation and felt her efforts to strengthen the association were not being recognised. In a lamenting mood she stated; “I try to involve all the queen mothers but they do not appreciate what I do. She gave an example of an occasion where she had designed a request permit to be completed by itinerant traders, giving details of all the passengers on board a truck. Each permit cost 15 GH Cedis. The purpose of these forms was to allow easy identification of the victims during accidents and to help flush out illegal traders. Madam Afoley said that “Nana Ama Serwaa tried to sabotage the idea by giving the forms free to her favourites and unauthorised traders”. Meanwhile, Nana Ama Serwaa was unhappy that Afoley, being the younger person, was being disrespectful by not consulting her on every issue before it was carried out and by collecting money from members without explaining what it was being used for. Afoley, on the other hand, told the Author that about 23,000 GH Cedis was paid to staff during the year.

The service providers:

This group mentioned accidents as the main risk. Many fatalities are recorded among this group when accidents occur. This is because during the journey they sit on top of the packed crates. They stated that it is not only when the vehicles crash that they are at risk - some told of experiences of being hit by tree branches, especially at night, while the vehicle is in motion. One sorter told of her experience;

I was travelling with the traders to Burkina Faso when a tree hit my head; my neck and chest were seriously injured and hurt so bad the whole night. The following day I was coughing blood and my neck remained stiff as I could not turn my head towards my shoulders but the traders did not pay any attention to me. The Burkina Faso farmers gave me traditional medicine but it did not get better. On my return, I was immediately admitted to the hospital and it was three months before I recovered. It was family members and Alhaji Clement, the (Ouahigouya station leader) who, out of passion, helped pay my hospital bills. Since then I have stopped the business, I am now concentrating on my vocation as a seamstress. I will never go to Burkina Faso as a sorter again.

Another concern in terms of risks for the group was that because they are hired without any written contract, the traders can dispose of their services at the slightest provocation. This makes their jobs very insecure. There are also allegations of most of the men taking advantage of the female sorters and sleeping with them. There are unconfirmed stories of some sorters contracting HIV AIDS as a result. The station leader was indifferent about the risky nature of the sorters job, saying that “it is an indecent job environment”. This is because most of the sorters have to sleep with the men (loading boys, interpreters or drivers) to secure their position in the trade”. To deal with the many risks they face, the players have devised management strategies which, although they may not be best practise, are based on practical experience.

4.6.1 Risk management strategies adopted to combat local factors

Risk management is a common requirement in all aspects of life but approaches may differ depending on the geographical location and the social setting as well as on economic factors. For example, in rural agricultural settings, risk management strategies are crop specific. Against this background this section will focus on the identified

localised factors that are employed to mitigate risks. This will help to understand the management measures adopted by the various market players based on their functions.

Farmers: One option open to farmers is to reduce the size of their cultivated land. Farmers, in general, can also minimise risk by limiting the incidence of credit and through diversification. However, the latter is not an option readily available to tomato farmers. In Ghana, tomato farmers manage the problem caused by defaulting creditors (traders who buy on credit) by insisting that they provide someone to serve as a guarantor. This service will usually be provided by the interpreters. Another way of tackling this problem is having someone travel South with the women, collecting the money and returning on another tomato truck. This same problem is handled differently by farmers in BF. There, they choose to detain one of the traders until the money is paid. Alhaji Clement narrated the sad experiences of some women who were detained:

Last year the farmers detained one of the traders; according to sources they were not giving her food. I heard of her sad ordeal after a month and after several attempts to contact her colleagues in Accra to send the money failed. I organised to pay for her release but after her arrival in Accra it was detected that she was pregnant. The only explanation was that she probably could not live on only water so she had to give herself out in order to get money to buy food. This year the same incident happened, a BF interpreter and a sorter spent 5 days in detention before I heard of it and paid the money for their release. When the woman came her husband refused her and it took the intervention of a church pastor to stop him from divorcing her (Field interview, 2008).

These cases were confirmed by Madam Afoley. According to her, in the first incident it was the first time that woman had been to Burkina Faso. She stated that the association made sure that her colleagues who refused to send the money to the farmers were arrested and detained in police custody for some days after which they were made to pay the money to Alhaji. She was, however, reluctant to comment on what happened to the pregnancy after the incident.

Diversification as a management strategy is available farmers in Burkina Faso. They grow crops such as onions, the cultivation of which is straightforward because they have a reliable irrigation system and it is an exportable crop so it does not pose marketing problems.

Traders: Traders manage transportation risks by cost sharing. Usually a group of four or five traders will come together and hire a truck. In this way, the cost is spread and the risk to each of them is minimised. Another practice is for traders to pay only half of the cost to drivers in advance. They give some money to the driver for the outward trip and pay the rest of the money when they return. In order to reduce the high incidence of accidents, traders try to deal gently with drivers in order not to upset them and when necessary advise them to take a rest before the journey. Controlling the volume of supplies to the market is another way of preventing the risk of a glut which could lead to less profit. It was this same intention that the Government established marketing boards to serve as regulatory bodies on behalf of farmers. Now these boards no longer exist, traders have taken upon themselves the responsibility of protecting their business by managing market supplies through imposing schedules so that itinerant traders can only discharge goods on specific days. On a visit to Agbogboloshie market, the leader indicated that supply control was very helpful because of the perishable nature of the crop. They have no storage facilities so whenever there is a glut; they are compelled to sell at give away prices. She added that it also has a social consequence by assisting in market sanitation as, according to her, when there is a glut a lot of filth is created.

This problem of sanitation is very common in most urban markets. Some traders litter drains and pedestrian pavements with unwanted tomatoes and occasionally offload at unapproved sites. This generates problems between the traders and the Accra Metropolitan Authority (AMA) which is very much concerned about the resulting environmental hazards. On the subject of harassment, the traders agree that the ECOWAS policy to ensure free movement led to the reduction in the number of barriers in each member country. This has resulted in the removal of all unauthorised barriers thus reducing the rate of extortions and delays. In the past, traders have also resorted to

boycotting Burkina Faso tomatoes in order to demonstrate against police harassment. The method used to outwit the armed robbers who disguise themselves as farmers is to ensure that trucks are not assigned to unknown persons. Anybody who comes to Burkina Faso to request a truck must be known by a local person who is also in the tomato business before they can be considered. Because of this there is a group of interpreters who come from Burkina Faso to represent the farmers and in many cases they work with the Ghanaian interpreters. This trend is generating a new dimension where local interpreters in Ghana are gradually developing a joint collaboration with those from Burkina Faso.

Service providers: For these groups, the only management strategy seems to be that of finding ways to please the traders in order to secure their jobs. They need to be very tolerant. The interpreters seek to please the traders by always bargaining with farmers for low prices. They also loan them money when they run short and sometimes they arrange in advance accommodation for those who intend to stay for the period. Loading boys and sorters may run errands for the women throughout their stay. For the sorters, the risk of lower payments by traders is compensated by sometimes stealing tomatoes from farmers during sorting. They normally carry with them some carrier bags which are filled with the rejected tomatoes and taken away after sorting. When the farmer is not there to supervise the sorting they will also steal good quality tomatoes, selling them to make additional earnings. However, some of these risk management options are in conflict with the deeply embedded socio-cultural values which make it difficult for players to effectively carry them out. Players are often faced with the dilemma of choosing between economic accumulations and upholding a moral value.

4.7 Market players and the traders' dilemma in the tomato sector

Chapter 3 contains an explanation on how rural market players are frequently confronted with the dilemma of choosing between economic accumulations and embedded cultural values. A straightforward example of the latter is religious beliefs. Harder to explain is the view that, while accumulating wealth, a person should also act with consideration and compassion for others. Moral values, the influence of networks, the extent of one's

obligation to society and the protection of one's name are all factors which exert considerable influence in market transactions. Looking at such factors in the tomato market in particular, it was observed that players are frequently influenced by such considerations.

It is essential to recognise that some individual choices are shaped by larger frames of meanings (Mudege et al, 2008). For instance, in one of the interviews, a trader in KCM stated that “the tomato farmers in the UER are our *husbands*, we cannot eat and then abandon them”²⁰. This is an interesting example of the flexibility which exists in an otherwise rather rigid environment where intermediaries would usually form barriers between the traders and the farmers (see figure 4.4). The significance of social relations is especially high among rich tomato farmers who deal directly with the traders. Many researchers have acknowledged the key role social structures such as networks play. For example Mudege et al, (2008: 37) is of the view that “individuals may take up what appears to be the most reasonable choice not because they are always consciously carrying out objective evaluations of the available choices and choosing the most profitable one (as rational choice theory will have it)”.

The vital role networks play is not limited to rural farming households. Evers and Gerke (2007) observe that the importance of networks is not limited to socio-cultural market environments but features in modern and more developed societies. The lack of formal support structures in rural communities makes networks an indispensable support system. It is reported that good relationships among pepper farmers and traders in Tamale resulted in traders assisting farmers with inputs and credits while farmers remain loyal and reciprocate by sharing information on credible supply sources (SARI, 2007). In their work on market institutions, trusts and norms, among farmers in Nigeria, Lyon and Porter observe that the loyalty and reciprocity created by networks becomes a vital aspect of trade as relationships are strengthened by trust (Lyon and Porter, 2007; Gyasi, 2005). Lyon also reports interesting cases showing the extent to which networks can influence relationships among farmers in Ghana. He cites a case in the Brong Ahafo region where,

²⁰ Interview with Maame Saah in Kumasi Central Market on the 4/02/08 in Kumasi

due to close links with a farmer and trader, the farmers' daughter went to stay with the trader in Accra to be educated while helping the trader in her household chores. He also describes similar situations where a trader in Accra gives a farmer accommodation when he happens to be in Accra, or a farmer named a child after a trader as a sign of respect (Lyon, 2000: 673). In such a situation the trader might have attended the naming ceremony and would thereafter refer to the child as hers. It is therefore not surprising that the traders use the word '*husband*'. This may oblige the farmer to transact aspects of the business within the context of such a relationship. For example, the farmer may give extra tomatoes to the trader saying "when you get home use these extra ones to cook for my children or my rival". This statement by the farmer is in acknowledgement of the trader's use of the word '*husband*'. It suggests that the trader's children are his children or if the trader is married, her husband is his rival. Creating such a social atmosphere in marketing can sometimes result in lower prices or traders getting extra produce from farmers. This could also be interpreted as a cynical strategy to keep a good relationship and at the same time make economic gains.

The underlying principle in this situation is similar to a traders' act of gift giving and observing social commitments in relation to top government officials. As Tilman observes (see Chapter 3), it confers on the receiver a moral obligation to be committed to the giver. The traders using this approach are aware of the power they have gained by having the support of such influential people in society. In other words, the authority they enjoy arises from the feeling of obligation and the bond of loyalty which are created by cultural norms. In the same way, the officials are occasionally in a dilemma as to whether to conduct their duties on pure professional ethics or on the basis of loyalty and their moral obligation to traders.

Giving goods to retailers on credit is another activity based on the above mentioned factors although traders will still seek information regarding the moral hazards or the uncertainties presented by adverse selection of their retailers. However, even with such knowledge, they still continue to transact business with them. Take, for example, a widowed retailer with three children who may or may not be related to the trader who

knows that the retailer may be vulnerable due to her financial burden. She may be genuinely sympathetic about the retailers' ordeal but not necessarily ready to compromise on her business. In this circumstance, she finds herself in a dilemma: should she succumb to the moral obligations of sharing and caring for relatives, neighbours or members of one's own ethnic group or should she follow the logic of profit maximisation and capital accumulation? (Evers and Gerke 2007). Decisions in the face of such dilemmas are highly influenced by social factors where she is morally compelled to continue to give goods so that the retailer can take care of her household. These actions can also be said to be influenced by the "objective condition for the social world setting limitations on what is and what is not possible and in this way the most probable practice is excluded as unthinkable" (Mudege et al, 2008: 37; Bourdieu, 1990) In such a situation, the trader succeeds in protecting her image by avoiding having society brand her as someone who does not empathise with the retailers' sad situation.

These factors were also observed in the working arena of the sorters. The sorters are sometimes recommended or introduced to a trader through any of the male players who have a good relationship with the trader. Before the introduction or recommendation the sorter might be in a close relationship, in many times intimate with the males. It is against this background that the station leader Alhaji Clement describes it as an "indecent job". In such situations, the sorters are confronted with the dilemma of trading their moral values to make a living or portraying a good personal image and staying poor. They have to measure the results of their decisions against the expectations of society and the teaching of their religious beliefs.

The discussion so far portrays a highly problematic sector within which the players run the risk of their actions being unprofitable. Leaving the discussion at this point therefore raises questions on how the sector has been sustained. This brings to mind the fact that rural agriculture has for years succeeded due to complex interactions of economic and non-economic systems. The rest of the chapter therefore focuses on factors such as cost of production and marketing as well as socio-cultural factors that play a role in sustaining the sector.

4.8 Economic and socio-cultural factors that contribute to survival of the sector

Agricultural production, irrespective of scale, requires a careful analysis of costs and benefits before a decision is made as to what needs to be produced and at what levels. While this analysis could be a key factor in decision making in many large scale enterprises, small scale farmers in rural settings tend to ignore some of the costs. In this section, an attempt is made to describe the actual costs of dry season tomato production and farmers' perceived costs so as to unravel the mystery of why production is sustained despite the numerous challenges and risks factors involved. In another example, traders' costs and benefits will be shown to assist in explaining how trade contributes to sustaining the sector. The analysis will also be important to verify the assumption that traders make huge profits throughout the tomato season. The computation on actual production costs employs data from MoFA, SOFA, an (NGO) in Bolgatanga and GLOWA research works in the study area. Figure 4.5 uses data from farm gate and retail prices in Makola market taken during the research work.

4.8.1 Cost analysis of tomato production and trade

The illustration in table 4.1 represents actual costs of production if one were to invest in tomato farming for purely commercial reasons. Contrary to the thinking of rural farmers who do not put value on inputs such as free labour, the calculations here reflect a business enterprise where economist stress valuing every input and making the most efficient use of resources. Therefore the 'Costs of inputs + value for family labour' means that monetary value is put on all inputs including family labour so that a complete cost of production can be attained. In any economic enterprise, management are careful in valuing the inputs that go into the venture in terms of its output or benefits (Ellis, 1993). In this sense no resource is taken for granted as the key principle is to efficiently turn inputs into the best possible outputs to ensure high profits.

In contrast to economic theories on profit maximisation enterprises, rural small scale farmers do not factor in the value of all inputs invested in farming. This practice of farmers is illustrated in table 4.2. It presents production costs within the context of farmers understanding where inputs such as fertiliser or agro- chemicals that the farmers buys are valued but they ignore others such as family labour because it is free. Various studies have been conducted and different reasons are given for such attitudes of farmers. For instance, Wolf, (1966), Nurge, (1971) and Benjamin, (1990) argue that due to their characteristically extended family system coupled with the traditional subsistence level of production they run a household, not a business enterprise. In a similar study in Norway, it was found out that the strong investments in farming may be due not only to agricultural constraints or a choice of life style but a survival strategy for the farm household (Agnete et al, 2003 and Benjamin, 1990).

