

Commercialisation: a meta-approach for agricultural development among smallholder farmers in Africa?

Citation

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Highlights

- We review policies of agricultural commercialisation for smallholders in Africa
- We critique commercialisation as a metanarrative for heterogeneous rural peoples
- A case study of Zambian cassava growers explores the implications of context
- We highlight the need for 'locality' and 'particularity' in policy formulation

This paper presents a critique of commercialising smallholder farming for agriculture in Sub-Saharan Africa. First it questions the validity of an overarching 'metanarrative' approach to development. Then it discusses the different types of knowledge, values and method and draws attention to the increasingly heterogeneous development policy context and also the heterogeneity among the smallholder 'targets' of agrifood policies.

Second, a case study exemplifies this critique in the context of an existing multistakeholder strategy of commercialising the Zambian cassava sector. Although limited in scope, the primary research illustrates how a commercial supply response should not be assumed from within a rural sector more concerned with food security.

The study casts doubt on the validity of a commercialising metanarrative. Rather, it endorses the need for a multidisciplinary understanding of the particular and local context which influences knowledge generation and development design, accounting for different value systems and perceptions of reality and smallholder farmer decision making within heterogeneous contexts.

Keywords: agricultural commercialisation; meta-approaches; contextuality; heterogeneity; smallholders; cassava; Zambia

1 INTRODUCTION

The World Bank's World Development Report (WDR) 'Agriculture for Development' (2007) drew attention to the importance for sustainable development and global poverty reduction of investing in agriculture, particularly among smallholders in developing countries. Synthesising knowledge from a wide range of sources, the Report offered a typology of rural poverty in relation to three agricultural worlds: 'one agriculture-based, one transforming, one urbanized' (p. 1). For Sub-Saharan Africa, which is mostly agriculture-based, the WDR argued that growth will happen through investment where the agricultural potential is medium to high, while at the same time ensuring the livelihoods and food security of subsistence farmers: 'Getting agriculture moving requires improving access to markets and developing modern market chains. It requires a smallholder based productivity revolution...' (p. 20). The aim is to achieve sustainable development and poverty reduction through the development of commercial agriculture.

Another World Bank report, *Awakening Africa's Sleeping Giant* (World Bank, 2009) argued that, 'for the foreseeable future, reducing poverty in Africa will depend largely on stimulating agricultural growth'. The basis for optimism about poverty reduction is that within more favoured agricultural

areas and for a range of commodities, African agricultural smallholders can be internationally competitive.

This revised focus on agriculture within the wider international community has been welcomed even by critics (Akram-Lodhi, 2008; Kay, 2009), and emphasises the importance of investment in agriculture for poverty reduction and the fundamental underpinnings of development in poorer countries, redressing more than two decades of neglect of agriculture. Nevertheless, there is a growing urgency to consider a wider range of views which can inform the development policy debate for the period post-2015: currently ‘there is a homogeneity of thinking among the organizations and agencies worldwide that attends to the question of agricultural growth’ (Feldman and Biggs, 2012).

This article addresses questions arising out of the policy of commercialising agriculture. Commenting on the meta-analytical approach to policy design, it stresses the importance of the particular and local context. This argument is followed by a case study which draws on the experiences of a European Union-funded programme for growth and poverty reduction through commercialising agriculture. This is the cassava sector development strategy in Zambia, part of the “All ACP Agricultural Commodities Programme” (AAACP)¹ which was launched in September 2007, and whose aim is to improve incomes and livelihoods of agricultural producers and reduce vulnerability at household and macro levels.

The paper continues as follows: section 2 criticises the vision of commercialising smallholder agriculture as a meta-approach for agricultural development, explores the concepts of knowledge, meaning and method in development policy; and then notes questions that are not satisfactorily addressed by the commercialisation narrative for smallholder agriculture, including diversity in the ‘big picture’ of development approaches, and heterogeneity in the ‘small picture’ of rural households characteristics. The importance of contextual ‘locality’ and ‘particularity’ are highlighted. Then a case study is reported: section 3 explains the context of empirical research into smallholder behaviour and commercial production in Zambia, followed by the quantitative and qualitative methodologies (section 4) and results (section 5). Overall conclusions linked to the general critique of commercialisation policies as a meta-approach for smallholders are presented in section 6.

2 AGAINST A DEVELOPMENT ‘METANARRATIVE’

2.1 ‘Incredulity toward metanarratives’

Since the Enlightenment rationalism and modernism have been the ‘metanarrative’, or overarching interpretative framework explaining knowledge and experience. A critique of ‘metanarrative’, attributable to Lyotard (1984), emerged within postmodern thinking as a reaction against positivist and modernist interpretations of the world. It denied a ‘totalising’ explanation of reality and embraced heterogeneity, ‘local determinism’ and ‘particularities’ - the quality of characteristics which pertain to a specific case or context or reality. The ‘grand’ narrative was said to be unhelpful and inaccurate for interpreting the world, and for policy prescription, and should give way to smaller, ‘local’ narratives that more precisely and correctly explain phenomena which are particular, heterogeneous and local (Poole, 2005).

2.2 The ‘discourse of the market’ versus rural differentiation

The methodology of the WDR is a meta-analysis. The emphasis of ‘Agriculture for Development’ (2007) is on commercialisation as a metanarrative for developing country agriculture and poverty reduction – both modernising in the sense of development theory, and modernist in the sense of underlying philosophy. It assumes rather than questions the essential attractiveness of market

¹ www.euacpcommodities.eu

incentives and profit maximisation, whereas for many people in developing countries, agriculture is on the one hand more than a question of economics, and on the other often is not perceived to be an 'attractive' profession (International Fund for Agricultural Development, 2011).

