Review

Smallholder agricultural commercialization for income growth and poverty alleviation in southern Africa: A review

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This review paper explores the concept of smallholder agricultural commercialization highlighting cases from Southern Africa. With most of southern Africa’s rural poor primarily depending on agriculture for livelihoods, shifting production from current subsistence towards market orientation (commercializing) can significantly increase the income and welfare of small farmers (smallholders) as well as contribute to economic growth and poverty alleviation. Smallholders face many environmental and individual constraints to commercialize. However, the changing environment driven by growing population, urbanization, income, global interconnectedness, policy reforms, technology, food industry restructuring and climate change presents opportunities for smallholder market participation. Efforts made in the region produced varying degrees of success depending on contexts and strategies, but collaborative efforts have been the most successful. While some negative effects can emerge, the expected income-mediated positive results at household and societal level are greater. The key components of commercialization are its drivers, determinants, processes, strategies, indicators and effects - which can be synthesized into a conceptual model useful in planning, implementation and review of commercialization programs. Future research needs to comprehensively define and measure commercialization and develop models which stimulate multi-stakeholder support for smallholders, joint investments, attitude change and entrepreneurship to succeed in smallholder commercialization.

Key words: Agricultural commercialization, smallholder, income growth, poverty alleviation, southern Africa.

INTRODUCTION

Agriculture plays a critical role in livelihoods, employment, income growth, food security, poverty alleviation, socio-economic development and environmental sustainability in developing countries (Upton, 2004; IFPRI, 2005; World Bank, 2008; Gollin, 2010; Pingali, 2010). What makes it more critical in low income countries like those in southern Africa is that the majority of the population (over 70%) lives in rural areas (UNDESA, 2012) and over 75% of the poor are rural small-scale farmers (smallholders) who primarily depend on agriculture for their livelihoods (World Bank, 2008; Gollin, 2010; Salami et al., 2010). This implies that...
developments in agriculture can have far reaching direct effects in uplifting lives of the poor. However, many developing countries have not fully utilized agriculture for its multiple functions (Pingali, 2010). Smallholder farmers, who constitute the bulk of the rural poor have also not fully benefited from agriculture’s multiple functions because they predominantly practice consumption-oriented subsistence agriculture which excludes them from the formal market system and the related income-mediated benefits (Diao and Hazell, 2004; IFPRI, 2005; Hazell et al., 2007; World Bank, 2008).

As the environment becomes more dynamic, presenting new opportunities and challenges, the viability of subsistence agriculture in guaranteeing livelihoods declines (Pingali and Rosegrant, 1995; Pingali, 2010). The new environment characterized by growing population, urbanization, income, global interconnectedness, policy reforms, technology, food industry restructuring and climate change calls for transformed agriculture (Barrett, 2008; World Bank, 2008). Commercialization can achieve agricultural transformation by shifting production practices from current consumption-orientation towards market-orientation (Brush and Turner, 1987; Pingali and Rosegrant, 1995; World Bank, 2008). Smallholder commercialization is described as a pillar of household livelihoods (von Braun and Kennedy, 1994); a cornerstone of rural development and poverty reduction (Pender and Alemu, 2007) and an indispensable pathway to economic growth (von Braun and Kennedy, 1994). This implies that commercialization’s ultimate purpose is poverty alleviation and economic development through income growth. The subsistence oriented smallholders have the greatest need to commercialize to satisfy growing demand and partake in the resultant income-mediated benefits (Kirsten et al., 2012). This process requires greater commitment, spread and speed to catch up with the rapidly changing environment (Hazell et al., 2007).

This review paper therefore synthesizes the key elements of agricultural commercialization and highlights experiences in southern Africa to assist in understanding of the concept, its application and future potential. It begins with a background to agricultural commercialization which highlights the role of agriculture and smallholders in the region before exploring the concept with cases, drawn from the region. It then summarizes key commercialization elements into a conceptual model, discusses application of the model and concludes with pointing to some research gaps and future research directions.