These views are however subject to debate as Awoke concludes in a study on efficient analysis of input utilised among small scale farmers in Nigeria where, because of the traditional multi-cropping system, there is efficient utilisation of inputs. Rural sociologists concerned with the study of rural household units believe that peasants are a diverse group whose society has special traits that deserve to be recognised (Wong, 1971; 333). Furthermore, the widely used anthropological conjecture such as Chayanov's "peasant model of household utility maximisation" focuses on the subjective decision made by the household. In this model, the amount of family labour which needs to be committed to farm production in order to satisfy its consumption needs is based on these rural attributes (Ellis, 1993; 109). Such features of rural farmers were observed to contribute to the survival of the sector. Inputs costs such as the those of family labour, food and the building of farm huts²¹ are not recognised as part of production costs. The use of family labour for free is not limited just to tomato producers in the UER. Studies conducted in 1997 on cocoa farms in Ghana by Owusu et al, (2002) and Minot et al,(2001) and studies on smallholder farmers in Benin and Malawi show that traditionally, rural agriculture has been sustained due to the low cost of labour. While

²¹ During the tomato season, farmers build farm huts and some members of the family stays in the huts till the end of the season

economic analysts treat labour as a commodity which can be purchased or dispensed with as and when necessary, the same can not be said of rural farmers . The labour force of rural small scale farmers is made up of close relatives who cannot be hired and laid off at will as in the wider labour market (Wong, 1971).

It is clear from table 4.1, that the profit margin is very low despite the limited data. The data fails to account for consumption and waste which farmers indicated could be as high as five crates of tomatoes in a season. If farmers' consumption and waste were to be considered the benefits would be much lower. It is not surprising, therefore, that investors have found the industry unattractive ever since the closure of the factory about twenty years ago. In table 4.2, the profit margin is so high because farmers do not include costs on many inputs which are important in production. According to Wong, the objectives of peasants' productions are largely geared towards survival and the economic aspect which primarily aims at making profit is only secondary. He is also of the view that peasants are more likely to compromise on overall profits. This is very true of tomato farmers who can harvest quantities of tomatoes and share them with relatives, friends or any visitors to the farm. An encounter with such a gesture was personally experienced by the Author during field research. Farmers were always willing to harvest tomatoes to give to the research team. It is clear from the previous discussions that several factors contribute to farmers' inability to control prices. However, they generally tend to ignore the value of certain inputs and do not consider them during price negotiations.

Table 4.1 Costs of production, incorporating the value of family labour

Estimates for tomato cultivation			
Description	Quantity	unit price	amount
Land levy	1 acre	204,000	204,000
Seed	2 tins	120,000	240,000
Care for nursery	30man hrs	5,000	150,000
Well digging			1,261,050
Well re-digging			64,926,00
Land preparation; slashing	1 acre	150,000	150,000
Ropes			25,193,00
Buckets			60,012,00
Fert. Application			
Bed construction	45 beds	3,000	135,000
Spraying			49,400,00
Transplanting	10 man hrs	10,000	100,000
Fertiliser (N.P.K.15-15-15)	4 bags	200,000	800,000
S/A	2 bags	150,000	300,000
1st weeding	15 man hrs	10,000	150,000
2nd weeding	15 man hrs	10,000	150,000
Plant nutrient;			
Irrigation			5,400,000
Harvest more	1 tin	30,000	30,000
Staking			33,500,00
Insecticide; karate	1/2 litre	45,000	45,000
Harvesting	10 man hrs	10,000X 6 times	600,000
Well refilling			44,034,00
TOTAL			9,511,050
Expected income			
Average crates per acre	65		
Average price per crate	175,000		
Average income per acre			11,375,000
Less expenditure			9,511,050
Average Profit			1,863,950

Source: MoFA and ZOFA during field research (2008); GVP,2008

Table 4.2 Costs of production (Assumes family labour is free)

Estimates for tomato cultivation			
Description	Quantity	unit price	amount
Land levy	1 acre	204,000	204,000
Seed	2 tins	120,000	240,000
Care for nursery			
Well digging	F/L + Commu		30,000
Well re-digging	F/L + Commu		30,000
Land preparation;			
slashing	1 acre		
Ropes			25,193,00
Buckets			60,012,00
Fert. Application			
Bed construction	45 beds		
Spraying			
Transplanting			
Fertiliser (N.P.K.15-15-15)	4 bags	200,000	800,000
S/A	2 bags	150,000	300,000
1st weeding	15 man hrs		
2nd weeding	15 man hrs		
Plant nutrient;			
Irrigation			
Harvest more	1 tin	30,000	30,000
Staking			
Insecticide; karate	1/2 liter	45,000	45,000
Harvesting	10 man hrs		30,000
Well refilling			
TOTAL			1,709,000
Expected income			
Average crates per acre	65		
Average price per crate	175,000		
Average income per acre			11,375,000
Less expenditure			1,709,000
Average Profit			9,666,000

Source: MoFA and SOFA during field research (2008); GVP, 2008

It is widely believed that itinerant traders always exploit farmers to make very high profits for themselves. It is due to such allegations that they are sometimes referred to as cartels, mafia group or troublesome and garrulous. The illustration in figure 4.5 is

important to help explain these processes and to counter or uphold such accusation. The analysis uses data from farm gate prices and wholesale prices at the Makola market in Accra. The standard tomato crates come in two sizes, 134.5kg and 54kg. The calculations are made using the size 54 because traders are more used to analysing costs with that size. Though most of the traders are illiterate they are usually able to remember all expenses incurred in the process of buying so as to factor in the costs in the pricing of the commodities. In an interview, it emerged that the calculation of the wholesale price is based on how much they buy at the farm gate and any extra costs they incur during the journey. While traders are focused on maximising profits, farmers are concerned with meeting the household consumption needs. During the field work, it was noted among the traders that the price at which they sell to wholesalers is calculated by taking into consideration all other expenses including personal expenditure such as feeding and accommodation.

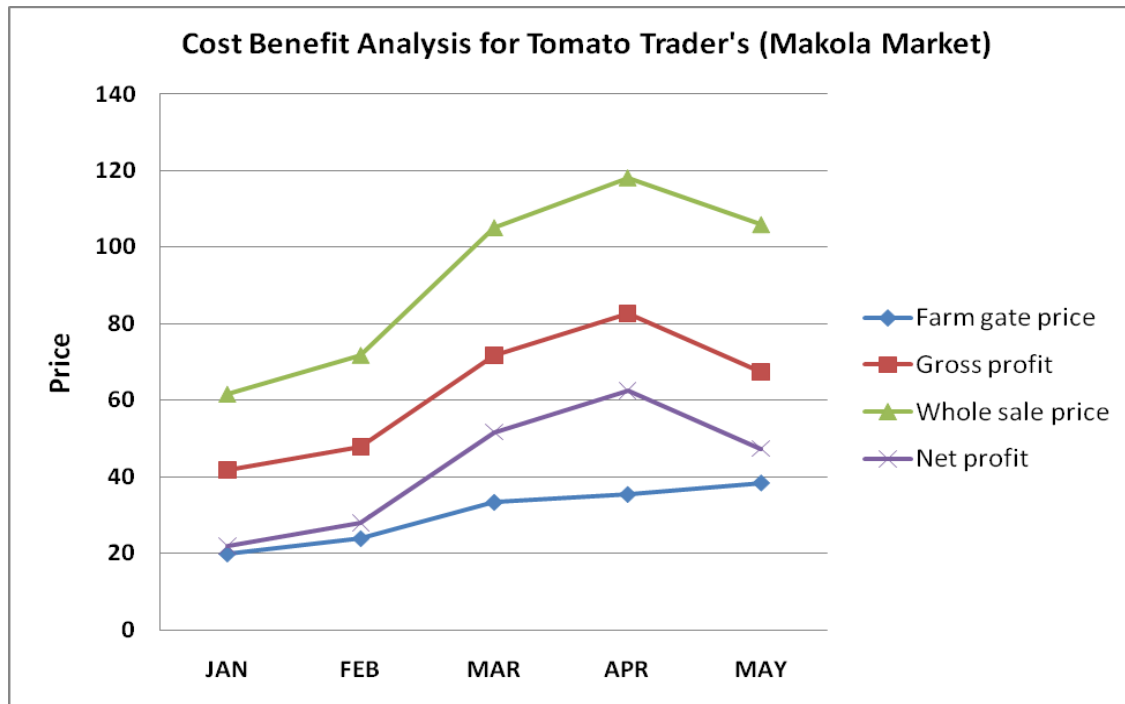
In a short outline of their costs they stated that truck drivers normally charge about 6 million Cedis for a truck that has the capacity to carry about 400 crates. The extra costs they incur include payments of fees, border permits and personal costs (accommodation, feeding etc.). The total sum of all the costs to the farm gate and back to the market was put at 8 million Cedis. Based on this information the following computations were made;

Cost to the trader = $8,000,000 / 400 \text{ crates} = 20,000$

Gross profit = Wholesale price – farm gate price

Net profit = Wholesale price – (Cost to the trader + Farm gate price).

Figure 4.5 Traders Costs and benefits (GH cedis per 54 kg crates)



Source: Farm gate and Makola market prices taken during research (2008)

From the analysis above it is obvious that traders do not always make such large profits. The low profit levels in January and February could be due to seasonal fluctuations. Traders confirmed that the season informs where they do their trading. From January to mid-May they buy from Burkina Faso and Upper East Region. From the end of May to July they buy from B/Ahafo and Ashanti region, and from August to December from Volta, Greater Accra and Ashanti regions. It is therefore possible that when production in the UER is beginning, the tomatoes in the Southern parts of the country are going out of season. Nevertheless, the Southern products may not be completely absent from the market by the time trade in UER begins. There is therefore the possibility of excess supply and, given the lack of storage facilities, traders may be compelled to sell at low prices.

Another possible factor that could explain the situation is excessive costs incurred within the period. For instance, at that time there were rumours of possible increases in fuel prices. Rumours of such nature usually culminate in hoarding causing a subsequent

scarcity in fuel and increased prices. Therefore, if a driver bought fuel at a high price then the initial amount agreed for hiring the truck will also increase, adding to the traders' costs. The trader may find it difficult to increase the price for retailers because there could still be southern tomatoes in the market. In the subsequent months, high profits can be made because these are the peak periods when there are no Southern tomatoes in the market. The only supply then is from the UER. It is also at this time that the traders employ strategies to control supplies to the market as well as restricting potential competitors' access to it. In 2008, production levels were low due to the farmers' bad experience in the previous year. As a consequence of this, many traders were not able to buy enough tomatoes. For this reason, the only economic explanation is that demand exceeded supply thus creating a favourable situation for the few traders who were able to supply the market, enabling them to sell at very high prices. As traders indicated, from May to July they buy from the Southern region. It is therefore not surprising that farm gate prices begin to rise but profits remain low. This could be attributed to the fact that, as the Southern farmers start to supply the markets, a glut is created thus compelling traders with goods from the North to reduce prices, resulting in lower profits. While the fluctuations between high and low profits average out at a survival level, field observations identified other non-economic elements, such as social factors, which also serve to support the sector.

4.9 The importance of Social-capital in tomato production

Within many development programmes it is acknowledged that there are basic economic explanations of how issues are resolved but that fails to recognise that most rural improvement techniques require dynamic processes involving complex social variables (World Bank, 1998). The part such factors play in traditional societies in improving the quality of life constitutes the foundation upon which social organisations are shaped. It is therefore important to understand that structural change and development is largely determined by the rigidity or flexibility of societal values. The ability to identify elements that bring people together and create rural security structures makes it easy to appreciate the role they play and therefore their contribution to development.

It is important to understand that rural livelihoods have conventionally depended on the support of social ties and the sale of assets to raise money for investment in farming, contrary to the belief that farmers fear losing productive assets. For instance Kasianga and Uldry (2004) ; Fafchamps, Uldry and Csukas (1998) report that, during the 1984 drought in BF, rural farmers and households who were affected refused to sell cattle but rather chose to minimise consumption levels. In a similar study conducted among herders in East Africa, it was observed that nomads with few animals to sustain themselves cannot maintain a nomadic lifestyle and face a much higher probability of losing their livestock. In this situation, they preferred to hold on to their animals to preserve their lifestyle (Fafchamps, 2009:11). Selling of assets such as land and livestock is not usually a decision welcomed by rural people though it may be the best means of solving an immediate scarcity problem (Ibid; Carter and Zimmerman 2000). Difficult as it may be, such acts are among the best options available to rural societies to ease social costs. As already highlighted in the chapter, many tomato farmers sell household assets but the majority get remittances from migrant relatives or borrow from friends and family members in order to farm.

Such rural support systems have been confirmed in a study on health payments carried out by WHO in fifteen African countries. It was found that households, apart from selling assets, resort to borrowing money from friends and family to cope with medical bills (Adam Leive, Ke Xu, 2008). Tomato farmers mostly rely on family and friends for financial support. Financial institutions, for example rural banks that are established for the poor, may be willing to give small loans. Even so, the complexities involved in accessing such loans are no different than when trying to borrow from the bigger banks. Their processes are not only restrictive and cumbersome but they demand collateral that rural farmers cannot afford. To the farmer who may need only ten or twenty Ghana Cedis to buy inputs, this can be confusing and frustrating. Borrowing in rural settings is informal and largely dependent on social relations (Leive and Xu, 2008). However, the decision to borrow can be difficult in the context of the social consequences if subsequently one is unable to make repayments. Informal borrowing in rural societies

depends much on one's reputation. Trust is a key element in such situations. Basu's (1992) work among traders in India, as well as Batt and Rexha's (1999) studies in the Philipino seed potato industry, demonstrate that trust is a critical factor in sustaining an efficient business.

In Ghana, Lyon (2000) found that trust between vegetable traders and farmers is based on networks and pre-existing social relations. This is common in close social settings like the KND. However, any of these methods can come at a cost to one's personality. Borrowing, for example, can cause low self-esteem in the borrower because of the fear and shame of being refused. In addition, inability to pay back can jeopardise a longstanding relationship if not handled carefully by the lender. It can be embarrassing, leading to naming and shaming. Remittances from migrant family members have traditionally been used as a means of support. In a few instances, migrant family members encourage their relatives back home to farm by promising financial support. Their activities can be closely monitored by the migrant thus putting pressure on the farmer. Some family members give specific instructions and direct how the money should be spent.

In situations where the migrant is younger than the farmer, the latter feels that he is not trusted and feels belittled on being instructed by his younger brother or sister. For instance in "Doba, the sister of Webunga (tomato farmer), did not only support him financially but travelled from the South, where she lives and works as a nurse, to monitor the harvesting and marketing. According to her, supporting him financially serves as a "hedge". If the brother is successful in the farm she would be relieved of the financial burden placed on her by the household depending on her in times of food shortage. She added that it is cheaper to assist in the farming than to take sole responsibility for the household needs until the next farming season"²². Despite the social implications, social ties serve as important sources of support to tomato farmers and contribute to the survival of the sector. While these support systems for production are available to farmers, marketing is a competitive activity where farmers are at a disadvantage. Examining the

²² An interview with Webunga's sister in Doba (2008)

historical and cultural background of the social setting, it was found that factors supporting the sector were not only in monetary ones. Socially ascribed values and norms were observed to be important incentives also. Maintaining status and a good name are vital elements in rural societies therefore, a “rise in income may be less of a priority to a poor household than an increase in the security (DFID, 2002; 4).

4.9.1 The socio-cultural values that support production

Social structures have a strong influence on individual behaviour and decisions (Gidens, 1976 Mudege et al, (2008). Such attitudes are quite evident among some tomato farmers. Mudege et al also found, in their work on rural farmers in Zimbabwe, that social and political issues are embedded in the history of farming. It is therefore not surprising that they report that farmers who do not get high yields do not command as much respect as those who do get high yields. They note that farmers who get high yields do not only gain high status in the village but, in discussions, their views receive serious attention (Ibid).

In Ghana, some farmers, by virtue of being in production for many years, are well known and command respect. Although there are many tomato farmers in the communities, if one goes looking for tomato farmers, a guide may take the person to particular households. These households are famous for their production and they will therefore continue to maintain such prestigious identities. For example, in Doba, a farmer who believes that he was the first to introduce tomato farming in the community, challenges anybody whose view is to the contrary. He farms every year not only to maintain his social status but to defend his position against the threat from new competitors.