Various authors have criticised the WDR approach to engage smallholders in commercial markets: Havnevik *et al* (2007) consider the WDR to be consistent with the World Bank's mistaken philosophy of 'market fundamentalism'. Feldman and Biggs (2012) contrast the WDR with the International Assessment of Agricultural Knowledge Science and Technology and Development (IAASTD). Agreeing with Broad (2006: 388), they note how the IAASTD critique of agricultural productivism has been sidelined by the neoliberal 'mainstream'. McMichael (2009) is suspicious of the attempt to include - or suborn - smallholders within value chains that are synonymous with a corporate food regime. Indeed, 'exclusionary corporate agriculture' might well be a consequence of the type of project envisaged in the Sleeping Giant report. Like McMichael, Amanor (2009) also highlights the differential but often exclusionary results of agribusiness investment and market access.

In its defence, the WDR does note that 'heterogeneity defines the rural world' (World Bank, 2007: 5), and that national agendas for agriculture need differentiation: 'Agendas differ by country type, reflecting differences in priorities and structural conditions across the three agricultural worlds. The agendas must be further customized to country specifics through national agricultural strategies with wide stakeholder participation' (World Bank, 2007: 19). 'Particularity' is sought through the presentation of a typology of rural households which distinguishes five livelihood strategies within the three worlds: market-oriented smallholders; subsistence-oriented farmers; labour-oriented households; migration-oriented households; and diversified households. For Akram-Lodhi (2008), it presents a somewhat nuanced assessment of agrarian development.

While such clustering and customisation are welcome and analytically useful, they have limitations (Poole, 2000). Kay notes that the WDR advocates three pathways out of rural poverty which can be based on agriculture, the non-farm economy or outmigration – but are unlikely to help the poorest of the poor (Kay, 2009). Rather than accounting for differentiation within the rural population, Kay argues that this narrow approach is a prescription for furthering an agrocapitalism which fails to address the development challenges facing the majority of independent rural smallholders.

Thus the level of 'differentiation' in the WDR and in the mainstream literature is both limited and reductionist. It glosses over the development 'losers', whose limited assets and capabilities consign them to exit from agriculture and often from rural life into – probably the lowest - echelons of an urban-industrial society. Exit from agriculture can mean unemployment, social disruption and urban deprivation within a context of burgeoning populations, climate change and resource scarcities.

Thus, the levels of differentiation commonly used are not very 'local' or 'particular', reflecting the methodologies of meta-analytical approaches and the growing influence of thematic reviews. They do not get deep into the hearts and minds of rural household members. Differentiation and customisation are conceived only within the overarching imperative of commercialising agriculture.

This academic critique is paralleled by a growing popular movement. The concept of food sovereignty originated in Latin America during the 1990s as a rights-based approach to improving food security, self-sufficiency and control of the agrifood supply chain within a discourse of agroecological sustainability. As a widespread reaction against agricultural market liberalism and agrifood industry globalisation, the transnational peasant movement, *La Via Campesina*, represents at least 200 million farmers and rural workers, plus a range of organisations and indigenous groups worldwide (Rosset and Martínez-Torres, 2012). Naranjo (2010) argued that food sovereignty can be achieved locally, even within a context of general globalisation, through policies which enable smallholders to improve their well-being, food security, self-esteem and to forge an adequate livelihood without engaging in global markets. Thus, food sovereignty has the potential to contribute

to the development of local food systems and the promotion of agroecology, in the same way as the notion of a solidarity economy offers an alternative approach to mainstream economic organisations and relationships.

2.3 Knowledge and policy

It is possible to value what the WDR does while remaining sceptical about what it does not do. Related to the philosophically and empirically problematic nature of the metanarrative itself, there are difficulties with synthesising nature of the WDR process. How knowledge is built up is an important consideration: empiricism and 'evidenced-based policy' in development can be problematic precisely because i) the methodology, and ii) the knowledge or evidence usually reflect an approach that too often is 'ours', 'northern', and 'reductionist'. In structuralist terms, this metanarrative approach tends to perpetuate existing power relations (Foucault, 1980) and results in unsatisfactory development policy discourses (Stiglitz, 1999; Gore, 2000).

Rodrik (2006) wrote enthusiastically of a shift within the World Bank (preceding the WDR 2008) which encouraged scepticism of top-down, comprehensive, universal solutions, noting that economic analysis has to be done case by case. But this view has been sidelined, with doubts created about the scientific legitimacy of the alternatives. The same scepticism, it is argued, has been applied to the IAASTD approach to understanding rural development from an alternative viewpoint (Feldman and Biggs, 2012: 145). Feldman and Biggs also note the epistemological and methodological issues related to the legitimisation of knowledge. They identify a ranking of expertise based on disciplines, methodologies and data that is headed within the agricultural sciences by plant scientists and agricultural economists. They do not say who are the followers, but it is evident that other social sciences and humanities – anthropology, geography, history, sociology, politics and psychology – are accorded less attention.

2.4 Meaning and method

There are also, of course, other ways of looking at methods for knowledge management, communication and policy formulation. Commenting on the deductivism of David Ricardo, Kolthammer wrote:

A deductive economic law may be inhuman, but it seems scientific and simple: an inductive generalisation may be safe, but it is vague and misty and complex. The former is too clear-cut, the latter too ill-defined... two methods, neither perfect, each needing the other's aid, the one overwhelming us with experiential details, the other blinding us to them. Best is it to know the logic and the conclusions of both (Kolthammer, 1911: xi-xiii).