BACKGROUND: THE ROLE OF AGRICULTURE AND SMALLHOLDERS

The conventional role of agriculture involves producing food for the growing population, producing raw materials for agro-industry, providing labour and market for urban industry, supplying savings for investment, and providing export earnings (World Bank, 2008; Pingali, 2010). The focus has been on the flow of food, materials and labour towards industry and urban areas, and to some extent, the flow of inputs towards farming areas. However, Pingali (2010) argues that agriculture has multiple roles which need to be re-discovered, and receive a renewed understanding and recommitment (agricultural renaissance) to realize greater value from the sector. These include agriculture’s contributions to socio-economic development through income growth, food security, household livelihoods, poverty alleviation, gender empowerment and environmental sustainability (Pingali, 2010).

Although some agro-pessimists do not believe in agriculture as a source of economic growth, agro-optimists provide overwhelming support and evidence for agriculture-induced socio-economic growth in developing countries including southern Africa (Gollin, 2010). For instance, agriculture is credited for 25 to 30% of GDP; 65% of employment (World Bank, 2008; Gollin, 2010); 73% employment of economically active women (Pingali, 2010); and large proportions of export earnings (Gollin, 2010). It also provides income used for household expenses and increased national food supply and food price reduction, which lead to better nutrition, food security and poverty reduction for rural and urban net food buyers (Gollin, 2010; Pingali, 2010). Although agricultural development alone is not sufficient to guarantee economic growth, it is the first and most important source of growth, and was a precursor in many industrialized economies in Europe, as well as recent industrial growth in China, India and Vietnam (Hazell et al., 2007; World Bank 2008; Gollin, 2010). Agriculture also provides environmental services like carbon sequestration, watershed management and preservation of biodiversity in light of climate change, resource scarcity and rising environmental management costs (World Bank, 2008).

On-going debate on the role of smallholders in agricultural development shows that some researchers believe that smallholders cannot cope with current trends in market demands due to their cost, technology, resource and skills challenges and part-time commitment (IFPRI, 2005). However, others argue that small farms are important players with significant shares in agricultural resources, activities and outputs hence they should lead agricultural growth (Hazell et al., 2007; World Bank, 2008; Pingali, 2010; Salami et al., 2010). In most developing countries, smallholders are preferred in new poverty alleviation strategies because: they own the bulk of production resources like land and livestock; they directly benefit from income and food supply growth; and they can efficiently use land and cheaper family / local labour (Hazell et al., 2007; World Bank, 2008; Salami et
It is therefore inevitable for smallholders to be incorporated into the market system in response to growing demand which current production cannot fulfill (Pinnstrup-Andersen et al., 1997; IFPRI, 2005). In most southern African countries however, smallholders have remained subsistence oriented and their economic contribution has not been properly accounted for (Hazell et al., 2007; World Bank, 2008). This is because they face multiple challenges mostly related unfavourable historical policies and institutions; transaction costs and access to productive resources, finance, technology, markets, market information, technology, infrastructure and skills development services (Diao and Hazell, 2004; Hazell et al., 2007; Barrett, 2008; World Bank; 2008; Pingali, 2010; Kirsten et al., 2012). Despite these constraints, the future of smallholder commercialization is not completely bleak as opportunities also emerge in the changing environment especially those related to demand growth driven by population growth, urbanization, income growth and changing consumer tastes and lifestyles (Delgado et al., 1999; Diao and Hazell, 2004; Hazell et al., 2007; Pingali, 2010). Therefore smallholders in southern Africa have a chance to commercialize, grow their income and alleviate poverty.