Against a background of high rates of unemployment, one engaging in any form of agricultural activity is seen as a hard worker capable of taking care of a family. This social ideal attracts recognition and respect. In such a traditional setting, where the decision to give a daughter in marriage can be made on the basis of a man’s hard work, being labelled as a hard worker is an asset worth acquiring. The social implication of being branded as lazy is a considerable dent in a person’s reputation. The effects can be stigmatising, taking the form of mockery, naming, isolation or exclusion from the

benefits of some community resources. When a young man or a husband complains of poverty or lack of any assets he can quickly be referred to his colleagues who are farming tomatoes. In this regard, many struggle to farm tomatoes when possible so that they are safe from such offensive retorts from their relatives or wives.

In another dimension, seeing those tomato farming households who have been able to accumulate assets e.g. a radio, tape recorder, mobile phones, bicycles, roofing sheets, cement and, in recent times, television sets motivates others to move into this sector. Despite the fact that the traditional mud houses are in keeping with the people's culture and history (see Chapter 2) the influence of modern lifestyles has resulted in changes in building techniques. In the communities it is prestigious if a house is built with cement blocks and roofed with aluminium sheets. This is popularly known as a block house. Such a household is viewed as a rich house while one built with mud and roofed with grass is a poor house. The preference for block houses is increasing hence some farmers, after selling their produce, buy cement and aluminium roofing sheets to either replace or add a block house to the family mud house. An example can be seen in figure 4.6. Where farmers by the riverside are mixing cement with sand to mould blocks on the farm. The majority of farmers buy livestock after selling the tomatoes for use as a hedge fund for future household needs. Most such farmers would have sold their livestock in order to cultivate tomatoes in what can be termed as a recycling of resources. Only in rare cases will they be able to generate incomes high enough to enable them to buy and sell animals purely for profit.

Photograph 4.6 Farmers moulding blocks from tomato proceeds



Picture taken during field work (2008)

The acquisition of assets such as radios, tape recorders, and mobile phones gives a young man confidence and the respect and admiration of his peers, thus raising his social status. It must, however, be noted that acquiring such assets does not necessarily mean that he has been able to adequately provide for the household. As a matter of fact, such acquisitions may have been achieved at the expense of some important needs like food, health or education. On the other hand, the inability to meet educational or health needs may not be a criterion for judging household living standards since this is common in these communities.

4.10 Conclusion

In this chapter the structure of the local market is discussed. It has been shown that the strong traders' association gives them the power to control the market. Farmers are disadvantaged by weak cooperation and lack of trust among members. While the controlling power of traders is very noticeable in the South it is less so in the North. The reason for this is partly due to a traditional norm in the North which assumes that land is

a resource for the use of all. Accordingly, a group of players cannot deny others of its use. This gives farmers better marketing opportunities in the district market. However, due to gluts during the peak of the season they are compelled to sell to the Southern traders. The interaction of power, cultural norms and networks is manifested at this level. While such ties and norms support production they also pose a dilemma to trade. This is observed in the context of economic accumulation conflicting with maintaining a good image in society. Such intricate dynamics are further complicated by Regional cooperation. In Chapter 5 the complexities of regional trade are discussed to explain their impact on local farmers.

5 Regional trade policies and trends at the national level

5.1 Introduction

The chapter describes regional trade policies, focusing on cross border trade of tomatoes between Ghana and Burkina Faso. In order to provide a deeper explanation of this aspect of the market, personal surveillance was undertaken of traders' movements across the border. Trips were also made to Burkina Faso tomato farming communities making the data source largely empirical but augmented with secondary information. In this regard, the chapter discusses the trade dynamics in the fresh tomato market. It details how Burkina Faso, the major competitor in the sub-sector has succeeded on the Ghanaian tomato market. A narration of field observation on the general marketing environment will include statistics on movements of tomato trucks across the borders. It acknowledges the cordial trade relationships existing between the 2 countries. In a brief explanation of the ECOWAS trade policies, it shows the risks and power relations within the market. It concludes with a summary of the key effects on the Ghanaian domestic market.

5.2 Cross border trade at a regional level

The idea of a regional cooperation by African leaders as an essential catalyst for maximisation of the continents potentials and its rich resources was conceived far back in the 1960s. This paved the way for countries with common resources and cultures to cooperate in achieving better regional security and more effective global integration through allowing each other easy access to their markets.

During an interview, the Ghana Ambassador to Burkina Faso described the cordial relationship between Ghana and Burkina Faso as being due partly to this regional cooperation. According to him, this began in the 1980s, when the two governments, represented by President Sankara of Burkina Faso and President Rawlings of Ghana, were seriously discussing the continental government unification of Ghana, Guinea, and Mali. This was a united front Ghana's first president, Dr. Kwame Nkrumah, had sought in vain. He was of the view that both political and economic ties have been the main platform for bringing the two countries together. Socially, the two nations are bonded by

their ethnic roots, a particular example being the Kasena's and Mossi's of Northern Ghana who are only separated by an imaginary border line. In Polanyi and Evers study of markets, they observed that the exchange of goods and services and freedom of movement coupled with social activities across supposed borders, contribute to the strengthening of relations as well as improving human welfare. However, on purely political grounds the warm relationship between the two countries has had its setbacks. Typical examples would be the processes that led to the shift of power in Burkina Faso in 1987 and Burkina Faso being accused by Nigeria and Ghana of supplying arms to Charles Taylor's forces during Liberia's civil war in the 1990s²³. These notwithstanding, economic relations continue to flourish between the two countries. For instance, the Ghanaian government's establishment of the road, air and telecommunication networks has facilitated cross-border trading, particularly of agricultural products, agriculture being the main sector in the economy in both countries. However, for the past three years, trade within the tomato sector has been besieged with problems, resulting in conflict in some cases.

5.2.1 The tomato sector in Burkina Faso

Burkina Faso is situated in West Africa, sharing borders with six other countries. It is a tropical country with a hot, dry climate similar to the Northern parts of Ghana. Like most African countries, the economy is dependent on rain fed agriculture and soils of relatively low fertility. It is reported that, since the 1980s, agricultural development is skewed towards the South-Western zones, where support for the cotton industry resulted in an increase in production (INERA, 2008). The North, subject to less favourable climates, does not produce such cash crops but grows rather more traditional crops such as millet, sorghum and livestock (Ibid). Recent climatic changes in, for example, West Africa have resulted in a decrease in annual rainfall by 20% to 40% compared to the periods 1931-1960 and 1968-1990 (AGM, 2009). These variations have had a direct impact on crops and production systems. The dry season is longer in the North so the production of vegetables in the South can begin a month earlier and continue for one month later than

²³ (http://en.wikipedia.org/wiki/Ghana-Burkina_Faso_relations, accessed 7/05/09).

in Northern Ghana (INERA, 2008). In this region, growing vegetables, most of which are tomatoes, has become a viable option because they can be grown in a relatively disease free environment (Ibid). It is also reported that tomatoes contribute significantly to agricultural revenue. Vegetables (of which 60% are tomatoes) bring in 30% of the total.(Ibid). A large proportion of the tomatoes is exported to areas along the West African coast with Ghana dominating in the market. According to the farmers, Ghanaian traders form 80% of their market.

This is, however, not surprising as Ghana and Burkina Faso have historically enjoyed smooth trade relations which have been further strengthened by ECOWAS trade agreements for example, agreements on the free movements of goods and services across borders. Maize, onions, fruits and vegetables such as tomatoes are common goods that are traded across the borders. However, the tomato sub-sector continues to be a cause for concern as every marketing season brings new challenges, meeting which, in many cases, require the intervention of government. The main reason is that tomatoes are produced in the same period in both countries. As already noted, marketing starts from January to mid May in Burkina Faso and Upper East Region²⁴. This has created fierce competition between the two countries since they both depend on the same buyers to market their products. The situation has increased marketing problems for Ghanaian farmers who in many cases find it difficult to cope with the high level competition. The fact that traders from Ghana prefer tomatoes produced in Burkina Faso further complicates the problem for Ghanaian farmers. On occasion, the situation has resulted in aggressive conflicts (see Chapter 6) In an interview at INERA, it was stated that traders tend to prefer Burkinabe tomatoes over Ghanaian ones because of the better quality and lower price (INERA, 2008). In another interview with the manager of the ICOUR project, he gave reasons for the current state of the situation by explaining that:

²⁴ Field interview with Madam Afoley (Acting Queen mother) in Accra 2008.

The government of Burkina-Faso sees tomatoes and vegetables as exportable crops and a source of foreign earnings for the country. As such the government allocates a large portion of funding to the sector e.g. the government supports an association called ECO-BAN for tomatoes and vegetable growers. The association organises inputs in bulk for the farmers of secure high quality varieties of tomato seeds such as Petomec[®] 1 or 2 which are compatible with the soil and capable of withstanding long journeys. Agronomic practices also play an important role. They farm along the reservoir, use a lot of organic manure (cow dung) and less water during fruiting. In the area of processing they have solar dryers where the tomatoes are processed and packaged for marketing (Field interview, 2008).

The above information was also confirmed by the deputy manager. According to him, due to the good agronomic practices of Burkina Faso farmers, Techno-serve, (a Ghanaian based NGO) supported ICOUR by taking some Ghanaian farmers on a study tour in Burkina Faso. This was to assist the farmers in acquainting themselves with agronomic practices among tomato farmers there. He added that the practice of shading ripe tomatoes to prevent direct sunlight spoiling them was adopted from Burkina Faso. Personal observation was made of ongoing research to improve upon the current variety during a visit to Burkina Faso at INERA. The objective of this is to produce higher quality tomatoes for the market. The fact that the current varieties are already a preference for Ghanaian traders this does not create a state of complacency and they are still striving to improve them. As part of the study, researchers were deployed to travel on tomato trucks with some traders returning to Ghana. Their task was to take random samples of the temperature of the tomatoes at specific times throughout the journey to the loading points in Ghana. The directors at ICOUR were of the view that getting the right true-to-type seed variety is paramount. The project manager was doubtful about the varieties used in Ghana. He suspected that the Petomec[®] seed varieties that Ghanaian farmers got from BF were not true-to-type but were extracted from the fruits, washed, dried and packaged. This is a clear example of asymmetric selection discussed in the theoretical chapter.

According to sources, the current tomato varieties farmers in Ghana use are associated with a new variety ICOUR introduced in 1992. However, this was highly perishable and, as a consequence, many farmers suffered heavy losses and most stopped tomato production altogether. This negative experience ultimately had a positive impact as it forced ICOUR to identify the better varieties on which production is presently based (Erenstein et al, 2006: 385; Okali and Sumberg, 1998; Dittoh 1998). However, since the marketing system has been transformed, for example by the long distances in transportation, coupled with climatic and environmental changes there may still be the need for further research into the right type of seeds that can withstand these factors. Fred²⁵ in an interview also points to poor agronomic practices by Ghanaian farmers. According to him, in BF they use about 70% organic manure which means fewer chemical fertilisers. He stated that “I have people who prepare the compost for me and the variety of tomatoes that I grow is “70”. It shrinks with time instead of getting softer like those grown in Ghana. During fruiting we are careful not to over irrigate. He disclosed that the seeds in Burkina Faso are from Italy and was philosophical about the poor technical support in Ghana. In his view agricultural extension service delivery is more effective there than in Ghana.

²⁵ Fred Abadu has for the past 5 years been doing business with the tomato traders as an interpreter. He also finance farmers in BF, last year he acquired land and has started contractual farming.

Photograph 5.1 Solar dried tomatoes and mangoes in BF



Source: Picture taken by researcher (2008)

An interview in Burkina Faso with the manager of ECO-BAN was different. The manager indicated that tomatoes were not among the crops that they export and the organisation does not deal with tomato farmers. However, a visit to the solar processing site confirmed that tomatoes are processed by solar drying in periods of glut. A sample of solar dried tomatoes is shown in figure 5.1. It is also true that the Burkina Faso government is investing in the vegetable sector by improving the irrigation system. Some tomato farming communities are also given food aid. In one of the communities, the farmers confirmed that they are given maize, beans, oil, grinding meals and pumping machines. These are given to farmer groups during the vegetable farming season. Other communities e.g. Kongoussi, Ouahigouya, and Tem which were not getting such support interpreted the gesture as politically biased because the government only supported communities where it has strong support. In Yako, a private philanthropist (Kanasoe)²⁶ had established a dam for the community and large scale tomato production is taking place.

²⁶ Mr Kanasoe is a very rich contractor in Burkina Faso who has constructed a dam for the people in his home community.

5.3 Tomato marketing between Ghana and Burkina Faso

Tomatoes are produced in most parts of Burkina Faso but large-scale production is concentrated in the Northern parts of the country where climatic conditions are more favourable for the crop. The places listed in table 5.1 are among the most popular production areas. Map 5.1 below depicts the trade routes from Ghana to the production centres.

Table 5.1 Popular tomato production areas in BF

Capital	Administrative Province	Administrative Region
Ouahigouya	Yatenga	North
Kumbissiri	Basega	Central South
Dori	Seno	Sahel
Kongoussi	Bam	Central North
Siniare	Obritenga	Plateau Central
Bobo-diolasso	Houet	Houts Bassins
Gaoua	Poni	South West
Yako	Passorre	North
Kaya	Sanmatenga	Central North

Source: Ministry of agriculture in BF

Considering the number of regions involved in production, as against only one such region in Ghana it is not surprising that competition with its neighbour is high. It is believed that farmers are able to sell at very low prices with flexible market practices for their buyers because of the support they get from the government. Traders and loading boys confirm that if tomatoes are bought in Ghana for about 12GH Cedis per crate, the same quantity can be bought at half the price in Burkina Faso. Farmers are also flexible. For example the practice of heaping the crates was started in Burkina Faso. Additionally, the translators are better paid for bringing the traders to the farmers. In BF they get about 2GH Cedis per crate while in Ghana they have to negotiate for 1GH Cedis per crate.

Tomatoes in Burkina Faso are sold domestically but a large proportion of the market lies in the neighbouring countries of Ghana, Togo, Benin, and Cote d'Ivoire with Ghanaian women forming 80% of the market. The trade has also been enhanced by the de-

regulation of free movement of goods and services across national borders. The Ghanaian traders are mostly women from the Southern regions of the country (Greater Accra, Central, Ashanti, Brong Ahafo, Eastern and Western). The women have, over the years, engaged in trade between the two nations in every tomato marketing season. Dominant among the traders are those from Greater Accra, Central and Ashanti regions. The season usually begins in December when wet season tomatoes in Ghana get finished and harvesting starts in UER and Burkina Faso. During the period, some of the '*Kwansofo*' and loading boys from the South migrate to Navrongo and stay until the season is over. The migrant traders buy the tomatoes for the drivers to deliver to a relative in the South or a relative accompanies the driver on the round trip. This practice has gone on for several years so most of the houses they occupy just for the season are almost permanent with some popularly known as Ouahigouya houses because of their trade in Burkina Faso (Ouahigouya is a popular tomato producing community in Burkina Faso). The loading boys, on the other hand, come mostly from Greater Accra, Central, Ashanti and Brong Ahafo regions and usually congregate on a regional basis. They occupy abandoned or unfinished structures and squat till the end of the season. However, a few of them may rent cheap rooms.

Map 5.1 Trade routes from Ghana to production centres in Burkina Faso



Source: created by researcher and Benjamin Schraven (2009)

The journey to Burkina Faso from Ghana usually takes about three to four days (providing the trucks are in good condition). Most of the tomato trucks arriving from the South stop in a station in Navrongo popularly known as the Ouahigouya station. The station is under the control of Alhaji Clement. According to him, he introduced the role of interpreters to the business. Currently he functions as the overall leader of the bulk of the service providers. One of his responsibilities is settling disputes and conflicts among group members. He also has a good relationship with the traders. Alhaji Clement rarely goes on treks but gets his commission from other interpreters who give him a percentage of their earnings when they return from the journey. Usually the tomato trucks from the South arrive in Navrongo in the evening for the women and the drivers to spend the night.