Long urges a balance between simplistic systems thinking and post-modernist ethnographic particularism (Long and Long, 1992: 4). Homewood (2005: 198) warns against a polarisation of environment and development debates between natural and social sciences, western and national versus local perceptions and level interests, in which assumptions and perceptions define policy rather than constitute hypotheses for research. Brooks (2011) similarly criticises the simplistic problematisation by neoclassical economists that ignores diversity. The point is that the theoretical constructs (eg 'positive' economics), research into, and policies of development usually depend on an epistemology and methodologies that replicate the positivism of natural sciences and miss other approaches to knowledge, method and policy, and thereby address only a part of reality.

Issues such as heterogeneity in context, the intersubjectivity of knowledge and alternative perceptions of reality suggest the need to understand smallholder farmers' perceptions of 'particularity' and 'locality'. The right questions need to be asked about both the external macro influences that condition the policy environment for smallholder agriculture, and the micro constraints which determine the response of smallholders to policy initiatives. Examples of the external influences are i) international policies and structural constraints - the different technologies,

value systems and organisations driving external investment in rural development that make up the 'macro' picture of agricultural development; ii) patterns of external investment in rural development - and iii) internal constraints - the household-level 'micro' picture which includes limitations in understanding the prevailing concepts of capital assets and attitudes of smallholders.

2.5 International policies and structural constraints

Structural adjustment policies: the current state of smallholder agriculture in Africa owes much to the period of structural adjustment through fiscal austerity, privatisation and trade liberalisation and the Washington Consensus phases of international development policy (Oya, 2011) which reduced the state management of price and other policies and the provision of services such as agricultural inputs and extension.

For these policies the World Bank was a principal protagonist. Like Feldman and Biggs (2012), Bayliss, Fine and Van Waeyenberge (2011) in their analysis of World Bank research and policies assert the impoverished capacity of unrealistic economics – the assumptions underlying the model of perfect competition and theory of market imperfections - to address issues of economic and social development. Oya calls these models and methods 'universally applied sets of principles derived from neo-classical economics, and particularly appealing for micro-econometric applications' (2011: 147). They both criticise the 'knowledge' role of the Bank, 'projection of its knowledge as being neutral, technical and apolitical' (Van Waeyenberge, Fine and Bayliss, 2011: 16) and the lack of coherence between research, rhetoric and policy priorities. These weaknesses and inconsistencies underlie the failure of the macro and sectoral reforms of structural adjustment of the 1980s and the 'Washington Consensus' of the 1990s to elicit the expected responses.

Weis (2007) also reflects on how the problems and prospects of smallholder farmers in the developing world have been framed by colonialism and the policies of adjustment and liberalisation. Contrasting outcomes that have accompanied the modernisation and intensification of the global agrifood system are the growth of the industrialised agricultural export economies such as the Cairns Group of trading nations and stagnation within the vast majority of the world's agricultural population: that is, smallholders in developing countries. An important phenomenon is how the growth and consolidation of agro-transnational corporations has tended to homogenise hitherto diverse agroecologies and supply systems, raising market entry barriers that for the majority of smallholders are difficult to overcome.

Global trade regimes: Weis' (2007) criticism of the World Trade Organization (WTO) is similar. Developments in the political and commercial economy of global agriculture coincided as 'structural adjustment reconfigured agricultural policies and compressed state sovereignty, an essential precursor to institutionalisation of trade liberalization in the WTO' (pp. 6-7). The international agricultural trade policy architecture remains loaded against many poorer developing countries despite nearly thirty years of negotiations. Agriculture had been largely excluded from changes to the General Agreement on Tariffs and Trade (GATT) until in 1986 members initiated the Uruguay Round of trade talks. Changes focused on reforming policies for developed country agriculture until the Doha Round, begun in 2001. For developing regions including Africa, the prize was increasing access to export markets and reduced trade-distorting domestic supports of the rich industrialised countries. Since the talks collapsed in July 2006, the global economic and commodities crises have altered the negotiating context (Poole, 2011). However, the unevenness of trade liberalisation – for example, patterns of inequality, inequity even iniquity in respective rich and poor country subsidy policies – urged by rich economies on developing countries has advanced global agribusiness to the detriment of smallholder farmers.

According to Hoda and Gulati (2007) a more robust approach is necessary to redress the inequities and iniquities of the global trade system: because developing countries have a demonstrated comparative advantage in the production of tropical products and can be competitive suppliers to

the world, they should negotiate boldly to reduce support in protection; seek steep reductions in trade-distorting domestic support of agriculture by developed countries, such as the pernicious effect on African exporters of United States support to the cotton sector ; and argue for an immediate and substantial reduction in export subsidies and financing mechanisms that destabilise international markets.