AGRICULTURAL COMMERCIALIZATION AND SOUTHERN AFRICAN EXPERIENCES

Agricultural commercialization – definition, elements and processes

Definitions of commercialization differ in focus and breadth, which has also influenced its measurement. While some authors narrowly view it as increasing the proportion of marketed output (Govereh et al., 1999; Okezie et al., 2008), or increasing cash crop production (Kennedy and Cogill, 1987), others broadly view it as a transition from subsistence towards market-oriented production (Brush and Turner, 1987; von Braun and Kennedy, 1994; Pingali and Rosegrant, 1995). In southern Africa, commercial production has been mainly associated with large scale farmers and smallholder commercialization has mainly been understood from the narrow view (Govereh et al., 1999; Rukuni et al., 2006). For instance, most of the cases recorded in von Braun and Kennedy (1994), Govereh et al. (1999), Poulton et al. (2008), Salami et al. (2010) and Kirsten et al. (2012) determined commercialization level by proportion of output marketed and mainly focused on crops (cash crops, food crops and horticulture). However, as argued by von Braun and Kennedy (1994) and Jaleta et al., 2009, narrow views oversimplify the concept by omitting critical elements like production purpose and farmer's behavior in resource acquisition and allocation - which Poulton et al. (2008) view as more critical in defining commercial production than product type, scale of production or production location.

This review supports the broad view and defines agricultural commercialization as an agricultural transformation process in which farmers shift from mainly consumption-oriented subsistence production towards market- and profit-oriented production systems. The process involves progressive substitution of subsistence with commercial practices (Pingali and Rosegrant, 1995). This entails increased integration of farmers into the exchange economy; deliberate moves to competitively satisfy market needs for profit; increased recognition of farming as a business venture, production for the market, participation in input and output markets, profit consciousness, uptake of and investment in efficient technologies as well as strong formal linkages with other value chain actors (von Braun and Kennedy, 1994; Pingali and Rosegrant, 1995; Asian Development Bank [ADB], 2004; Jaleta et al. 2009). In the literature reviewed, the broad concept has not been used in measuring commercialization.

Commercialization drivers and opportunities

Although literature does not specifically classify factors which trigger smallholder commercialization, this review classifies them into at least five categories based on the nature of their impact. These are factors which: increase demand for agricultural products, push for renewed approaches to farming, make the operating environment more enabling, make operations more efficient or increase individual commitment to commercial activities.

Factors promoting demand growth

The Southern African Development Community (SADC) experienced rapid growth in total population, urban population (UNDESA, 2012), and per capita gross national income [GNI] (World Bank, 2012) between 2000 and 2010 (Table 1). While total population is expected to double by 2035, urban population is expected to outstrip rural population by 2030 and treble by 2035 (UNDESA, 2012). The growth of population, urbanization and income increases demand for both food and non-food agricultural products (Hazell and Wood, 2008; World Bank, 2008) and for crops, the demand is multi-faceted as increased demand for livestock products also causes increased demand for crops used to produce stock feeds (Pinnstrup-Andersen et al., 1997). These trends reinforce earlier projections that between 1993 and 2020, developing countries (especially Sub-Saharan Africa) will experience demand growth of 1.4% (per annum) for human consumption cereals, 2.6% for stock feed cereals and 2.9% for livestock products (Pinnstrup-Andersen et al.,
Table 1. Population, urbanization and income trends in the SADC.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total population (Millions)</th>
<th>Urban population (Millions)</th>
<th>Share of urban population (% of total)</th>
<th>GNI per capita** (Value USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>220.2</td>
<td>77.4</td>
<td>35.14</td>
<td>1,563</td>
</tr>
<tr>
<td>2010</td>
<td>276.4</td>
<td>109.2</td>
<td>39.53</td>
<td>3,123</td>
</tr>
<tr>
<td>2030</td>
<td>410.2</td>
<td>206.9</td>
<td>50.44</td>
<td></td>
</tr>
<tr>
<td>2035</td>
<td>444.3</td>
<td>238.0</td>
<td>53.55</td>
<td></td>
</tr>
</tbody>
</table>

Annual growth 2000-2010: 2.3% - 3.5% - 7.2%

Data Source: UNDESA (2012) and **World Bank (2012).