The following day the women prepare for the journey to BF. This may involve checking accounts, cooking food or buying food stuffs to cook in BF. The leaders or translators start to carry out their duties by changing currencies for the women (during this period the Burkinabe CFA²⁷ goes up as it is usually on high demand), paying border fees and getting the necessary papers at both borders for the journey. Interpreters are sometimes referred to as leaders because of their role of leading the trucks to the tomato farms. The drivers may also be checking the condition of their trucks and making repairs if necessary. The trip usually starts around noon. The traders and leaders know how much they have to pay at every barrier so before they set off the total amount is calculated and given to the leader who makes the payments at each barrier as they travel.

There is only one leader per truck. Depending on where they decide to buy from²⁸ and on the arrival time there, harvesting and buying starts immediately or on the following day. On arrival at the farm, the leader or interpreter goes round the fields to assess the quality and quantity of the tomatoes, taking into consideration the number of crates in the truck. He then reports back to the women and, if they decide to buy, the leader begins to negotiate prices with the farmer on behalf of the traders. As stated in Chapter 2, the leaders are well experienced in negotiations because they have done this for several years. In addition, since their commission depends on how well they are able to negotiate, they bargain for high prices. For example, if the traders offer 20,000 Cfa per crate the interpreter would tell the farmers that the traders are ready to pay 15,000 Cfa or 17,000 Cfa.

²⁷ CFA is the currency used in Burkina Faso

²⁸ see map 5.1

Photograph 5.2 a leader negotiating prices with farmers in BF



Photo taken during field research, 2008

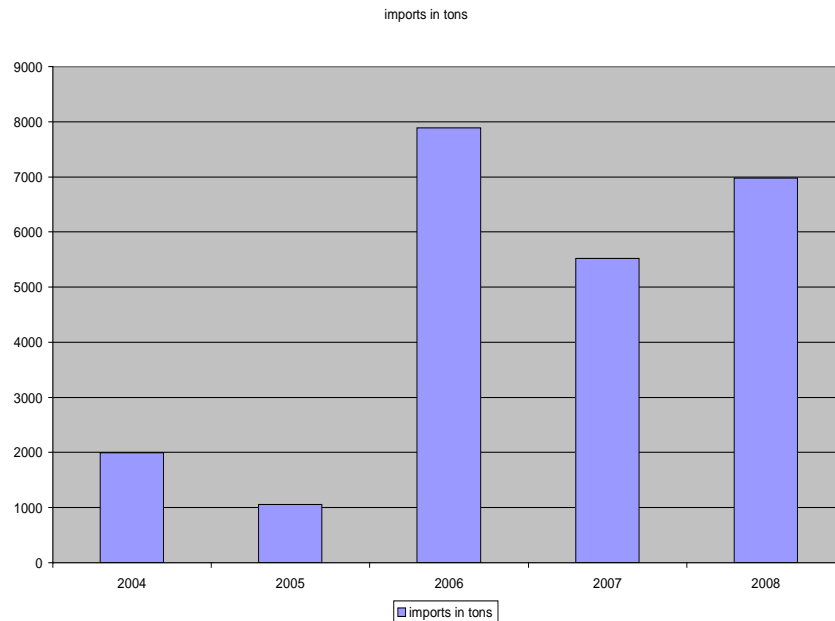
If successful, he takes the 20,000 Cfa from the trader and pays 15,000 Cfa or 17,000 Cfa to the farmers. This gives him a commission of 5,000 Cfa or 3,000 Cfa per crate. If both parties fail to reach an agreed price after bargaining he tells the women to adopt a boycott strategy (walking away to create the impression that they are no longer interested in buying). In such situations the farmers are compelled to accept the last offer and call the group back. On acceptance, the crates are distributed amongst the number of farmers available and harvesting and sorting begins as illustrated in the photo 5.2 above. While this activity is going on, the women start to prepare food for the group (driver, interpreter, loading boys and sorters). After the crates are filled the leader pays the farmers and the loading boys arrange the crates as described in Chapter 4. The trip back to Ghana starts right after loading, regardless of the time. On the way back, the leader has again to go through the process of paying at the various barriers until they get to Ghana. The women may either spend the night in Navrongo or continue to the South depending on the capability of the driver or the traders' schedule as explained in Chapter 4. The job of the interpreter ends on their return from Burkina Faso to Navrongo, He does not follow the truck to the destination point. During the season, the district is busy with both social and economic activities, tomato trucks, motorbikes, traders, loading boys and sorters busily

move across the border. The atmosphere is always fascinating as people temporarily put aside their usual trade to make quick money from the tomato business. Others take advantage of the season to get into small scale income generating activities; selling food, shoes, jewellery or textiles at the border or at Ouahigouya station. Observing the trade from a distance, it appears that all actors are happily earning high profits but this is not the case with local farmers in Ghana. Farmers have tried hard to create equal market opportunities but the traders' preference for Burkina Faso tomatoes has often led to disputes and conflict during the period.

5.3.1 Conflicting reasons why traders prefer Burkina Faso tomatoes

The traders' continuous preference for imported over local tomatoes is creating a problem domestically. The past three years has seen trade across the border taking on a different dimension. Local farmers find it increasingly difficult to look on passively as fleets of trucks pass them by on their way to Burkina Faso. According to the personnel at CEPS, the peak season is during February and March, when as many as fifty trucks a day can be seen crossing the border to Burkina Faso bringing in tons of fresh tomatoes (fig. 5.1 below).

Figure 5.1 Tomatoes imports from Burkina Faso



Source: Author's calculation from field data (2007)

The graph shows the reduction in imports in 2007 due to the conflict detailed in Chapter 6. This affected production in 2008. Although it can be seen that marketing in that year was relatively high, it is not comparable to 2006 which was without problems. The low imports recorded in 2004/5 were due to an outbreak of tomato disease in both countries. The market level in 2008 is attributed to farmers' demonstrating in 2007 against the traders' preference for Burkina Faso tomatoes. The impact of the demonstration reflects solidarity among the farmers which suggests that, if the farmers are well organised, their collective voice can influence the market.

Different reasons have been put forward to explain the traders' preference. In an interview with the DCE and at the MoFA office, they were of the opinion that the traders are also involved in illegal businesses e.g. carrying fuel (which is cheaper in Ghana), cement and "*Apatashie*"²⁹ to sell in Burkina Faso. According to them, the government is caught in a dilemma because of the regional regulation that permits movements of goods across borders. Such views are strengthened because the high risks and harassment which

²⁹ *Apatashie* is a local alcoholic beverage that is distilled from the palm tree in Ghana

should, under normal circumstance pose as a disincentive for the traders seem not to be problem for them. The farmers strongly believe that the traders also carry drugs. A member of staff at MoFA described his irritation when, witnessing a tomato truck carrying such illegal goods at a Burkina Faso barrier, he attempted to take a picture but nearly had his camera confiscated by the gendarmes (personnel at the Burkina Faso barrier). He was of the view that they probably take bribes and allows the women to pass with the goods. An insider in the tomato business also confirmed the allegation but was quick to add that some of the traders do not belong to the traders' association so they are more likely to indulge in such acts.

According to the traders, the reason partly due to consumer preference and partly to the higher quality of the tomatoes which to means they reach the marketplace in good condition. They claim the tomatoes produced in Ghana's UER are of low quality, containing too much water and being too soft. An Accra trader explained that the shorter journey from the South to the UER takes about two days as compared to Burkina Faso which takes three days. However, by the time they arrive in the South, the tomatoes brought from UER are spoiled. The traders link the spoilage to the poor agronomic practices adopted by UER farmers. They accuse the farmers of using too much water and too many chemicals. However, these allegations remain merely the opinion of the traders and consumers as there is no scientific proof available to support them³⁰. This is especially true in regard to the type of irrigation practiced in the area -well and bucket irrigation combined with the frequent scarcity of water which suggests over-watering would be rather unlikely. The hotly debated high water content of the tomatoes led to tests being conducted to measure the "brix" or water content in some of the most common varieties produced in Ghana and BF (70, Roma and Pectomech (1, 3 or 5). The following were the results:

³⁰ see Chapter 2

Table 5.2 Tomato varieties and brix (°Bx) level

Variety	Brix content	Comments (for processing)
Ghana & BF, 70	5	10kg of fruits to get 1kg of paste
BF & Ghana (Roma)* ³¹	5	10kg fruits to get 1kg of paste
Techiman (Local variety in Ghana)	4	14kg fruits to get 1kg of paste
BF Pectomech	6	8kg of fruits to get 1kg of paste

Source: Test conducted during field research (2008)

The test was conducted with the help of an agronomist at the factory (see Chapter 6) The various values were arrived at by cutting or puncturing a tomato fruit then a drop of the juice was squeezed on a refractometer , an instrument for measuring brix content. The refractometer is held perpendicular to a source of light which makes it easy to read the indicated values. He explained that the degrees of brix (°Bx) tell the sucrose (sugar) and water content in tomatoes. For example, if a test of 100 grams of solution showed a brix content of 25 it means that the solution contained 25 grams of sugar and 75 grams of water. He stated that the higher the percentage of brix, the lower is the water content which is good for processing because fewer kilograms of the fresh fruit are needed to make a kilogram of paste. According to him, the best brix content ranges from 5 to 7. “*Techiman*” is a local variety popularly grown in Ghana’s South during the rainy season. The tests confirm very high water content which is also confirmed by consumers. A visit was also made to a local processor³² in KCM. With experience gained during his four years in this business, he grades the tomatoes according to the water content, starting with the best from Burkina Faso, followed by those in UER, with the Southern variety (*Techiman*) placing last. He believes that the varieties in Ghana and Burkina Faso are the same but those produced in Ghana have less pulp and much more water as compared to

³¹ * This variety was bought from traders returning from BF and many were not sure of the type but most said it was Roma

³² Anafo, is a small scale processor in Kumasi central market, he grinds tomatoes into puree mostly for, food vendors, Chop bar operators (local eating places) and domestic use

the ones from Burkina Faso. As for the '*Techiman*', they have to be boiled to evaporate the water before they can be used for cooking.

On the issue of chemical usage, studies show that, in 1988, Ghana used less than 5kg of plant nutrient per hectare of arable land compared to 6.4kg for Mali, 21.5 in Malawi and a world average of 98.7kg (Hutchful, 1996; Kelly and Crawford, 2007). Further reports show that out of 19 developing countries studied by FAO, Ghana had the lowest level of chemical fertiliser application (Hutchful, 1996: 163). Faced with this information it is clear that the traders' views are completely unsubstantiated.

5.4 Conclusion

The chapter discussed how regional trade policies have created marketing problems in the Ghanaian tomato sector. Although the study focused on the long standing economic and social relations between Ghana and Burkina Faso, much attention was given to the disadvantageous position of the Ghanaian tomato farmers as traders from Ghana prefer Burkina Faso tomatoes. The reasons given range from allegations of illegal trade by the traders while they complain of the poor quality of Ghanaian tomatoes due to poor agronomic practices. However, this is mere speculation as there is no scientific proof to support this view. It was found that, while farmers can have bargaining power locally, this may not be the case at a global level. The complexities and interaction of global policies have created a barrier for farmers when it comes to fair competition. These are investigated in the next session by examining "processing" as a means by which farmers could improve their incomes by adding value to their produce.

6 Global policies: the state of the domestic processing sector

6.1 Introduction

This chapter investigates the state of domestic processing through an examination of global trade policies. A case of an investor in the processing sector is presented to give a deeper understanding of the complexities at that level. The discussions centre on the state of domestic processing using the tomato factory in the regions as an example. Attempts are made to connect the current state of domestic processing to SAPs policies in general and to trade liberalisation in particular. The case study explains the conflicting interests of government and a foreign investor in the revamping of the processing factory. This is followed by a description of the processing options available locally and the commercial limitations faced by the farmers.

6.2 Brief overview of the dynamics in the processing sector

Detailed arguments have already been propounded on the effects of global policies on the tomato sector. Economic development through deregulation, privatisation and state withdrawal to encourage market expansion have been promoted. The essence of this approach is that resource allocation and economic outcomes should be left to 'the market', that macro-economic policy should be geared primarily to monetary stability and that the government should concentrate on the preservation of a legal framework in which 'business' can be done (Evers, and Gerke, 2007: 5; Standing 1991: 5). These processes, which were once seen as the solution to the deplorable state of the economy, are now cited as being mostly responsible for the distortions in the nation's agricultural markets. This is certainly true of the tomato sector where the domestic markets were significantly destabilised by the changes. The importing of large quantities of tomato paste reached exorbitant levels according to Asuming-Brempong et al, (2006). An FAO report show that domestic imports rose from 3,300 metric tonnes in 1998 to 24,700 metric tonnes in 2003, a 650% increase over the period (Issah, 2007). In response, domestic production dropped considerably to about 35% of the market share (ibid). Different varieties of imported f tomatoes can be found on the market including: Gino, Salsa, Labianca, Pomo, Rosa, Toma, and Verga, just to mention a few of those shown in

photo 6.1. Other foreign brands come with appealing names such as *Obaapa* (the ideal woman). Such invasions of the market by foreign goods have also been noted by Evers and Gerke (2007) in Indonesian markets. They observe that region-specific goods and traditional products have not only lost their significance but many have been wiped out of the markets completely.

Photograph 6.1 Brands of tomato paste in KCM market



Photograph taken during field work in 2010

In the light of these imports potential investors saw the processing sector as not being lucrative enough and government was not tempted to invest in an area that is not economically viable.

As a consequence, , the tomato factory ceased operating and was put into divestiture due partly to technical problems but mostly due to the fact that it could not function efficiently enough to compete with the high level of cheap imports. The collapse of the factory in 1989 was devastating for the farmers in UER and the factory workers. When interviewed, the caretaker of the factory disclosed that:

The factory was the means of livelihood for more than half the population in the region. We had 60 to 100 permanent and temporary employees. Contract farmers numbered over 1,000 and all the fields were green with tomatoes throughout the year. We were processing not only tinned tomatoes but tomato juice and paste as well. He added that the factory also created many more jobs externally with people engaged in different businesses at the factory premises³³.

Such dynamics have not only reduced the power of the state but weakened the regulatory roles of state agencies. This created an opening for new players to pursue various interests. For instance, the domestic processing sector has been used by government to further their political ambitions and by a foreign company to generate profit.

6.3 The new tomato factory and International Investment; conflicting interests

When the governments of several developing nations consented to structural reforms, it paved the way for international investment in their countries. This gave investors easy access to local resources and an added advantage in the local economy. Moreover, the “two major ECOWAS events; the decision of the summit of 1980 to establish a Free Trade Zone (FTZ) for unprocessed agricultural products and the signing of the Protocol on Non-Aggression and Mutual Defence Assistance of 1981” (CDD, 2002:12), were very good opportunities for Trans-National Corporations (TNC). It was against this background that Trusty Foods Company Limited (TFL) set up a tomato processing factory in Ghana. The Italian company owned by the Rosa Family took advantage of the ECOWAS treaty on FTZ to establish a presence in the country in 2004. The factory imports tomato paste from the mother factory in Italy and final processing and canning is done in Ghana. It is said to be the largest in Italy and apparently dominates imports of

³³ Field interview in 2008 with a former employee of the factory who harbours lots of concerns and emotions because he has not been paid since the closure of the factory yet he has been asked to stay as a caretaker.

tomato paste into Ghana by about 39%³⁴. The intention of the company is to produce canned tomatoes for the Ghanaian market and the sub-region. In an interview at CEPS³⁵ it was explained that:

The company's move into Ghana was based on an agreement under the FTZ scheme. This scheme allows duty free reprocessing and resale of goods. Free Trade Zone is an export orientated operation which maintains that, of all the goods produced in the country, only 30% is allowed to be sold in that country and the other 70% must be exported (to create employment and generate foreign income). Manufacturers also enjoy import tax exemptions in the country to which the goods are exported but the company is expected to source the raw materials used from the country in which it operates. The strategic aim of the company is to locate in Ghana and produce for Nigeria which forms 90% of its market. In the early stages of their operation they were allowed to import the paste from Italy with a view to subsequently developing and obtaining the raw materials from within Ghana. There is evidence that the company started to do this in Downeya, but it was not a successful undertaking so they continued to import the raw materials from Italy. When suspicions arose that the company was in violation of the regulation requiring them to establish a home based source of raw material, Nigeria started to deny them the tax exemptions they had been enjoying.