2.6 External investment in rural development

New technologies: Faith and investment in supply-side technologies have proven to be important for developing agriculture. The Green Revolution was a metanarrative in Asia, a consequence of a particular view of development that involved massive investments in and dissemination of new grain varieties and associated technologies. Few phenomena have been so well researched in agricultural development (Otsuka, 2000; International Food Policy Research Institute, 2002). Hazell (2009) summarises how plant breeding combined with expanded use of agrochemicals and irrigation and supportive public policies led to dramatic and yield increases from the late 1960s onwards in Asia. While many people were saved from hunger and poverty and important land areas were conserved from conversion to cropping, the nutritional consequences of the Green Revolution have been contested (Bezner Kerr, 2012):

In Africa hitherto the Green Revolution has largely failed. The importance of locality and particularity in respect of natural, socioeconomic and institutional conditions is now well appreciated (Herdt, 2012). The new process is a search for different sorts of knowledge and smaller narratives which are local and particular, with development recommendations developed by, with and for individual farms and farmers (Conway and Waage, 2010:71). Bezner Kerr (2012) also highlights important lessons about social inequalities, environmental concerns and adverse nutritional consequences from Asia that need to be taken into account in Africa.

Deep local knowledge is essential. An illustration is work on promoting *striga*-resistant technologies in Kenya. *Striga* infestation is one of the principal constraints to staple grain cultivation in Africa. The development of new technologies, specifically Imazapyr-resistant (IR) maize, is a potential solution, but research has been necessary to identify constraints to and reasons for the limited adoption of the demonstrably superior technology (Manyong, Nindi, Alene, Odhiambo, Omanyua, Mignouna and Bokanga, 2008). Besides better distribution and extension methods, farmers' perceptions of the technology and of the forms of services delivery were found to be significant factors. Technical, technological and idiosyncratic cultural and farm management factors all played a part.

Similarly, Nyanga, Johnsen and Aune (2011) noted that often farmers' perceptions have not been taken into account in the promotion of conservation agriculture. Their review of agricultural extension materials in Zambia indicated a strong emphasis on the transfer of technical skills without addressing the social issues likely to affect adoption of innovations, notably the attribution of climate change to supernatural causes.

New 'players' in investment, trade and development: Foreign investment in African agriculture is underpinned by alliances, values and visions of the world that are not necessarily consistent with those of the prevailing Western view. The fourth Annual BRICS summit that took place in New Delhi in March 2012 drew more attention than hitherto given to the economic and political roles and objectives of Brazil, Russia, India, China, with South Africa also joining the group (Government of India Ministry of External Affairs, 2012). Elsewhere it has been noted that the BRICS countries are becoming significant contributors to international foreign assistance (Global Health Strategies Initiatives, 2012). While the total value of assistance falls a long way short of that of traditional donors and the Gulf States, the rates of increase far surpass those of other donors and they are becoming influential parties with notably different methods compared with traditional donors, shaped by their own domestic experiences, philosophies and interests. Not all these developments are so new (Zafar, 2007: 106), but the scale of the shift in power balance is huge: lending by China's

Development Bank and Eximbank to pursue national policies in trade and foreign affairs through 'financial diplomacy' is widely reported in the mainstream press to have exceeded lending by the World Bank since 2009 (see for example, Financial Times (2011)).

It may be in vain for von Braun and Meinzen-Dick (2009) to appeal for a code of conduct for foreign land acquisition, and advocate an institutional approach rooted in a 'western' ethic of laws, concepts and organisations, a framework that is not necessarily consistent with the narrative of other international investors. The clash of investment cultures also suggests that initiatives such as the World Bank's voluntary Principles for Responsible Agricultural Investment (PRAI) are likely to be ineffective (Oakland Institute, 2011). Moreover, the 'western' public sector development research and investment agenda has evolved significantly and now is being modified by philanthropic programmes such as that of international foundations (Herdt, 2012). The *Alliance for a Green Revolution in Africa* (AGRA), initiated by the Rockefeller and the Bill and Melinda Gates Foundations is the African-led programme to stimulate thorough technological change comparable to the Green Revolution in Asia, which is needed to improve the low level of performance of African agriculture and enhance food security and rural incomes, and boost national economic growth (Toenniessen, Adesina and De Vries, 2008). The strategy of 'market-led technology adoption' is being effected through a range of adaptive interventions: development of more resilient crops; better soil productivity through innovations targeting local agroecological conditions; understanding local consumer preferences; devising 'smart' subsidies for locally-formulated fertiliser; boosting institutional development of more efficient local market systems and organisations; encouraging gradual public sector policy reforms alongside civil society support and private sector capacity building. Local African leadership and training of African scientists are key elements of the Alliance strategy.

Thus the global influence of traditional 'western' development institutions is declining in relation to that of other fast-emerging regions, and cultural and institutional differences create alternative meanings of commercialising agriculture, development and business.

New 'rules' of trade and investment: Approaches to 'investment in agriculture' can assume radically different forms because globalization multiplies the range of ethical perspectives that need to be taken into account. The economic and political restructuring of recent years has created renewed interest in the philosophical and ethical bases of the emergent and resurgent Asian nations. While the contrast of 'Eastern ethics' with 'Westernism' is an oversimplification of complex cultures and geographies (Koehn, 1999), a comparison can be constructive. According to Shun and Wong (2004), Westerners argue that Confucian thinking conflicts with Western ideals of democracy and individual autonomy; Confucianists reject Western hegemony and argue for different and equally tenable 'Asian' value systems. Western morality, they say, undermines the responsibility of individuals for others. Other value systems, including Islamic morality, are no less important (Zaman, 2002).

For development policy, the ramifications are significant. Policies of investment in large-scale commercial agricultural development and non-traditional agricultural exports have been part of the framework of agricultural development for decades. An alternative approach to agricultural development in Africa is the sovereign and corporate investment in land in foreign territories to meet agrifood demands in the home rather than the host country. The contrasting views among development policy makers and practitioners about 'land grabbing' and the likely balance of outcomes between opportunity and threat have been highlighted by academics and advocacy groups alike (White, Borras, Hall, Scoones and Wolford, 2012).