Table 2. SADC production and trade trends for SADC countries.

<table>
<thead>
<tr>
<th>Period</th>
<th>Agric GDP (USD Bil)</th>
<th>Agric GDP % of total</th>
<th>Per capita Agric GDP (USD)</th>
<th>Cereal production (Mil tons)</th>
<th>Meat production (Mil tons)</th>
<th>Milk production (Mil tons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>15.8</td>
<td>17.5</td>
<td>311.69</td>
<td>28.3</td>
<td>3.1</td>
<td>5.1</td>
</tr>
<tr>
<td>2009</td>
<td>14.3</td>
<td>13.1</td>
<td>452.26</td>
<td>34.4</td>
<td>3.7</td>
<td>5.7</td>
</tr>
<tr>
<td>Annual</td>
<td>(0.1%)</td>
<td>(2.9%)</td>
<td>Growth</td>
<td>Growth</td>
<td>Growth</td>
<td>Growth</td>
</tr>
</tbody>
</table>

Data Source: FAOSTAT (2009, 2010).

Demand growth is further expanded by changes in cultural diversity, consumer lifestyles and consumption patterns due to globalization, migration and urbanization (Mendez and Hopkin, 2004; Pingali 2010). Although greater competition and higher standards are expected in new markets (Pingali, 2010), demand growth opens good opportunities for smallholder commercialization.

Environmental changes pushing for renewed approaches

Demand for agricultural products has rapidly grown, but production was not impressive over the period (Table 2). While agricultural GDP and agriculture’s contribution to GDP declined between 1999 and 2009, cereal, meat and milk production have grown slower that demand, population, urbanization and income presented earlier (FAOSTAT, 2009, 2010). As a result, per capita food production index has declined from 100 in 1999 to 94 in 2009 and the region has relied on food imports (FAOSTAT, 2009, 2010). Global warming and climate change have also affected agriculture with adverse effects on temperatures, rainfall patterns and water availability (CAWMA, 2007; Hazell and Wood, 2008; World Bank, 2008). These conditions and the net production deficit make traditional smallholder agriculture less rewarding, hence the need for adapted approaches and market-oriented productivity revolution to meet the growing demand. The growth of supermarkets in the region’s food industry also demands standards (higher quality, quantity, safety, health and service) and smallholders need new strategies to meet them (Reardon et al., 2003; Louw et al., 2008; Kirsten et al., 2012).

Factors making the operating environment more conducive for productivity

The region is endowed with agro-ecological conditions and natural resources (arable land, water and vegetation) suitable for production of particular crops and livestock for trade with non-producing areas (Louw et al., 2008; World Bank, 2008). While drier areas like Botswana, Namibia, southern Zimbabwe and northern South Africa are suitable for livestock production (Delgado et al., 1999; Upton, 2004), wetter areas like Malawi, Zambia, Mozambique and the rest of South Africa are suitable for crop production (Louw et al., 2008). The region can continue to adapt pro-smallholder policies which drove smallholder productivity growth in cotton, tobacco, maize, tea, sugar and livestock since independence (Govereh et al., 1999; Rukuni et al., 2006; Poulton et al., 2008; Kirsten et al., 2012). Regional integration into trading blocs like SADC and Common Market for East and Southern Africa (COMESA), and relations other blocs or markets like the European Union (EU), Asia and Middle East relaxes trade barriers, calls for adaptation of strategies and trigger commercialization (Pingali, 2010).

Factors making operations more efficient

Access to appropriated technology and value chain
integration can significantly improve efficiency, reduce transaction costs and promote commercialization (Barrett, 2008; Pingali, 2010). The region is experiencing rapid growth in information and communication technology (ICT) but value chain integration and other operational technologies still need to be improved (Pingali, 2010; Kirsten et al., 2012).