In October 2005, Nigeria banned imports of tomatoes from Ghana. Subsequently, TFL entreated the Ghanaian government to negotiate with Nigeria to rescind the ban. It is suspected that the new factory, Northern Star Tomato Factory (NSTC), was revamped following Nigeria's condition of inspecting the home based raw material before allowing imports and subsequently reinstating the tax exemptions for the company. A member of

³⁴ field interview at NSTF Bolga on the 22/10/08

³⁵ Interview at the CEPS headquarters in Accra on the 12/2/08

staff at Trusty Foods³⁶ confirmed that it was when Nigeria started to block their goods that they had to force the Ghana government to revamp the factory.

6.3.1 Revamp of the Pwalugu tomato factory

The PTF was reopened in 2006 (GNA, 2006) under the new name NSTC after almost twenty years of closure. Information obtained at TFL confirmed that the company pushed for the reopening of NSTC. Baseline survey and an agronomist from Italy undertook environmental investigations. This was necessary because the parent organisation in Italy with years experience has the know how for tomato production. During the revamp according to the staff, the company incurred about half a million Euro cost. They provided the machinery and took charge of the installation. In answering a question about the ownership of the factory (a topic which has been much debated among the media and other concerned bodies like the NGOs), It was stated that the new factory is under the ownership of the Ghana government. In an interview at the (MoTI)³⁷ the reason for the revamp was given as an attempt to support farmers and help them increase production and improve their living standards, taking into account various internal and external factors. Internally, the decision was prompted by huge post-harvest losses and the perennial gluts during the season which allowed traders to dictate prices to farmers, compounded by the traders' failure to pay for goods bought on credit. It was also intended to strengthen domestic production to counteract the influx of cheap tomatoes from subsidised European farmers. According to one source, some importers shifted their business focus to China because the goods were cheap. It was later discovered that the paste from China contained too much starch and colouring therefore there was still a need to produce quality tomatoes at home. It was disclosed that, in the short term, the factory will produce only the paste which will then be transported to TFL to be canned under the brand names Gino, Labianca and Rosa. These are the same brand names the company has used since its inception in the country.

³⁶ Interview at Trusty Foods, Tema on the 15/2/02

³⁷ Interview at MOTI in Accra on the 13/2/08

The government used the revamp as a platform to gain popularity in the region by stating that, as part of its poverty alleviation and regional development programme, it hopes to revamp the factory for the welfare of poor farmers. Therefore, strong messages were sent to raise farmers' hopes and to encourage them to produce on a large scale promising that the factory would absorb all the tomatoes. Based on this information in 2007 farmers channelled all their resources to this end while others took huge loans to enable them to produce tomatoes. Unfortunately, the factory which has the capacity to process 500 metric tons a day was not ready during marketing (GNA, 2007; Knottnerus, and Francisco 2007). In the first place, it was not connected to the national electricity grid. Volta River Authority (VRA), the institution responsible for electricity in Ghana complained that they had no transformer available. Secondly, the arrangements with farmers were poor as the management of the factory did not collaborate with MoFA. The management of NSTC persuaded individual members from various government stakeholder organisations like MoFA to become board members of the factory but they never met to discuss anything. In an interview, management confirmed the inability of the board members to meet together. They also stated that they had not anticipated going into full operation in 2007 but had planned to do test runs that year. However, bowing to government pressure, they had no option other than to operate with a generator. Crippled by the accumulated effect of managerial miscalculation, undue pressure from government and the high cost of running a generator, the factory had to close down after just three tests runs (DG, 2007 GNA, 2007).

The farmers' frustration was compounded by traders bypassing them in favour of Burkina Faso, leaving vast acres of tomatoes rotting on their farms. The inability of the factory to buy the tomatoes together with being neglected by the traders was very depressing for the farmers and some were reported to have committed suicide as a result (DGN, 2007; Knottnerus, and Francisco 2007). Others desperately took the law into their own hands and demonstrated by blocking the roads to prevent traders from passing to Burkina Faso. This action by the farmers infuriated the translators who reacted by assisting the traders to use unapproved routes to Burkina Faso. The situation degenerated into such serious

conflicts such that the state security forces were deployed to the area and some farmers were arrested. Samuel Abuyoum, one of the farmers arrested tells of his ordeal:

The politicians deceived us! When the traders were bypassing us to Burkina Faso, we went to complain to the District Chief Executive (DCE), because he is a government representative for the district. He asked us to exercise patience while loading boys were assisting the women through unapproved routes and no action was taken on his part. This made us take action by blocking the roads and deflating the tyres of some of the vehicles. When the authorities realised our actions, the DCE and the District commander of police were called to the scene. Upon deliberations we were asked to allow the traders access to Burkina Faso. Later, the women went to complain that we had confiscated their monies and mobile phones. The following day, I was on my farm while some group of the farmers went to intercept the trucks again. This infuriated the police who came with guns. When I heard gun shots, I rushed to the scene where the police commander identified me and I was napped among 17 other farmers. We were tossed between the regional and district cells just to keep us away from our angry colleagues who were calling for our release. In the end it took us (the farmers) a contribution of 7 million cedis to hire a lawyer who handled our case before we were released. In fact, since my father started farming and I took over, this is the only government I have seen who has treated farmers this way. Arresting us and making us pay such a huge amount notwithstanding our plight.

(Interview with Samuel Aboyom in Navrongo on the 9 of August 2007).

In an interview, the lawyer³⁸ who handled the case on behalf of the farmers confirmed that the farmers were arrested on a Friday and put into custody. They were charged with the offence of obstructing the highway and impeding the movements of vehicles and pedestrians. He was contacted by one of the farmers' zonal leaders (Martin) to assist in

³⁸ Interview with lawyer in Bolgatanga on the 23/6/08

bailing the farmers but he could only appear a week later because of the financial limitations of the framers. According to him, after examining the case and the nature of the penalty he advised the farmers to plead guilty and pay a fine. The lawyer stated that he had to convince the judge to let the farmers pay a fine because if the women were allowed to come in and testify it would have complicated the case for the farmers since the law does not respect poverty. Finally, the farmers were fined 5, 00 GH Cedis each. Asked how much he charged them, he said it was within poverty range. He also confirmed that the farmers only took the desperate action after their appeal to all official channels to stop the women from passing to Burkina Faso proved futile.

While the efforts to stop the farmers riots was ongoing, government officials met and placed a two week ban on tomato traders' movements to Burkina Faso in an attempt to calm the volatile situation. To avoid the government being accused of violating regional trade policies, officials had to find a genuine reason for the ban. In this case, the reason given for the ban was that they wanted to establish the facts on an alleged deposition about chemicals in tomatoes from Burkina Faso. The real reason was to enable government enough time to find a solution to the problem in a peaceful atmosphere. A series of meetings between government, farmers and traders was held and an MOU was finally reached. The two week ban affected farmers and traders in both countries. Lots of Burkina Faso farmers lost their tomatoes and most traders also lost income and could not pay their loans. However, the farmers' reaction had a positive influence on the subsequent year's market. Trade for the farmers was fairly balanced between the two countries. However, for fear of the same problem occurring again, most Burkinabe farmers diversified into cultivating onions. A visit at the Paga border saw most tomato trucks returning empty from Burkina Faso.

In Ghana, production levels were also low in the beginning but when farmers realised that the market for the first harvests was promising most went into late cultivation. In an interview with those farmers who cultivated without fear of the previous year's problem, a farmer in Mirigu explained that since it was close to election year they were sure the government would do everything to protect them in marketing. This statement is an

indication that farmers are aware of governments' politicisation with the sector. In another perspective, traders who were affected by the two week ban could not do effective business as they would have done had there not been a problem the year before. They complained that they were not able to fulfil their loan agreements the previous season hence they could not get enough capital to trade the season after. In that year (2008) most traders bought goods on credit. A typical example was described by Samari³⁹, at the border. He phoned his trader, saying he was sick. Asked to explain, he said "she has no money, she owes about four farmers in two communities in Burkina Faso and she has called that she is coming again without money. I cannot do that business with her".

This notwithstanding, TFL succeeded in marketing some canned paste from NSTC at a competitive price using the goods of other importers (Mari and Buntsel, 2007). "Upon realising that the local products were in the market, importers resorted to illegal under-invoicing practices, indicating an export value far below the goods' real worth. The difference is paid "under the table" in cash" (ibid; 6). The act by exporters was to evade import levies by CEPS and enable them to sell their goods at cheaper prices (ibid). In another development the same paper reports that WATANMAL, a local US based distributor of TFL canned products decided to cut down drastically on its purchases from TFL. WATANMAL, which has its processing factories in Europe and China, imports the paste then sells it to TFL to can. TFL then resells the canned products to WATANMAL under the brand name "Gino", the same brand name used by its plants in China and Europe. After reducing its purchases from TFL, WATANMAL took it upon itself to convince its numerous Ghanaian consumers that Gino was made entirely in Ghana. After convincing the consumers of this, the US based distributor now increasingly imported canned tomatoes directly from its plants abroad, thus making more profits and avoiding the process of passing through TFL.

³⁹ Samari is a translator who was apparently angry and tired of giving excuses to farmers on behalf of his trader and coming home without money

6.3.2 An effort to ban tomato imports and emerging problems in the new factory

The various strategies adopted by importers to avoid doing business with TFL prompted the company to put pressure on the government to ban other companies from importing processed tomatoes into the country. This action by TFL supports Evers and Gerke's explanation of "power" discussed in Chapter 3. They reasoned that if they had to run NSTC and absorb all the paste from the factory, then other imports would be a threat to the business and to the new factory. According to TFL, the tomato traders are not a threat, but other importers are. Currently there are more than six importers in the system, each bringing in tons of cheap, canned tomatoes. TFL's concern was that the selling price of imported goods is so low that local producers cannot compete because of their additional processing costs. Hence they perceived a need to press for the ban. Consequently, in August 2007 the government announced a ban on imports as from the 1st of November that year. (DG, 2007; GNA, 2007), motivated either by wanting to stop importers from under-invoicing or for fear of losing an investment opportunity vital to the country's tomato industry (Mari and Buntsel, 2007: 7). The government may have been justified in entertaining such fears because, since the implementation of the liberalisation policies, no-one has been tempted to invest in the tomato industry.

In response to their announcement, most of the importing companies, guided by the power of international trade policies, took the government to court for violating international policies and preventing their source of income. The action by the importers proved successful and in 2008 a letter from the government was circulated at all borders exempting some importers from the ban. A list obtained from MoTI showed twelve companies that were exempt from the import ban, namely,

- 1 OLAM Ghana LTD
- 2 VEGA Company LTD
- 3 BIEBEB Company LTD
- 4 OSCAR Company LTD
- 5 UNIQUE STAR Companies LTD

- 6 KOBBEL Company LTD
- 7 MOTAY Company ltd
- 8 VIOKORDAR Company LTD
- 9 T GATE Enterprises
- 10 FILEY Enterprise
- 11 CONY A ENT.
- 12 WATANMAL

However, an explanation by MoTI that the ban was only meant to allow the importation of tomato paste contradicted a letter sent by them to KOBBEL LTD on the 5th and to UNIQUE STAR on the 23rd November 2007. The letters contained the following statement: “The Ministry is of the opinion that KOBBEL LTD should be given a ‘special dispensation’ on the basis of the information provided, consequently, KOBBEL LTD is hereby given approval to resume importation of canned tomatoes, paste, and concentrates into Ghana” (MoTI, 5/Nov/2007). At MoTI they denied TFL had influenced the government’s decision to ban imports and explained that the government took the initiative due to under-invoicing by some importers. In answering the question about why some firms were allowed to continue importing, it was stated that the ban was aimed at tomato paste but at canned tomatoes so they made allowance for the importation of tomato concentrates. This statement still contradicts the contents of the letter to the two importing companies. The difficulty in getting the power source to the factory was also given as a reason why some imports were allowed since the factory could not operate efficiently enough to meet the nation’s demands. The decision to allow the importation of tomato paste gives TFL the only factory in the country that cans paste. They buy all imported paste and complete the processing by canning and reselling it to the importers.

Photograph 6.2 NSTC processing plants and TFL in Ghana



Source: Picture taken by author during field work in Bolgatanga and Tema (2008)

In 2008, with the help of TFL who provided a transformer, the factory was connected to the national electricity grid. In the same year, new plastic crates were purchased to replace the wooden crates and TFL imported a new tomato variety at a cost of over 100K Euros. The new variety, which is very suitable for processing, was expected to yield 60 tons per hectare. However, due to poor coordination and lack of communication, contracts with farmers about using the new variety were not clearly drawn up so the farmers failed to use the seeds. Nonetheless, processing was carried out on a fair basis at NSTC but, as the factory had no contract with the farmers, competition with the traders was extremely keen. At one point traders were ready to buy tomatoes at twice the price the factory could afford. In another situation, some farmers contracted with the traders to bring maize while the farmers organised tomatoes for them. On a visit to the field in Doba on the 12th of March, it was seen that a tomato truck had arrived with bags of maize. Although tomatoes were scarce at the time, the farmers managed to organise large quantities for those traders. Another problem for the factory was that farmers were not happy with the payment procedures. They do not pay cash on the spot but after buying from a particular community a cheque would be written in the name of a leader who had to distribute payments to the other farmers.

The factory usually had to go through extensive bureaucratic procedures before it could make payments so it usually took some time before management was able to pay the leader who then had to pay the farmers. These arrangements sometimes resulted in confusion and caused heated arguments. For example, in 2007 most farmers lost money through the process. Apart from these problems, the farmers who are made leaders criticised the management for making them bear the added cost of transportation for the follow-up to the factory. In order to ensure sustainability, the management at NSTC hope to establish a factory farm to produce the necessary raw materials. It will also supplement what the farmers produce and solve the problem of seasonal shortages. Plans at MoTI indicate that sometime in the future the factory will be sold to TFL but with the government retaining a controlling share. The new factory entered into a five year agreement with TFL in 2007 under which they will provide equipment and technical staff as well as training the other staff. Apart from the factory, local processing methods are still practiced but their extent and any potential for commercial purposes are somewhat limited.

6.4 Local agro-processing methods practiced

Local processing methods include milling and drying. The demand for these methods arises because of the many food vendors springing up in Ghana creating the need for bulk purchase and preservation. The most common processing method in Ghana is milling. Locally manufactured milling machines (see photo in 6.3) are very popular in Ghanaian markets. The machines are electrically powered and mill tomatoes into purée, similar to that from a normal domestic blender. The method remains the only suitable means of preserving tomatoes bought in large quantities by most of the food sellers and during festivals when bulk cooking is required. In many cases the purée is stored in deep freezers or further cooked to evaporate the water content, leaving a thick paste. The paste is then stored in sealed bottles (insert in photo 6.3) or, depending on the quantity, in bigger containers. The product will remain edible for up to a year if it is frozen. In another method, about a one-inch layer of vegetable oil is poured into the top of the filled

containers to prevent any fungi growth since preservatives are not added. The containers are then sealed and stored in, those not in a freezer staying fresh for up to three months.