2.7 Internal constraints

Capital concepts: The sustainable livelihoods approach to poverty reduction has now assumed orthodoxy in much development thinking (Scoones, 2009). The simple dynamics focus on asset endowments (human, social, financial, physical and natural) as determinants of livelihood strategies

and which result in particular livelihood outcomes. The WDR argues that rural populations are differentiated primarily by the level of household assets, of which the three core are land, water and human capital.

The nature of livelihood capitals among rural households and differentiation in agricultural potential need to be further elucidated. An asset-based, structuralist approach to rural heterogeneity may capture the principal determinants of the potential supply response to development policy stimuli (Donovan and Poole, 2013) – but there is more. The World Bank’s concept of ‘core assets’ is too narrowly defined: other influences are significant factors affecting the propensity of rural people to engage in commercial agriculture. While Oya (2004) analyses the command of land, labour and capital as the basis of class differences and relations resulting in inequality, stratification and differentiation, yet this oversimplifies the development of commercial agriculture; he also points to attitudinal characteristics that need to be tested empirically.

Attitudinal characteristics: An important weakness within the livelihoods framework is the lack of attitudinal characteristics, therefore, a dimension of ‘hearts and minds’. Often the range of livelihood strategies is complex, diverse and competing. Choice then becomes a function not only of assets and access, but people’s attitudes, aptitudes and aspirations, more complex than mere risk management. Therefore, research must address the individual’s and household’s perceptions and willingness to respond to market incentives and intervention initiatives. This depends, *inter alia*, on concepts of human and social capital more complex and nuanced than data on an individual’s level of education and networking. Intrinsic human characteristics such as individual likes and dislikes affect decisions about subsistence production or engagement in markets: thus attitudes, attributes and aptitudes condition individual entrepreneurship (Poole, 2000: 214). Moreover, individual and household decisions are made within a framework of incentives and constraints that are shaped by collective and ‘community’ values and local culture. These, in turn are not fixed, but are influenced by policies and services provided by external players such as private firms, third sector organisations and state initiatives and support.

Therefore, research into development strategies must not only take into account heterogeneity in conventional capital asset endowments, but also other elements of the ‘local narrative’, how worldviews may differ across cultures, populations, genders and within communities, and how different individuals’ and collective attitudes and aptitudes will create diverse – local and particular – responses to opportunities and policies. All this, in a context where young people are often ill-prepared and unwilling to become farmers (Poole, Alvarez, Vazquez and Penagos, 2013 forthcoming). In short, research needs to understand local determinism: maybe not every smallholder will want to be a commercial farmer.

3 THE CONTEXT: CASSAVA IN ZAMBIA

In order to assess the relevance of the metanarrative approach to smallholder agricultural development and provide evidence for the importance of understanding the ‘local’ and the ‘particular’ for analysis and policy formulation, we report empirical research in Zambia. The context is a commercial agricultural development strategy adopted by the European Union ‘All ACP (African, Caribbean and Pacific) Agricultural Commodities Programme’ (EU AAACP).

That smallholders will produce for the market is plausible given: i) conditions of competitive market behaviour and prices; ii) reasonable institutional safeguards; iii) adequate provision, adoption and adaptation of new technologies; iv) minimum efficient scale of production; and v) efficient marketing linkages, distribution and infrastructure. Actually, these are big ‘ifs’. The research reported here picks one crop, cassava, which happens to be covered by the ‘Sleeping Giant’ report on Zambia. In addition to factors external to households and the immediate smallholder environment, it attempts

to look within households to identify what local and particular factors might influence the smallholder farmers' agricultural strategies. The fundamental question concerns the response to development incentives: what is the propensity of smallholders to engage in commercial agriculture?

3.1 *The potential of cassava*

The potential of commercial agriculture in Zambia has been recognised because of the significant and largely underexploited land area classified as having medium-to-high potential for agriculture, with a very low population density (World Bank, 2009: 51-2). While many commercial agricultural development programmes benefit primarily the asset-rich smallholders and niche markets, this EU programme has identified a staple food crop. Cassava is within the relatively neglected roots and tubers sector, is low in marketable value but important in domestic trade, and highly-valued for food security (Barratt, Chitundu, Dover, Elsinga, Eriksson, Guma, Haggblade, Haggblade, Henn, Locke, O'Donnell, Smith and Stevens, 2006), and is a major component of the economy of many poor rural households (Poole, Chitundu, Msoni and Tembo, 2010; Poole and de Frece, 2010). Beyond the pro-poor bias and agronomic potential, the socioeconomic suitability of cassava for poor households is clear: 'Cassava proves financially profitable for smallholders in a wide variety of settings. It requires no purchased inputs. Its flexible planting and harvesting calendar enables households to fit in labor requirements around other obligations, making cassava one of the easiest crops for labor constrained HIV/AIDS households to grow' (Nweke, Haggblade and Zulu, 2004).