Factors making individuals more committed to commercial activities

Entrepreneurial culture is also cited as a key driver of commercialization in the region (Poulton et al., 2008; Kirsten et al., 2012). Although little research is available in the region, its mention implies that entrepreneurial capacity building can develop the commercial mindsets required to trigger commercial activity in smallholder agriculture (Rudmann, 2008).

Commercialization approaches / strategies

Literature does not explicitly classify commercialization approaches, but this review observed that approaches can be classified by the leading agent of change or the primary driving force. It is also possible to have hybrid strategies combining any strategies from the two categories.

Classification by leading agent of change

Literature shows that commercialization efforts can be dominated by one agent or more entities undertaking facilitating or operational roles. Based on this, strategies can be (a) state-led (socialist), where government takes a leading role (Rukuni et al., 2006; Jayne et al., 2011); (b) private sector-led (capitalist), where private companies take the leading role with minimum state support and interference (Mulemba, 2009); (c) donor-led, where the donor community and non-governmental organizations take a leading role (World Bank, 2008); or (d) collaborative (partnerships) strategy where there is joint effort between the state, private sector and donors (World Bank, 2008). Among all the strategies, partnerships have proved to be the most successful as single agent strategies proved costly or unsustainable (Poulton et al., 2008; Biacuana, 2009; Mulemba, 2009). For instance, grain commercialization in Zimbabwe, Mozambique and Zambia was state-led in their post-independence eras and private sector-led in the structural adjustment eras (Rukuni et al., 2006; Biacuana, 2009; Mulemba, 2009). Small ruminant commercialization efforts were donor-led in post-independence Zimbabwe (Khombe and Ndlovu, 2008; van Rooyen and Homann, 2008), but successfully collaborative in South Africa and Namibia (Roets and Kirsten, 2005; Kruger and Lammerts-Imbuwa, 2008; Louw et al., 2008).

Classification by leading driving force

Literature reveals that commercialization efforts can be primarily driven by one force while others take a supportive role where applicable. Commercialization can therefore be policy-driven (Hinderink and Sterkenburg, 1987; Kirsten et al., 2012); demand-driven (Pinstrup-Andersen et al., 1997; Delgado et al., 1999); technology-driven (Pingali, 2010); entrepreneurship-driven (Rudmann, 2008); or value chain-driven (ADB, 2004; Barrett, 2008). The process can also be driven by multiple forces.

Commercialization determinants

The success and failure of smallholder commercialization is influenced by many enabling and constraining factors which can be physical, political, economic, socio-cultural, technological and individual (Pingali and Rosegrant, 1995; Louw et al., 2008).

Enablers of smallholder commercialization

The effect of enablers to facilitate / promote the success of commercialization. The region’s natural conditions and post-independence pro-smallholder policies, public goods and services, subsidies and investment incentives were critical in smallholder commercialization (Timan et al., 2004; Rukuni et al., 2006; Louw et al., 2008). Zimbabwe’s land reform (Rukuni et al., 2006; Khombe and Ndlovu, 2008), South Africa’s black economic empowerment (Louw et al., 2008) and tribal grazing land policy in Botswana (Timan et al., 2004) are notable examples of pro-smallholder policies in the region. Zimbabwe’s smallholder success in cotton, tobacco and maize in the 1980s was enabled by investment in research, extension, genetics, infrastructure, marketing institutions and market incentives (Rukuni et al., 2006). In Botswana, success in beef sector was enabled by investment incentives in form of long-term leases, infrastructure and input loans / subsidies, training and market linkage through the Botswana Meat Commission [BMC] (Timan et al., 2004). Similar factors are also cited in the success of Namibia’s goat sector as well as South Africa’s goat and horticultural sectors – with the addition of strong producer groups, private sector commitment, technology and market information (Roets and Kirsten, 2005; Kruger and Lammerts-Imbuwa, 2008; Louw et al., 2008). Clearly, commercialization success cannot be attributed to any single factor, but a combination of several complementary factors.
**Constraints of smallholder commercialization**