Traditionally, the most common method adopted by farmers in the UER is sun drying. The tomatoes are cut into halves and laid out to dry in the sun. This method is very uncertain because the drying process depends so much on the natural atmospheric temperature and humidity. Fluctuations in either or both of these affect the end product which should be brittle, red in colour and have retained their flavour. There is no technology available to determine allowable water content but they should be dry enough to be ground into powder. Day and night temperatures in the region fluctuate widely making it difficult to achieve consistent results. An example of the process going wrong can be seen in the black colour of the dried tomatoes in figure 6.3. In addition, contamination by insects and dust cannot be avoided since the tomatoes are dried in the open. Storage also poses a challenge since, due to the high humidity in the rainy season, deterioration is accelerated and the product gets mouldy very quickly. The best way to store the dried product is to package it in special plastic bags, well sealed to keep out moisture and prevent mould growth, as practiced in Burkina Faso (See photo in 5.1). It is also ground to a powder and stored in sealed containers.

Photograph 6.3 Dried tomato and milling machine



Picture by author during research 2008

The problem in using these methods in dealing with commercial quantities is the high overhead costs incurred in milling. In the first place, somebody willing to go into processing on a commercial basis will have to purchase the milling machine. Secondly, since the puree has so much water content it has to be further processed into paste. Then, in order to store it preservatives have to be added and a storage facility provided. The final challenge is to attract consumers. To do so, the product has to be well packaged. The cost involved in all of this reflected in high prices. Given that the market is already flooded with cheap, imported paste marketing is difficult for the processor.

Furthermore, apart from the unpredictable and laborious processes required in sun drying, dried tomatoes are not commonly used in the preparation of most traditional meals therefore consumption is very low. Consequently, farmers prefer to sell their tomatoes fresh. It is common to see large quantities of ground dried tomatoes in Ghanaian markets. However, the product is frowned on because the reddish powder is different from the black colour of the dried tomatoes. It is alleged that the powder on the market is not derived from dried tomatoes but is milled cola-nuts or a mixture of other ingredients. In

addition, the large quantities displayed in all the markets in the country raises questions as it seems to exceed the quantities dried in the country. Marketing is therefore limited to a few road side food sellers who cannot afford canned tomatoes. An attempt by the government to support small scale processing was initiated in 2005 but it did not achieve significant results.

The agricultural engineering services of MoFA and the Italian company collaborated in taking delivery of some processing machines known as 'Tomato Master'. The objective was to fulfil the Government's policy of making Ghana an agro-industrial country and supporting small scale agro-processing industries. Accordingly, ten complete lines of the tomato-processing equipment were procured for sale to communities and individuals (ISSER, 2004:104). These are mobile machines for both domestic and small scale processing of tomatoes into paste and puree. According to the regional director of MoFA in the UER, some of the machines were given to women on credit. The ministry also encouraged schools and hospitals to acquire the machines for the institution's private use. However, many farmers contacted said they had no knowledge of such machines and those who did know stated they were too expensive for them to buy.

6.5 Conclusion

The chapter examined the possibility of processing as an option for farmers, by examining the impact of international trade policies on the processing sector. The limitations in the domestic processing industry were attributed to the influx of tomato imports and the subsequent closure of the PTF. An interesting case of an investor who established in the country under the FTZ policy was presented. The breach of trade regulations by the investor, coupled with his link to the revamp of the factory presents a sector driven by profit orientated and political ambitions. In view of that, the question still remains whether the actions by both the government and the investor are genuinely geared towards the welfare of poor tomato farmers as was promised during the factory's inauguration. The last session described local processing methods that are practiced but cannot be developed commercially for farmers due to high overhead costs and a lack of

support. Farmers' ability to add value to their products has several economic benefits. The potential of added value to generate higher profit margins for producers cannot be overemphasised. It can expand better market opportunities which are crucial for improving livelihoods. This is important for tomato farmers whose livelihood systems are multidimensional due to the complex social structures. The social setting is highly diverse with cultural, economic and social attributes that play various roles in many aspects of rural life.

7 Tomato farming: economic and social implications

7.1 Introduction

This chapter examines the impact on the sector of the political and social factors prevalent in the sector. The former incorporates the influence of external and internal processes on society while the latter looks at the economic significance of the socio-cultural factors that motivate the farmers. Risks are revisited from a social angle and the dilemma investors are confronted with is also discussed. It is anticipated that the chapter will connect to the concluding section by providing plausible suggestions that could be considered for incorporation in future development policies.

7.2 How global trade shaped the internal processes of production

Several authors in various fields of study have been concerned about the outcomes of global market policies. Many have examined the positive and negative consequences, particularly in developing countries where economic reforms have produced interesting results. Although some success stories of international market policies have been reported, official statistics indicate that the agricultural sector remains disappointing (Cleaver and Donovan 1995:24). The evidence from the tomato industry is remarkable because of its regional dimensions and the effects on the domestic market. From the discussions, it is clear that foreign tomato imports are sold cheaply due to the subsidies they receive from the exporting countries plus the reduced tariffs levied on imports. This has influenced consumer distribution and production levels in national markets. Against this background, it is important to examine how the country's internal processes shaped livelihoods. To a certain degree it will also assist in understanding how the farmer at the grassroots level understands and is affected by international economic changes.

The tomato farmer at the rural level is neither aware of nor concerned about the government's commitment to international trade regulations or its economic policy limitations. What is important to them are the internal structures that restrict their access to productive assets and equal participation in domestic markets. The poor extension delivery systems and technological changes due to economic adjustments mean a struggle

in both production and marketing. In this perspective, any government in power is blamed for the problems in the sector though some still make reference to the collapse of the factory. A contentious aspect of the changes in agriculture that affected farmers is related to inputs. The removal of subsidies on inputs, e.g, fertiliser, insecticides, seeds, etc has led to the politicisation of the schemes and a shift in favour of private entrepreneurs. From the evidence presented in previous chapters it can be deduced that these have led to political leaders making false promises to farmers.

The historical significance of tomatoes in the region, in some social circles, is linked to the first president. Some share the view that the Tono and Vea irrigation projects were development programs intended by the president to be compensation for the many years of neglect and poor development suffered by the regions. These sentimental views seem strong enough to make successive governments be cautious and ensure that, while the sector satisfies their political interests, it does not collapse during their time in office. Although they maybe insensitive to the needs of the producers the fact that the sector is sustained to levels that attract political attention is enough. Political leaders are not ignorant of the fact that the enhancement of diverse cultural and economic products is very critical for national development. Yet the regions' agricultural diversity and the exchange potential of important crops are only highlighted during durbars or festivities in the region. These are platforms that leaders take advantage of to market themselves and promote their political parties. In addition, party politicians create local power structures to enable their supporters to help carry their agenda forward.

For instance, during the period of the research, which was an elections year, the government promised to supply farmers with fertiliser at a subsidised price. The initial announcement of this package encouraged farmers to commit resources to produce crops on a large scale. Regrettably, local political leaders aligned themselves with rich farmers or vice versa to the disadvantage of poor farmers. If the conclusions of Fafchamps, (2009:11), that “successful input distribution involves providing inputs on credit or sharecropping” is anything to go by, then this appears as a deliberate action to marginalise the poor. The rich farmers were given the mandate to stand at the forefront,

taking responsibility for the distribution process by collecting money. According to the farmers they were asked to pay an initial deposit of 20,000 GH Cedis. Most of them could not so their access to the fertiliser was automatically limited. The farmers explained that, due to the announcement, they had channelled resources into tomato production at the expense of other equally important needs. In an angry mood, they stated that they know where the fertiliser is sold so they actually do not need government to sell fertiliser to them. They are better off in the open market because they have suppliers who are willing to sell any quantity they wish to buy.

Many agro-chemical sellers have resorted to selling in smaller quantities due to the increasing numbers of farmers who request to buy in small amounts, For example, in the KND fertilisers are sold by using standard containers called '*bowls*'(about 2 kilos in weight) and other liquid chemicals are dispensed from 5mls upwards. Some farmers indicated that they sometimes form groups of four or five to buy a bag of fertiliser to share while others buy on credit. Though these market strategies help farmers and perhaps are a contributing factor to their continuous production, there is a negative impact on the quality of the fertiliser. Apart from the poor storage facilities of the sellers, opening the bags to dole out small quantities exposes the fertiliser to the environment. Since it takes longer to sell the contents of the bags in this way, the likelihood of the potency of the fertiliser being reduced needs no scientific research. In such circumstances, farmers make sacrifices and commit their already meagre resources into inputs which may not give the right results, thus affecting production levels. It is common to hear farmers complain of applying high quantities of inputs, especially fertiliser, to their crops and yet not getting the expected results. "High quantities" is a very subjective term as farmers have no accurate knowledge of crop input requirements. The possibility of farmers using an insufficient quantity of inputs cannot be eliminated. For instance, Cleaver and Donovan, (1995) have observed that with the removal of subsidies, countries such as Cameroon, Mali, Mozambique, and Sierra Leone experienced a slow increase or even a reduction in the use of fertiliser. Although other factors could be responsible for poor productions; the poor selling conditions in the agro-chemical market are a contributory factor. The continuous use of less potent and un-approved quantities could

also create a situation where insects, pests and weeds become resistant to certain chemicals. The likely health hazard is undeniable because dispensing in smaller quantities means dangerous chemicals are stored in unsuitable containers, a practice which can lead to domestic accidents. Also, it has been known for farmers to get confused differentiating between the chemicals.

Against the background that the extension delivery system is under resourced, vital market information for farmers is not only scarce but access to it is a problem. With the elimination of the state marketing boards, the pricing of agricultural commodities is left to the open market. It is well appreciated that economic activities, and especially the trade in tomatoes, has been enhanced due to the good road network to the North. However, the lack of co-operative organisations leaves farmers in the hands of powerful tomato traders, associations.

7.2.1 Traders position and the market

For the tomato trader, imports of foreign tomatoes do not affect business. The regions produce enough for the whole country and the demand for fresh tomatoes is always high so they are not in competition with importers, even in the dry season. In addition to domestic consumers, very large quantities are sold to restaurants and commercial food sellers making '*kenkey*⁴⁰'. This is a very popular meal eaten all over Ghana. It can be eaten at any time of the day and can be bought at any street corner. It is common to hear students and bachelors referring to *kenkey* sellers as their wives because they depend on them for their meals. The fresh tomatoes which are a key ingredient in *kenkey* cannot be substituted with imported paste. For that reason, these groups of food sellers need a constant supply of fresh tomatoes.

Because of the available markets, the traders' main focus is not on the demand for their product, They are more concerned about the threat to their business when production is

⁴⁰ Kenkey is a meal prepared from maize, it's eaten with fish and sauce made by grinding pepper, fresh tomatoes and onions.

impeded. This is illustrated in the photo in 7.1. The picture shows tomato retailers struggling to get to the top of a moving tomato truck as it arrives in the market so that they can get hold of some crates to sell for a living. The tomato trade is the only source of income for many traders. Most of the women are raised from childhood with the tomato trade as the only occupation known to them. For many, this view has been passed on through the generations, becoming a household tradition preserved to prepare the young ones for their future employment opportunities. Those who have the advantage of acquiring a recognisable position diligently wait in line until it is their turn. In this circumstance it is of no surprise that the traders jealously protect their occupation in order to secure their livelihood.

Photograph 7.1 Retailers struggle in a moving truck to get tomatoes to sell



Picture taken during field work in 2008

Against that background, traders behave like politicians who want the factory to be seen as working to keep the farmers in continuous production. It was surprising to hear about Madam Afoley holding meetings with ministers and stakeholders in favour of the factory's operation. The obvious reason is when the factory is seen as working farmers continue to produce, which means that traders are secured in their business. Additionally, they do not see the factory as a competitor because traders are ready to buy at prices that

the factory cannot afford due to the additional processing cost. Given the weak management structures at the factory coupled with technical problems, farmers are not contracted to sell to the factory. In such an open market system the traders have no problem getting to farmers. An example is seen in Chapter 4 where during the research some farmers sold their tomatoes at 60,000 Ghana Cedis per crate, the highest price ever sold to the traders. This increased to one million the following year, in some communities. The traders lure farmers by paying high prices when there is keen competition with the factory, only for prices to immediately fall back when the factory management withdraws. These strategies confirm the notion that in a market where prices are not controlled and there is no support for production, it is the farmer who suffers. However, this does mean that traders enjoy a trouble free trade environment. They are restricted to the days scheduled for them in the market. This, coupled with the delicate nature of the goods, means the timing of their arrival at the market is very important. Because they have to get to the markets with the goods still in good conditions they put pressure on the drivers. In the previous chapter, the poor condition of most of the tomato trucks was discussed and it was shown that such pressures on the drivers' results in accidents which, in many instances, are fatal. (as the photograph in 4.5 shows).

7.2.2 Social dimensions of the risks associated with tomato traders

Traders mentioned road accidents as the highest risk factor in the trade. Accidents usually impose a financial penalty on the traders through losing their goods or having to hire a replacement truck, thus reducing their income. The loss of life in fatal accidents also has severe consequences for the nation's economy. The social impact of the loss of lives can have a devastating effect on family members. In an interview with Madam Afoley, she showed pictures of traders, drivers and loading boys who had all lost their lives; emphasising that most of the deceased had been the sole bread-winners of their families. A simple analysis of deaths recorded by the association over the typical six month marketing period in 2005 (see Chapter 4) showed that an average of 3.5 accidents occurred every month, causing 4.83 deaths. . Taking the nation's average household size

as being 5.1⁴¹ it can be deduced that some 24 households and around 130 people within that period lost their bread winner. These statistics do not include the injured who may not be able to return to a normal economic life. In fact, they are more likely to become a burden to the family which has lost its income source since they will need both psychological and financial help from them. A family member is likely to be denied their economic opportunities in order to care for the injured person or less time will be spent in taking care of other family members, for example young children and the elderly.

The psychological impact of grieving and depression may be temporary but the negative effects on future life styles can be long lasting. The absence of support for relatives of the deceased e.g. their children can be an extra burden for other distant relatives to bear, thus adversely affecting their livelihood. In situations where there is no responsible guardian “the social costs of young people's inability to exert control over their lives and fulfil their educational, economic and reproductive goals can be enormous” (Odotolu et al, 2003: 94). There is a very high possibility that such vulnerable individuals will indulge in social vices such as stealing, drinking, drug abuse and so on posing a threat to relatives and the general society. The incidence of teenage pregnancy is also high.

The risks factors inherent in the sector are multi dimensional. The idea of district assemblies created by government was to give districts the power to control and manage their own resources. However, this has not had any positive impact in the tomato sector as internal politics and monetary power prevail over the interests of farmers.

7.3 Internal politics: the manipulative power of government and foreign investment

The dynamics at the district level cannot be examined without a mention of the decentralisation processes in the country. In 1988 (Ayee, 1996,1993 and Crawford, 2004), District Assemblies (DAs) were created with the objective of relinquishing political and administration powers to players and institutions at lower levels (Ribot,

⁴¹ http://www.ghana.gov.gh/index.php?option=com_content

2001). Decentralisation was viewed as an opportunity to strengthen and support areas where regions and districts had a comparative advantage. It was therefore anticipated that the tomato sector in the KND would be a priority area in the development agenda of the district. It has since come to light that DAs are only a replica or miniature version of the regional political administrations whose autonomy and power levels are decided by central government.