Cassava has been growing in importance in Zambia since the era of market liberalisation in the 1990s when support for maize was reduced, as part of a trend towards agricultural diversification (Dorosh, Dradri and Haggblade, 2009; Govereh, Chapoto and Jayne, 2010). Cassava production steadily increased from 190,000 MT in 1970 to 640,000 MT in 1990 and about 1.1 million MT in 2007 (Food and Agriculture Organization, 2010). Production is almost entirely by smallholder farmers whose average cultivated area is less than 1 hectare. As a staple food crop it is second only in importance to maize, accounting for roughly 15 percent of national calorie consumption (Simwambana, 2005; Barratt *et al.*, 2006; Dorosh *et al.*, 2009). An estimated thirty percent of Zambians - about 4 million people - consume cassava as part of their diet. The majority of these consumers live in the Northern, Luapula, Copperbelt, Northwestern and Western Provinces, which are also the main growing areas. Latterly, demand for cassava for both human and industrial consumption has grown in the urban and industrial centres of Lusaka and Copperbelt provinces. Nevertheless, there are constraints to demand: as an input for glue for the wood and paper industries, total volume demanded is low. The addition of cassava flour to maize is problematic for consumers, and inclusion in animal feed is economically unfavourable because of the subsidies for maize. Without significant demand stimuli, perhaps the biggest potential market is for the fresh product and for dried cassava and value added products among the growing urban population in Lusaka. However, demand for human consumption of fresh cassava in urban populations outside the Copperbelt, ie around Lusaka, is as yet unresearched.

The Government of Zambia (GoZ) have been involved in research on varietal improvement of cassava which has resulted in the release of two waves of improved varieties (IVs), 3 in 1993 and 4 in 2000 (Simwambana, 2005). The public sector and diverse NGOs have been instrumental in cassava 'seed' multiplication and distribution: PAM, World Vision, Care, Plan International, FAO, WFP, and DFID (Poole *et al.*, 2010). Dissemination of IVs has been undertaken in traditional areas where there has been adoption, and often partial substitution of traditional varieties (TVs), and in the non-cassava southern and eastern areas. Seed multiplication and distribution has not effectively covered the whole of Zambia (Simwambana, 2005). Nevertheless, increasing production and consumption of cassava is evident in the southern half of the country in response to recurrent cycles of drought which have led to failure of maize (Cadoni, 2010). Other interventions to promote cassava production have addressed capacity building in small-scale processing of cassava into flour and chips

and for sales to the milling industry and to some food and livestock feed firms (Chitundu, Droppelmann and Haggblade, 2009; Poole, Chitundu, Msoni and Tembo, 2010).

In non-traditional cassava-growing areas, some farmers have adopted IVs and some have not, whilst still others have reverted from IVs to TVs. IVs are better adapted to value chain opportunities as they are early maturing, high yielding and more marketable. TVs on the other hand are low yielding and late maturing but offer the advantage of longer underground storability and food security benefits for growers. Organisational and institutional constraints that limit the potential of cassava include fragmented production, irregular supply, inconsistent quality, high cyanide levels, discoloration, poor transport and market infrastructure, high transaction costs and uncompetitive pricing.

3.2 Cassava sector strategy

The 'All ACP Agricultural Commodities Programme' (AAACP) was launched in September 2007 as an initiative of the European Commission and the Secretariat of the African, Caribbean and Pacific Group of States (ACP). With the implementation led by five international organisations (World Bank, United Nations Conference on Trade and Development, International Trade Centre, UN Food and Agriculture Organization and Common Fund for Commodities) the aim of the programme is to reduce poverty among rural producers in ACP countries through enhancing links between production, value addition and trade in agricultural commodities. Among other activities, the programme has researched and formulated value chain development strategies and implementation plans (All ACP Agricultural Commodities Programme, 2010). By adopting a participative and coordinated multistakeholder approach the programme has attempted to address at least some of the coordination constraints to the expansion of commercial agriculture identified in the 'Sleeping Giant' report (Chitundu *et al.*, 2009).

The ambitious sector strategy developed within the framework of the AAACP programme envisages a massive supply response, originally conceived as a quintupling of production in five years, expectations of which have now been scaled back. Substantial institutional innovations are envisaged in terms of producer training and organisation. In respect of technological innovation, the strategy envisages expansion of improved varieties (IVs). Potential suppliers are a host of small-scale producers who currently grow small quantities of cassava primarily for on-farm consumption. Demand signals and product marketing depend on a traditional and not particularly organised market system (All ACP Agricultural Commodities Programme, 2010; Poole, 2010).

One major problem underlying the sector development strategy is the assumption about potential demand. The four main distribution channels are industrial processing for human consumption, animal feedstuffs, industrial non-food uses (eg glue), and artisanal food products. The estimated potential supply gap for 2009 was 114,000 Mt of fresh cassava, which at average yields amounted to an increase in area of production of about 13000 ha. The potential demand is inadequately documented, and the research reported here does not test this assumption. This paper focuses on potential supply. It also gathered evidence on the environment external to smallholder production - the capacity of the support services, marketing and distribution systems - needed to provide the means whereby increased product supply can be brought into contact with potential demand. The study was small and highly contextualised, but findings cast doubt on the metanarrative of commercial agricultural development for smallholder households.

4 EMPIRICAL RESEARCH

4.1 Data collection and analysis

In January-April 2010 a field study of Zambian smallholder farmers' involvement in cassava production was undertaken. Chongwe District, located 50-60 km east of Lusaka, the capital and main

commercial city of Zambia, was selected as the main area for the study. Although it lies outside the traditional cassava-growing belt (less than 10 percent of farmers growing cassava) it has experienced an upsurge in the growing, processing and marketing of cassava. Within easy reach of a population of nearly 2 million, it has been targeted with value chain interventions by Government, NGOs and other donors who have included distribution of planting materials for improved cassava varieties, installation of processing plants, training of growers and processors and establishment of market linkages for both producers and processors.