Factors cited as major constraints to smallholder commercialization in the region’s cases includes: Historical policy bias in favour of large producers, lack of supportive institutions; poor access to productive resources, markets, market information, public services, technology and skills; shrinking government investment and support; high transaction costs; poor agro-ecological conditions, prevalence of diseases; limited commercial mindsets and negative beliefs (Rukuni et al., 2006; Hazell et al., 2007; Louw et al., 2008; Poulton et al., 2008; Kirsten et al., 2012). In Zimbabwe, Mozambique and Zambia, declining government investment after adopting structural adjustment programs in the 1990s greatly affected smallholder commercialization progress made in food and cash crops in the 1980s (Rukuni et al., 2006; Biacuana, 2009; Mulemba, 2009). According to the authors, this was worsened by poor access to: Finance, high-value markets, market information, infrastructure, disease prevalence and poor disease management strategies. In Zambia a dependency syndrome brought by socialist approaches negatively affected commercialization efforts (Mulemba, 2009), while farmers’ negative cultural attitudes hindered goat commercialization in South Africa’s Limpopo province (Tefera et al., 2004). Water shortages continue to be a major constraint for livestock production in Botswana and Namibia especially in remote areas (Timan et al., 2004; Poulton et al., 2008). Literature does not discuss individual constraints like commercial mindsets and attitudes in detail, but their mention shows that, they can cause failure of commercialization when unsuitable (Poulton et al., 2008; Tefera et al., 2004). Collective effort is necessary in dealing with these constraints for the success of smallholder commercialization.

**Effects of agricultural commercialization**

Agricultural commercialization produces positive and negative, as well as intended and unintended results at household, societal and global level (von Braun and Kennedy, 1994).

**Positive effects**

At household level, studies by IFPRI in Africa credited commercialization for: Increased productivity; family employment; increased household income through market participation and employment; improved consumption diversity; improved nutritional welfare; improved education, health and welfare; and improved household living standards (von Braun and Kennedy, 1994). The same studies discovered that at societal level, commercialization contributes to food security; poverty alleviation; rural and urban employment creation; improved livelihoods and social status as well as economic growth through productivity and investment (von Braun and Kennedy, 1994). World Bank (2008) further credited commercialization for creating rural markets for agro-inputs; creating rural supply bases for urban industries and consumers; increased economic investment in agriculture and other sectors; distribution of agricultural products through trade and environmental sustainability.

In Zimbabwe Governah and Jayne (2002) observed increased productivity in food crops due to cotton commercialization as farmers increased use of high productivity inputs purchased with cotton income. Similar effects on income and productivity were also witnessed in Malawi’s tobacco production (Poulton et al., 2008), Botswana’s beef production (Timan et al., 2004) and Zambia’s maize production (von Braun and Kennedy, 1994). Most of the positive results are income-mediated as increased household income is used to finance household welfare, and investment society and other enterprises (von Braun and Kennedy, 1994). These results confirm commercialization’s role in livelihoods, rural development and poverty reduction.

**Negative effects and concerns**

Mixed results reported from studies have caused some questions to be raised over commercialization's nutritional, welfare and environmental sustainability roles (von Braun and Kennedy, 1994). According to von Braun and Kennedy (1994) and Pingali and Rosegrant (1995) commercialization has been criticized for failure to improve household nutrition and livelihoods of the poorest; replacing subsistence risk with more complex market risk; failing to guarantee household food security; and opposing food self-sufficiency objectives. It has been also criticized for widening regional income inequalities (Pingali and Rosegrant, 1995), land degradation through chemicals (Pingali, 2001) and being an expensive and risky undertaking especially by the poorest (Pingali et al., 2005). However, von Braun and Kennedy (1994) argue that the accusations are not comprehensively proven as some of criticisms leveled against commercialization are in fact results of failure in policies, strategies, institutions, attitudes, and distribution of benefits and costs within households and communities. Although some negative results have been reported, positive results outweigh the criticisms and strengthen the need for commercialization. However, more empirical research is needed on effects to determine more convincing results.