The flaw in their construction is the fact that DAs are not well resourced and always need approval from central government before initiating any development programme. The involvement of the rural people in the decision-making process is merely a formality as their voice is not reflected in the outcomes. This observation is also reported by Ribot (2001: 3) who draws the conclusion that decentralisation has not succeeded in “entrusting downwardly accountable representative players with significant domains of discretionary power”. It is interesting that the tomato sector, being the mainstay of dry season agriculture in the district, has not seen any support through the creation of DAs. This conforms to the conventional believe that central governments use local players only for their political advantage (Kyei, 2000). After all, there are no easy measures to hold governments accountable for not delivering what they promised.

Their loyalty and accountability to external investors is much stronger as they seek to promote investment opportunities and global integration. Moreover, as the developing countries’ security markets have broadened and their market accessibility increased, investors are offered significant opportunities for risk diversification (World Bank, 1997) this includes flexible tax regimes such as the exemption policies on free-zone investment. Investors may also look out for countries with better prospects such as those with low production costs, a stable political environment and attractive markets. However, they are aware that low risks and certainties cannot be guaranteed.

7.3.1 Aspects of dilemma and risks in foreign investment

Many developing countries are aware that inward foreign investment contributes to the growth of their economies. However, contrary to this notion, some host nations attempt to influence the form and direction of the development process (Petersen, 1978). Such attitudes can be a challenge for international investors since they are caught in a dilemma because of the risk factors that abound. These uncertainties range from political instability, changes in economic policies, climatic variations, miscalculation of markets to a misunderstanding of the local cultural environment. Although the impact of the above factors may be country specific, they influence policies and resource regulations internationally.

Political instability can have an adverse effect on investment and the economic development of a nation. Typical examples are the coups d'état in Liberia, the tribal wars in Rwanda and Congo (Fosu, 2002) and the recent conflicts in Kenya and Zimbabwe. In such situations, hostilities between the different factions can lead to attacks on the country's infrastructure. As a result of the violence an investor can lose capital or their entire business. According to Fosu, the "direct adverse effect of political instability in Sub-Saharan Africa (SSA) was as much as 33% of the GDP growth over the 1960-1986 periods" (Ibid: 1). In Ghana during the 1980 coups d'état, many private enterprises collapsed and some individuals lost their entire wealth. The effects of climatic changes can affect the production or supply of raw materials to a company. Furthermore, unstable prices can lead to changes in consumer preferences. Bureaucratic registration procedures, unreliable power supply, underdeveloped transport and communications systems that are prevalent in developing countries create difficulties for investors (Dietmar, 1978).

In addition, the powerful socio-cultural structures such as chieftaincy institutions and high expectations about their social responsibility can present formidable challenges for investors. Chiefs are held to be the custodians of the land so are responsible for the welfare of their community members. They also complement government activities. For example, in Sierra Leone, they function as instruments of social control for the central government" (Chasan et al 1992:85) and as administrators and liaison officers between

the people and the government in Nigeria (Vaughan, 2000:61). In Ghana, the emphasis on global integration has led to changes in the role of chiefs from leaders in war and protectors of territories to combating poverty and dealing with social problems. Their challenge now is to integrate tradition with modernity to achieve democracy and good governance; and to implement a wide range of environmental and development programmes (Awedoba and Odotei, 2006). To help them meet these challenges, they expect huge royalties from investors; and community development projects such as schools, markets, clinics and roads are tagged on investors as being their social responsibility. This notwithstanding, arguments over investors taking advantage of their high financial power and size to influence a host nation's policies to the detriment of the poor continue to increase (Schetting, 1980; Lecraw, 1983; Herkenrath and Bornschie, 2003).

7.3.2 Influence of power: a case at the local level

Most international investors are strongly supported by trade policies and the protection of their mother companies. This affords them the power to control many sectors of their host nation's economy. For example in China, when the government suspended market interference in soybeans, four Transnational Companies (TNCs) took control of almost 85% of the market. This change resulted in a surge in prices by almost 60% within two months in 2005 (Shafaeddin, 2008). In similar circumstances in Mexico, speculation and hoarding by the four TNCs which dominate the national corn market, resulted in a sharp increase in the domestic price of corn in 2006 by over 100% (Ibid). This sort of thing creates problems in countries whose economic and social strengths lie in agriculture, natural resources and social structures. Any visible signs of unequal distribution and the marginalisation of any group where livelihoods are threatened can lead to aggressive resistance. In Africa, the conflict in the oil rich "Ogoniland" in Nigeria (Oyefusi, 2007) and the well known "Blood diamonds" conflicts in Sierra Leone are good examples⁴².

⁴² <http://www.un.org/peace/africa/Diamond.html>

In Ghana however, concerns are rather geared towards the food sector in which the tomato sector gains prominence due to its contribution to the livelihoods of the people in the KND. In reference to the processing company in Ghana, it can be said that they are strongly supported by their home company. The power of their financial position is used to manipulate and win the cooperation of government agents. They interfere with the political environment by forming alliances and lobbying with political elites to have access to the domestic arena. The failure of government to ensure that the company adhered to the regulations requiring the sourcing of raw material in Ghana confirms this view. It appears as though the company's continuous importing of paste from their home country is deliberately ignored. In addition, there seems to be a lack of appropriate mechanisms to commit the investor to obeying the regulations, hence for the failure to develop the raw material base. Revamping the factory alone, without strengthening the production base to ensure the continuous supply of raw material, is already a failure. It only gives the investor a good reason to import supplies from their home country, while the factory serves only as a symbol. Part of state functions is to protect the social, economic and cultural rights of its people without discrimination (Sende, 2009) However; it cannot be said that this is being applied to the people of the UER.

During the commissioning of the factory, the expected job creation which had been much publicised turned out to be an illusion. From the time of the factory's revamp, the Managing Director (MD) (who is a member of staff of MoTI in Accra, the capital) has been living in the capital and has had a car provided for him in the region. He would fly into the region from time to time to his awaiting car which had to be fuelled throughout his stay. He also incurred the additional costs of staying in hotel just to be briefed about the progress of work by the field manager. The field manager, also brought from the South, stayed in the hotel for about three months before he was given well furnished accommodation and the latest model pickup truck. The furnishing of the offices and the repairing of some electrical gadgets such as air conditioners were done by people from the Southern parts of the country. On the few occasions that the factory operated in 2006, accountants and other administrative staff who are already employed in MoTI were brought from Accra to the UER to manage the marketing and finances and they were all

well looked after. In the same vein, the investor, emulating the government, brought in expatriate technicians from their home country. The people in the region were thus denied employment opportunities. The amount the government spent on hotel bills, flights, fuel and accommodation for the two managers and others could have been used to employ at least ten people located locally. The dual actions of both government and the company are not limited to the UER but have residual consequences on the general social fabric.

7.4 Local investment and marketing strategies: the Influence on society

“The question of how international investors influence development in their host countries is not new. It constitute the core of sociological debates that have been ongoing for decades” (Herkenrath and Bornschier 2003:106). These concerns can be seen in the tomato sector where activities seem to compromise on the needs of the people thus perpetuating poverty. Most of these concerns centre around host governments providing various forms of investment incentives thus giving foreign corporations more economic liberty than is given indigenous employers (Blomström and Kokko, 2003). Investors, as commercial organisations, are interested in maximum returns on their capital and long-term monopolisation” (Rahman 2008). In order to achieve this they invest large amounts of capital in commercial ventures in order to attract consumers. The strategy in some organisations is to make a mockery of local products thus discouraging consumer demand for them. In the first place, the high level of investment asked for discourages local investors, but farmers are more prepared to face the consequences Fafchamps, (2009:11) than investors who are economically orientated. According to Fafchamps, farmers by definition are more willing to engage in activities that carry a lot of risks. Local investors however, are not prepared to risk capital in sectors where the prospects for profit maximisation are not guaranteed. The motivation to invest in the raw material base, which means creating employment and a market for local tomato farmers, depends on how profitable a local investor finds the sector. This does not rule out the fact that local investors, for the security and stabilisation of the business, may also compromise on the political interest of governments. One certainty is that it will not be at the expense of a sector where a huge amount of capital is invested or for the benefit of the local raw

material base. A further point is that local people will be employed instead of people from the South in order to cut down expenditure on hotels, flights and accommodation. For the investor, getting the support of the government is a way to use the factory as a cover for the continuous importing of raw materials from their home company.

Secondly, in order to achieve the goal of profit maximisation, marketing approaches adopted by the investor go beyond consumption to the creation of social stratification. They delve into the cultural and social organisation of the nation to project their products onto consumers. One such tactic is the naming of a brand of tomato paste as ‘*Obaapa*’ (see photo in 7.2 : also discussed in Chapter 4). In order to create the publicity for the product, the investor paid a textile company to produce clothes called ‘*Obaapa*’. Popular local actresses wearing designer quality dresses made from the textiles were used to stage a drama portraying that a woman who does not use ‘*Obaapa*’ tomato paste to cook is of a lower social class.

Photograph 7.2 ‘*Obaapa*’ tomato paste and textile



Picture by author during research 2010

In a society where the perception of an “*ideal*” woman is a social construct, accorded with respect, status and admiration, every woman will want to be seen as “*ideal*”. When they go shopping and buy the product, some even find ways to display it when they meet

friends. Another may find a way of announcing it when she gets home by engaging in a conversation about how expensive things are and how much '*Obaapa*' tomato she bought. Adverts target average Ghanaians who have the buying power and believe in identifying with a class. Wholesale customers who buy from the company are given free '*Obaapa*' textiles. Occasionally, programmes such as cooking competitions using '*Obaapa*' tomato paste are sponsored because of their high media coverage. Such programmes "especially affect the youth, women and children as they are easily convinced and generally attracted to glamour" (Rahman, 2008). Furthermore, the social impact of the investor's marketing strategies creates social segregation by projecting consumers of '*Obaapa*' tomato paste as of a high social class. It must be noted that it is not known if this problem is prominent in the country at present because no objective data has been gathered. Nonetheless, the available literature shows that dynamics of this nature can undermine the simple lifestyles which are an important element of social security in many households. According to Rahman, in such an atmosphere, ethical and moral considerations have no place and corporate interests determines life styles. Actions of this nature cause the decline of entrenched moral values in society and results in cultural conflict. This influences lifestyles and creates competition with the possibility of ruining traditional boundaries thus generating tension within families. Wiesinger, (2007) is also of the view that these processes restructure the local socio-economic patterns thus adversely affecting civic engagement. Involvement in local associations decreases as networking ceases to be valued as a resource for things such as information.

Such social outcomes at the trade level become more complicated when examining the social and economic implications among producers. This is especially so because of the fact that it is the social and cultural factors which motivate most tomato farmers to farm.

7.5 Analysing the significance of socio-economic factors that support production

The concept of farmers depending on social networks such as family labour may not be a new finding since it is common practice in peasant agricultural households. Nonetheless, the dimensions of its impact cannot be ignored when analysing the economic importance

of social networks within tomato farming communities. Understanding such measures increases our knowledge of society by adding to the current range of social indicators. For example, it helps us to explain why some communities adapt better to change or are able to do better than others with a given set of resources (ABS, 2002). Many social indicators provide information quantifying outcomes in areas of social concern such as setting education as a basis for social development. Putnam (2000), for instance, observes a strong correlation between social capital and education, child welfare, health and crime rates in a study on the collapse and revival of an American community. Due to the increasing dependence on family labour some cultural practices in the region encourage large family sizes which have other social consequences. On a wider scale, the use of child labour is not limited to dry season tomato production. It is a common practice during the rainy season in the region when children are removed from school to herd cattle. The effect on their education has attracted debates and alternative suggestions among educational activist, NGOs and some local media. Measures such as providing under-tree education for cattle herders to augment the formal dry season school have been proposed. That is, during the time the cattle are out on the fields grazing the herders are grouped together and taught under the trees so that the educational progress of the child is not disrupted during the rainy season or limited to formal dry season school (during the dry season livestock are left on free range and do not need herders). What this means in tomato growing households is that children who are supposed to be in school are occupied in both the dry and rainy seasons. This suggests that attempts to resolve the issue will need a different approach for such households. According to ABS, (2002), such social practices call for further examination as they could provide the additional variables affecting social outcomes that are not fully or adequately explained by current socio-economic and demographic indicators. During the government's efforts to introduce free primary education for all, such information would be useful in informing policy development and decision making. It is therefore important to identify where there is child labour, the extent of the exploitation and, particularly, the correlation between children working and the quality of their education. If the tomato sector is to be supported for economic benefits, then such research is crucial when seeking to improve the living conditions of tomato farming communities.

Though definitions and concepts of a quality of life may be subjective and difficult to describe, there is no doubt that the primary elements are not disputed. Here, an attempt is not made to define quality of life in general but only within the context of the government's attempts to reduce poverty. It is expected that individuals are able to meet the educational needs of children, the health needs of the family, food security (GPRS II, 2005) and, within the local setting, participate in social activities. The social atmosphere is quiet diverse and one single factor cannot explain all that goes into meeting a social need. For example, the farmers' acquisition of electrical gadgets may represent status symbols that could contribute to explaining the profile of the private side of family life (ABS, 2002). It could also explain the social dynamics of a community but still does not imply quality of life. Sherraden et al., (2005) have shown that households with low consumption ratios often list items such as a car or furniture among their valuable assets. In analysing the economic benefits, Yunju et al, (2008) and Caskey (1994), reports that "household appliances such as televisions and air conditioners are sometimes used as a source of cash at the time of economic emergency". However, it has been proved in a similar study that the "value of consumer durables, except automobiles, is rarely included in calculating net worth on the grounds that these items cannot be easily sold in the market and their resale values, even if sold, are typically much less than their consumption services to households" (Yunju et al, 2008, Spilerman 2000 and Wolff, 2002) Setting the above within the context of this study, it can be postulated that such assets cannot be used as a hedge for the households' future economic needs so do not translate into quality of life or reflect improved livelihoods.

7.6 Conclusions

The chapter examined the scope of the economic and social implications of the tomato sector. An explanation is given of the extent to which processes of exchange and modes of accumulation affect society. The chapter demonstrates how marketing strategies permeate social structures in an attempt to capture consumers. Such complex dynamics do not only affect the economic conditions of the players but their social life as well. This is evident in the social factors that motivate farmers to produce. Analysis has shown that

they cannot be translated into economic benefits. In the same vein, such factors have contributed to the creation of a stratified society and have served to undermine simple living.

8 Conclusions and Recommendations

The fundamental anomaly this study set out to investigate was the increasing level of production in the tomato sector despite the many obvious problems which should have had a negative impact and the economic potential of the sector. Answering this broad question required cross examination of several con-current, pragmatic issues as well. The main objective was to gain an understanding of the internal dynamics in the tomato industry and, through an academic analysis, make suggestions and recommendations. On the basis of the findings, it is argued that, although technical problems and poor management contributed to the collapse of the tomato sector the main cause of the problems lies in SAPs and subsequent global trade policies. Policies such as the reduction of import tariffs accounted for a high volume of imports of cheap tomatoes and the subsequent closure of the factory thus creating a market vacuum. Consequently, a vibrant local market was established and sustained through various forms of power-play, socio-cultural influences and internal politicisation, despite the obvious risks. In this regard, theories on power, risks and the traders' dilemma in the broad moral market are used to explain the complexities of the tomato sector.

The theory on power discussed in Chapter 3 reflects the ability of an organised group or association of players to excise control on society. Such associations have been shown to be powerful and political systems that influence social interactions. Within the context of the tomato sector, this was seen to emanate from the position, knowledge and economic situation of players enabling them to manipulate others or change the course of action. Being the major players, traders are empowered by a strong traders' association controlled by tomato queen mothers. This group is strongly supported by traditional authorities and official institutions. These sources of power, especially 'authoritative power', have legitimacy within the social structure and are examples of one person's ability to control the behaviour of others. This concept has been variously examined by sociologists, for example Evers and Gerke, Harris-White, Mittendorf etc., who have explained the complex, strategic use of power in society. Accordingly, traders have not only monopolised the market but also dictate prices to the farmers.