Fieldwork was managed by the NGO Programme Against Malnutrition (PAM). Data collection involved the administration of questionnaires to farmers, conducting focus groups among producers and processors, and key informant interviews. Four Agricultural Areas within Chongwe were purposively selected to capture data from diverse types of smallholder. Questionnaires were administered to respondents identified randomly from recorded farmers in the four Areas. The sample was structured by type of respondent, resulting in a total of 116 valid smallholder farmer responses, as shown Table 1. SPSS software was used to explore the data and chi-square tests were conducted to test the significance of specific variables.

Table 1 Smallholder sample

Type of respondent	N
Growing and commercialising improved cassava varieties	40
Growing but not commercialising improved cassava varieties	26
Growing only traditional cassava varieties	22
Non-growers (including ex-growers) of cassava	28

Qualitative data were collected through focus group discussions conducted by PAM staff. Three focus group discussions were held for groups of women only (20 members of the Kanakantapa Area Women's Association, Chongwe), men only (11 participants from Chainta, Chongwe) and a mixed group (11 female and 10 male participants from Rufunsa, Chongwe). Interview notes were taken during the focus groups, which lasted 1-2 hours, and subsequently transcribed.

Key informants were selected for their sectoral knowledge: the owner of a food processing firm (Authentic Foods), six national and international public sector officials, and diverse local officials and growers: one community development assistant (Rufunsa, Chongwe), one camp extension officer (Chimusanya, Chongwe), one Block extension officer (Kanakantapa, Chongwe), one District Agricultural Officer and one Senior Agricultural Officer (both Chongwe), and two larger-scale commercial growers (both from Kanakantapa). Key informant interviews were recorded through written accounts. Data from focus groups and interviews were analysed using content analysis, essentially identification, analysis and comparison of key themes from the diverse sources. Findings were discussed at workshops during 2010 and tested informally and triangulated with key informants during subsequent fieldwork in November 2010.

4.2 Data collection tools

The questionnaires to each respondent type covered six themes including household socioeconomic data; cassava production; cassava utilisation; form of interventions received; livelihood benefits in terms of assets; and attribution of livelihood changes. Focus group discussions and key informant interviews covered household data; benefits, constraints and risks of growing cassava; forms of intervention and support; attribution of livelihood changes; and market orientation and market access. These headings frame the findings, which are followed by a summary and consideration of limitations.

5 FINDINGS

5.1 What kinds of households in the region grow cassava?

Respondents: Table 2 summarises key household information. Of the respondents, 27 were women (23%), 89 were men (77%).

Table 2 Key household characteristics

	N	Min	Mean	Max	SD
Children < 15 yr	111	0	3.4	8	1.8
Total dependants	115	0	5.7	15	2.9
Farm size (ha)	113	0.1	1.8	6.3	1.2
Maize area (ha)	116	0	1.1	4.0	0.8
Cassava area (ha)	116	0	0.4	5.5	0.7

No significant relationships were found between growers/non-growers of cassava concerning fundamental social structures and external services (household structure and the number of dependants, gender, electricity, running potable water, irrigation, access to credit). In fact, in Chongwe District, despite the proximity to the capital Lusaka, there is little provision of physical and financial services to any smallholder households. Farm size was inversely related to proximity to the road.

Agricultural systems: Regarding agricultural production, *manyokola* was the dominant cassava variety in terms of frequency of planting, cultivated by 64 percent of growers and first choice of 53 percent of growers. An improved variety from Malawi, *manyokola* is not one of the IVs recently released by Zambian researchers but was introduced in the 1990s by two farmers from Chongwe District (Haggblade and Nyembe, 2008; Chitundu *et al.*, 2009; Cadoni, 2010). It is highly appreciated for its broad adaptation, high yield, 'sweetness', lack of toxicity and suitability for fresh consumption – and sale. The next most popular varieties among growers were *mweru* and *nalumino*, both cited by 14 percent of growers. Among growers generally, the attributes of IVs were more highly appreciated than those of the TVs.

According to key informants, 'households grow cassava and sweet potatoes as an integral part of their production systems'²; 'people have adopted cassava as an integral part of their production and food systems'³; 'integration is encouraging, many people are now becoming aware of the value of cassava'⁴. Other respondents commented that cassava had not been widely integrated into the farming system or livelihoods⁵. The differences are themselves significant, demonstrated heterogeneity in perceptions but could not be resolved by the qualitative methods and sampling which were not designed to survey and assess adoption of cassava generally, but the smallholders' production rationales.

In addition to maize and cassava, most growers cultivated groundnuts (78 percent) and sweet potato (57 percent), with soya, sorghum, sunflower, vegetables and beans as other crops in a mixed system. 69 percent of respondents claimed to have income sources in addition to that derived from livestock sales and labouring. Most commonly, this was the sale of agricultural produce (24 percent), and the rest was a variety of salaried and occasional/casual employments, local self-employment, and remittances (4 percent only).