**SYNTHESIS OF REVIEW FINDINGS**

**Conceptual model - Interconnected components of commercialization**

The discussion on smallholder agricultural commercialization has identified key interrelated
components of the concept as drivers; determinants (enablers and constraints); processes; approaches (strategies), indicators (measurement elements) and effects (positive and negative / household and societal). These can be condensed into a conceptual model useful in planning, implementation and review of commercialization programs (Figure 1). Multiple drivers (A) trigger the process by: increasing demand (like urbanization); making the environment more enabling (like policy, resources); pushing for new farming approaches (like climate change); making operations more efficient (like technology) or making farmers more committed (like entrepreneurship). For instance, when demand attractively grows, producing for the market becomes necessary and when appropriate technology is accessed, production for the market becomes more efficient. As smallholders progress from subsistence towards market orientation, the success and failure of the process is influenced by several environmental (like socio-economic factors), farm level (like farm resources) and individual (like skills) determinants (B) whose effects are also influenced by the drivers. When these factors are favourable, they facilitate / enable the process making it successful, but when unfavourable hinder the process causing its failure. The process (C) implies that farmers progressively substitute subsistence practices (decreasing) for commercial practices (increasing) until they fully commercialize. The process is approached differently based on the leading agent of change or the primary driver or any combination of them. The strategy (D) adopted determines key players, key activities and the role of producers. Most successful cases are based on collaborative efforts as successful commercialization has proved difficult without partnerships and all-inclusive approaches. Progress is measured / indicated (E) by some production purpose and orientation, nature of enterprise decisions (like resource allocation and technology) and extent of market participation (input and output) Ultimately, successful commercialization is expected to yield positive outcomes (F) at household level (like income) and positive impacts (G) at societal level (like food security). At the same time, some negative and unintended effects (H) can also emerge (like market risk) depending on contexts and strategies adopted. Lessons picked from the results feed into future programs and strategies (K).

Application of the conceptual model

The model is useful in understanding the concept of commercialization by researchers, economic players and

Figure 1. A conceptual model of smallholder agricultural commercialization. Source: Illustrated based on von Braun and Kennedy (1994); Pingali and Rosegrant (1995) and other literature review.
other stakeholders as it provides a condensed overview of the whole concept by summarizing key components of commercialization and how they are inter-related. It arouses attention to salient aspects like the multiple drivers, two-sided nature of determinants, strategy options, measurement elements and multi-faceted nature of effects. This enhances comprehensiveness in planning, implementation and assessment of commercialization programs. The measurement elements can also be used to profile smallholder farmers according to commercialization extent in order to craft targeted strategies and interventions for different levels. Given many agricultural development cases around the world, the model is instrumental in analysis, comprehension and comparison of the cases as it provides a framework to isolate key issues and lessons from the experiences. The key components highlighted by the model are not limited to agricultural commercialization projects alone but can be adapted for other developmental projects.

Gaps in commercialization literature

This review revealed some gaps in smallholder commercialization which future research and development should address (Figure 2). Although they cannot be addressed at once, highlighting them helps future research to address missing links to complement existing work.

CONCLUSION

This paper sought to review smallholder agricultural commercialization developments in the southern African region to expose the potential, components and research gaps for future research. The key findings presented in this review have uncovered some important insights into the role, conceptual understanding, measurement, drivers, determinants, strategies and effects of agricultural commercialization in southern Africa. The contribution of agriculture and commercialization towards income growth, employment creation, economic growth, livelihoods improvement and poverty alleviation is clear as evidenced by a comprehensive body of literature attesting to this. Although commercialization has been traditionally associated with large scale producers, growing opportunities are making it inevitable for smallholders to be integrated into the market economy. To achieve all-inclusive growth, smallholders therefore need all-stakeholder support to deal with constraints and participate in commercialization opportunities to realize its full benefits.

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REFERENCES


Zhou et al. 2007