According to Clark (1994), “traders’ efforts to survive and accumulate economic assets led them to employ secondary and innovate trading channels that improve overall economic resilience and autonomy at the local and national levels. She observes that, “emerging trends indicate traders will be able to consolidate their position within their local and national communities while those communities continue to lose ground internationally”. This view confirms the establishment of a local market which, in turn, encouraged a competitive regional trade where local farmers are disadvantaged. In this situation, it can be surmised that power in its various forms can be a constraint, for example the negative effects of coercion, as well as having the enabling quality of making actions achievable. The vibrant market in Burkina Faso does not only destabilise the local industry but comes at a cost to local farmers. Nonetheless, from the discussions of the results in Chapter 6, it is understood that the likelihood of power changing the course of events is inevitable. For instance the aggressive action by farmers which produced successful results in the market show that threats of violence can be employed as a power source to change a given situation.

On the basis of the research and given the social setting, it can be said that the politicisation of the local agro-processing sector is seen as a display of power. The political dimensions resulted in the use of the factory for personal interests through systems of institutional power. While the Government’s interest was in gaining political recognition the investors’ economic goal of profit maximisation was paramount. Traders were also seen to be in support of the efficient functioning of the factory. The reason for this was, since farmers are not contracted by the factory, traders were ready to pay higher farm gate prices which the factory management could not afford due to their additional processing costs. These dynamics have limited farmers’ processing options. Traditional processing methods, mainly milling and drying, are constrained by rudimentary technology, lack of support and high processing costs.

It has also been demonstrated that the strong exhibition of social control mechanisms shows the interface of power and society. These mechanisms reflect the functions of socially constructed assumptions such as cultural values. Within the dynamic economic setting, the interplay of moral and cultural norms has a supportive role which is used to explain their contribution to the survival of the sector. For example, with the withdrawal of support by the financial markets, remittances from closer networks such as family were responsible for supporting production although some farmers recycle household assets by selling and then replacing after farming. Such structures are useful in minimising risks and enforcing stability in the market to ensure productive outcomes. Although they function as disciplinary instruments which shape individual behaviours as discussions in Chapter 5 show, they also pose a dilemma for traders. The embeddedness of moral values and cultural norms in the market (see Evers and Schrader in Chapter 3) poses a challenge to the accumulation of economic resources. In this situation efforts are made by players to project a good image and maintain status in society. For example, traders do business with vulnerable retailers because they do not want to be seen as bad people who have no moral values and farmers do not want to be labelled as lazy by the community so they are compelled to farm.

These are perpetuated against the background of high risk environments. Climatic changes, the characteristic nature of a crop that is highly perishable and the high accident rates makes economic gain in the sector an uncertainty. Despite these setbacks, tomato production has been sustained since diversification options are limited. In Chapter 3 the “portfolio theory” as explained by Nehme is understood as a diversification strategy in agriculture. Its practice involves the production of a variety of crops as a hedge against the risks of producing just one type. Farmers’ efforts to diversify are met with both climatic and technical problems. Findings reveal that crops such as garden-eggs, pepper, okra and green pepper appear economically viable. However, incomplete information about their market potential coupled with high irrigation requirements and the longer time they take to mature, discourage farmers from growing them. The longer dry seasons and recurrent water shortages create problems for irrigation therefore making it difficult to cultivate such crops. This is compounded by increasing temperatures which inhibits crop

growth. In addition, insurance companies are scarce in rural markets due to moral hazards and adverse selection. The tomato sector is perceived as inherently risky because of information asymmetry, dependence on nature and weak technical support. Due to poor extension delivery systems, farmers lack adequate information about the good agronomic practices needed to produce many crop varieties on a large scale.

Drawing from empirical findings and the analysis, the thesis concludes that the tomato sector only has the potential to adequately generate employment and income if given the necessary support by government. In the current state, where annual farming is funded by remittances and the recycling of assets, production will continue at subsistence levels and will not develop as a business enterprise.

Against the background of the above it is suggested that government needs to be firm in its support of the industry, whether in terms of revamping the factory or putting workable structures in place to improve the local market. It is only in this way that medium and long term goals can be set. To revamp the factory, a comprehensive baseline survey of production and marketing dynamics should be conducted. In addition, contracts with farmers, the establishment of a local marketing committee and research into improved varieties for the market and for processing is important for both the immediate and long term goals. It was found that, while government appeared to revamp the factory, adequate preparations were not made to cater for long term operations. Revamping the factory is one thing but strengthening the source of supply is a prerequisite for survival.

Additionally, social impact assessment involving all stakeholders should be conducted in order not to generate a problem by resolving a poverty issue in one group of society and creating poverty in another. Many writers agree that involving people who are affected by decisions in issues that affect them promotes empowerment, accountability and efficiency (Stolp et al., 2002; Burdge, 2003; Pisani and Sandham, 2006). By this process government can find ways of handling groups within the sector who are likely to be displaced. For example, traders and service providers may lose their source of livelihood when the factory begins to function effectively.

One way politicians can draw positively on the sector to further their political ambitions and to benefit the farmers is to recognise small scale farmers in the annual farmers' day awards programme. Farmers have sustained the sector through local adaptation strategies; therefore they could be motivated by rewarding them with such things as pumping machines, bicycles, or wellington boots during such an occasion. Currently, the criteria for selecting award winners for both specific and general crop limits awards to wealthy farmers where often the prize of a vehicle or a house is not something which is needed.

Furthermore, MoFA could collaborate with the popular public media in the UER (Ura Radio) and in cooperation with their sister organisation in the South share data on market prices of tomatoes during the season and broadcast them in the local dialect. This would be helpful since most farmers have radio sets which they can make use to access such information.

By putting this in the public domain, not only are farmers empowered but information does not become a scarce commodity which only a few market agents can utilise to their advantage. It will improve marketing opportunities. For instance, price negotiations with farmers will result in a fair bargain if intermediaries and traders are aware that farmers have knowledge of prices. In a research report, (SARI) confirms that pepper wholesalers share information on price, quality and supply conditions which gives them greater power when negotiating higher economic rents (SARI, 2007). They state that traders manipulate farmers particularly during the peak of harvests by spreading false information about prices thus coercing farmers into accepting low prices. Public media has been successfully used in extending information to farmers in the Southern parts of the country. Radio discussions on agricultural topics such as animal husbandry, food crops and, more importantly, the cocoa industry are examples. Furthermore, during the market conflict in 2006, it was possible to have negotiations with traders where successful measures such as embargoes and import restrictions resulted in a better market the following year. This means that there is leeway for farmers therefore the opportunity could be capitalised and strengthened as a solution to the marketing problems.

Against the background of the outcomes, recommendations include the need to review foreign investment regulations and to prioritise the economic and social needs of the country. It is important for governments to be aware of vital social issues in designing domestic policies and programmes. Particularly critical is the KND tomato sector which is characterised by imperfect information and weak formal institutions. Measures should also be put in place to instil discipline and transparency and to ensure the accountability of investors. Opportunities should be created to encourage the interest of local investors in the tomato industry by providing attractive conditions by relaxing some investment regulations. For instance, Mbithi and Mainga, (2006) report from Kenya that tax flexibility on imported plants, machinery and equipments was implemented as a strategy to attract local investment. According to Blomström & Kokko, (2003) waiving taxes till a company realises its overhead costs and giving some years of exemption from customs duty could also serve as incentives. Low interest rates on bank loans or government sponsored commercials to promote local products are all ways that could be considered. In addition, regional governments need to re-examine their trade policies regarding foreign imports of goods similar to those produced in their own country. This would include considering measures such as increasing their border charges or setting a quota for importers of similar goods. Currently the border charges are so low in Ghana that the total fees paid do not reflect the large quantities brought into the country.

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Appendix

Methodology

Research Approach and Design

The research was conducted in 2008 in Kasena Nankane District of the UER of Ghana. It focused on tomato marketing among farmers who practice dry season bucket irrigation in *Kandiga*, *Mirigu* and *Doba* communities. A trip was also made to Burkina Faso to get first hand information on how marketing is conducted between the farmers and the trader's. As a development worker in rural agriculture, my familiarity with the cultural setting and language in the UER was an advantage through which I experienced minimal community entry barriers. This was further facilitated by the existing network created since the establishment of the Glowa Volta project around the Atankwidi and Anayari river basin where tomato irrigation takes place. In this regard with the help of the projects field assistant (Jacob Afiliga) accessibility to information and the communities were not with any significant difficulty. Additionally through the project, I conducted my masters' research study in the area, therefore a second entry gave me the opportunity to renew and make use of the acquaintances that had been created as well as an avenue to establish new contacts. I was therefore motivated to undertake the research because of the existing advantage available to me which contributed in enhancing my search for deep quality information to enrich the study.

Research Sample

A total of 100 small scale tomato farmers from the chosen communities' were interviewed. The sampling procedure was purposive; farmers who farm around the Atankwidi and Anayari river basins were selected from an existing list generated by the project (why?). Data on actual population of farmers in a particular community was not available; however, estimations were given by the district assembly as follows: Kandiga, 1250 farmers but this number is made up of farmers from other communities and two nearby districts, Mirigu and Doba were given as 202 and 200 respectfully. Three markets were chosen, these were Kumasi Central market in Kumasi, Makola in Accra and the Navrongo district market. Kumasi and Makola are the two biggest markets in Ghana

serving as a hub for tomato trade. Additionally, about 80% of tomato traders conduct their business in these markets. It was also important to have an idea of tomato marketing situation in the Navrongo district market since the research was being carried in the area. Interviews were granted to 3 tomato market queens one from each of the 3 markets while group discussions were conducted among 60 traders in the markets. Three market enumerators were also engaged in the 3 chosen markets. Other market players from whom information was gathered were service providers such as interpreters and sorters. In Burkina Faso about 45 farmers and 4 traders answered questions ranging from tomato production and marketing with supporting information from government institutions.

Process of data collection

The study used both primary and secondary data to investigate the market situation at global, regional and local levels. Primary data collection was made possible through interviews; field visits, observations and group discussions. It was anticipated that the combination of the chosen methods will allow triangulation of critical issues for in-depth understanding and description, hence making it possible to offer explicit explanations to the economic potential of the tomato industry.

Primary data

Both qualitative and quantitative data were conducted using structured and semi structured questions. Face to face interviews were used throughout since many of the respondents particularly traders and farmers could not read and write. The method was also suitable because of time constraints on the part of the traders and institutional heads who scarcely have time to answer questions. Questions posed provided deep insights into the tomato sector. Farmers outlined production and marketing problems at the regional and local levels. Interviews with tomato queen mothers revealed the role of traditional authorities and the embeddedness of socio-cultural norms in Ghanaian markets. The information was very helpful in the context of traders' dilemma and analysis of social implications on livelihoods. Group discussions with traders provided an appreciable understanding of the local market structure as well as cross border trade in Burkina Faso.

These interviews gave insights into the implications of market policies and the power of market associations.

The three market enumerators took records of farm gate prices from bulk buyers as tomato trucks arrived at offloading points and prices at which they are sold to retailers. This was to have an idea of costs and profit maximisation levels between farmers and traders to explain economic factors that contribute to the sustenance of the sector. In order to explain the effects of state withdrawal from the market it was necessary to have a complete picture of the market chain. It was therefore important to interview service providers, particularly interpreters and sorters who seem to have taken advantage of the absence of agricultural market institutions such as state marketing boards that used to regulate market prices. Data on market policies at regional and global marketing levels were gathered by conducting interviews with heads of government institutions such as Ministry of Food and Agriculture (MOFA), Ministry of Trade and Industry (MOTI), Customs Excise and Preventive Services (CEPS), management of the Northern Star Tomato Factory, the District Assembly and some NGOs. Interviews were designed to have an idea about governments' interventions towards the flooding of the domestic market with imported products to be able to explain the processing industry. CEPS were a key sector in providing information on ECOWAS policies on regional trade.

Data gathering through direct observation methods was also employed for clarification and to authenticate data sources. This involved field visits to farmer's farms, the factory, the border between Ghana and Burkina Faso (Paga), The 2 big markets in Ghana Makola (Accra) and Central Market (Kumasi) were also visited. The trip to Burkina Faso was assisted by the regional director of Ministry of Food and Agriculture (MoFA) for the Bolgatanga Municipal area, traders and service providers. Staffs of the Ghana embassy in Burkina Faso were also very supportive in contacts with other institutions and assistant translator as I can not speak French. Information from Burkina Faso was vital to validate the myths and rumours surrounding traders' preference for tomatoes in Burkina Faso and to be able to document the state of affairs from personal observation and experience.

Secondary data

Literature reviewed from secondary data was important in contextualising concepts within the local setting. Data sources included policy documents and reports from institutions such as Ministry of Food and Agriculture (MOFA), Ministry of Trade and Industry (MOTI), Customs and Excise Preventive Services (CEPS), NGOs, District assembly, Ghana Statistical Service (GSS), National Development Planning Commission and some local media. Policy documents include the Ghana Poverty Reduction Strategy GPRS II, Food and agricultural sector development policy (FASDEP) and the ban on tomato imports. They served as very useful source of information about the region and government development plans for agriculture in the area. Books, articles, journals and the internet were also very vital sources of information.

Challenges in carrying out the research

The three year period allotted for the PhD research was short. Furthermore the funds available were also limited. The short time presented pressure on field trips and in booking appointments for interviews between the 2 countries and among various categories of players. Schedules and appointments sometimes coincided with institutional heads and farmers thus putting one in a difficult decision making situation to choose and prioritise. Additionally, some official data were treated as classified documents and therefore not available in the public domain. Similarly some interviews were restricted for the same reason. Furthermore, information about tomato farmers who farm along the river basins in ministry for agriculture was lacking and most of the data accessed was contradictory and inaccurate therefore much time was spent cross checking for authenticity.

Key literature sources and respondents

Local Level (respondents)	Data from Formal Institutions	
	Institutions	Type of Data
Tomato Farmers		
Tomato market queens	Regional office of ministry of food and agriculture (MoFA) in Ghana and Burkina Faso	Interviews and annual report,
Tomato Traders	District office of ministry of food and agriculture (MoFA)	Interviews, Monthly and annual reports, Minutes of meetings,
Interpreters	Ministry of Trade and Industry (MoTI)	Interviews, List of importers and types of tomato paste imports
Sorters	Customs Excise and Preventive Services (CEPS)	Interviews and report on the ban on tomato imports
Drivers of tomato trucks	Navrongo District Assembly	Interviews and report on district plan for irrigation
Tomato loading boys	NGOs: ZoFA Koninklijk Instituut voor de Tropen (Royal Tropical Institute) (KIT) LACOSTREP II	ZoFA: Interviews and report on tomato working group meeting, Report of tomato farmers by ICCO team, Estimates of tomato production costs, Brief report on visit to Wenchi LACOSTREP II: Baseline survey report, 2001 KIT: Report on market queens in Ghana: the potential for cooperation with smallholder farmers and report on analysis of pepper value chain in Northern region of Ghana
Judiciary	Management of the Northern Star Tomato Factory,	Interviews and report of inaugural ceremony of the tomato factory
Tomato paste traders	National Development Planning Commission	Annual congress report of the implementation of the GPRS, 2005

Importers of tomato paste	Institute of Statistical, Social and Economic Research (ISSER), Legon	2005 report of the state of the Ghanaian economy
	Ghana embassy in BF	Interviews and INERA research proposal on tomatoes
	Tono Irrigation project	Interviews and Report on irrigation activities at Tono
	Local media	Interview and report on inside Ghana's tomato industry
	Ghana Statistical Service (GSS)	2000 Population and Housing Census of Ghana: demographic, economic and housing characteristics 2003 Core Welfare indicators Questionnaire (CWIQ) survey Ghana, national summary