² Camp Extension Officer, date: 07/04/2010, location: Chimusanya

³ Extension Officer – Palabana Block, date: 29/04/2010, location: Kanakantapa

⁴ Key Informant Interview held with cassava grower (started growing cassava in 2003), date: 29/04/2010, location: Kanakantapa

⁵ Focus Group Discussion held with farmers, date: 01/04/2010, location: Chainda

Cassava production: Production was reported to be low through most of the 1990s and then received a boost in 1997. Cultivation of cassava received another large boost in 2007 and 2008, although individual scale remains small. Of the 88 cassava growers in the sample, 65 percent said that over a period of the last three years they had increased the area of cassava grown: from an increase of 0.1 hectares (ha) to a maximum increase of 3.5 ha; and 21 percent said that they had decreased the area grown, by a range of less than 0.1 to 0.7 ha. For 18 percent of growers there was no change in area. One respondent, whose farm size was 6.3 ha, had expanded the cassava area by 3.5 ha. Most socioeconomic data for this grower were unremarkable except that he owned a hammer mill and was in this respect, and in scale of production, an outlier.

Household heterogeneity: Differences between household groups were identified by cross-tabulation and χ^2 tests in respect of farm scale, commercial orientation and level of organisation: compared with other growers, the livelihoods of grower/sellers of IVs were oriented more towards agriculture. They cultivated larger areas of cassava ($p<0.01$), lived further from the road (but NS) and received less income from labour and off-farm activities ($p<0.05$).

Growers and grower/sellers of IVs also exhibited stronger tendencies towards social and agricultural collectivism. They were more likely than growers of TVs to be members of community organisations ($p<0.01$) and marketing organisations ($p<0.001$).

There was evidence that the 28 non-growers (including ex-growers) of cassava differed from the 88 growers in respect of assets and livelihood strategies. Compared to cassava growers in general, the members of the non-grower cluster were characterised by:

- smaller houses ($p<0.01$) and poorer roofing ($p<0.05$)
- smaller farms ($p<0.001$) and smaller area of maize ($p<0.05$)
- lower maize self-sufficiency ($p<0.05$)
- more income from labour ($p<0.01$)
- lower likelihood of belonging to community ($p<0.05$) and marketing organisations ($p<0.01$)
- higher levels of indebtedness ($p<0.05$)
- living closer to road (but NS)

5.2 Benefits, constraints and risks of cassava production and marketing

Among all growers, there was consensus regarding the benefits and constraints of adopting IVs. The benefits of IVs were highly rated compared to TVs: they are fast growing, flavoursome, enjoy higher market demand fetching good prices, and provide food security as well as an occasional income supplement. In contrast to these immediate benefits, cultivating IVs made only a very limited contribution to longer term asset building: for example, while one key informant commented that cassava production had potential to 'improve income and lifestyle, provide new clothes for children and parents, and increase capital assets in terms of housing and livestock'⁶, questionnaire data revealed only small-scale investment in livestock (goats).

Respondents made light of the constraints related to IV cultivation (on a scale of 0-3 where 0=no problem to 3=severe problem):

- availability of planting materials was only a slight to moderate problem (1.74)
- access to processing, marketing, infrastructure and information were only a slight problem (0.99-1.52)

Through the questionnaire and focus groups alike, access to new land was not considered to be a problem in Chongwe (although potential to increase farm size elsewhere in Zambia, such as the

⁶ Community Development Assistant, date: 07/04/2010, location: Rufunsa

Copperbelt, is more limited). Risks, such as those due to exposure to weather and crop damage, and market risks faced by growers were considered to be small, and not a constraint to cassava production.

There were, however, conflicting perceptions whether labour availability was a constraint to production: male respondents indicated that labour was not a constraint, whereas some female respondents argued the contrary. A community development worker responsible for promoting cassava acknowledged that the labour requirement for expanding agriculture conflicted with gendered household responsibilities⁷. Nevertheless, cassava was also regarded as being less labour-intensive than maize: 'decisions are made and planning is important to avoid labour conflicts'⁸.

There was evidence from focus groups of competition between cassava production and keeping of livestock. Indeed, losses of crops to grazing livestock were one reason cited by ex-growers for withdrawing from production. Another disincentive was the incidence of cassava mosaic virus, to which the prevailing variety, *manyokola*, is not tolerant.

Overall, the principal benefits from growing cassava were said to be enhanced food security and consumption rather than income generation and investment:

In 1962, a Mr. Joseph Mkandawire brought cassava from Malawi, the popular *manyokola* grown in Rufunsa and Eastern province. In 1966, there was hunger in the area. Other farmers realized that those with cassava did not go hungry. It was at this point that many other farmers requested cuttings and starting growing cassava. Mr. Mkandawire is still alive and the grandchildren have continued growing the same variety⁹.

According to one focus group discussion, '... benefits will be sustained as cassava is multipurpose, drought tolerant and has low input requirements'¹⁰. Despite marketing interventions, there was little evidence either from growers or non-growers that increased commercialisation of cassava was an important objective. An exception was one grower who reported growing cassava roots for consumption and cash, who also commercialised leaves and stem cuttings for planting¹¹.

5.3 Interventions and support

The level of outside support in Chongwe District reported by all growers was limited. The Ministry of Agriculture and Cooperatives (MACO) was considered to be the principal player, followed by NGOs PAM and FoDiS (JICA), and a handful of other NGOs. Means of support recorded by respondents were farm visits, group training, nucleus farmers, mass media, technical demonstrations and visits, distribution of planting materials (responses ranging from 20-38 percent). Out of all respondents, approximately one-third only had received training in cassava production, marketing and group organisation. Fewer still had received training in respect of processing and quality control.

Only 10 percent had contact with outgrower schemes, and visits by private sector agents were almost negligible, with only one mention of the processor *Authentic Foods*. A total of 26 percent of growers said that they were aware of cassava initiatives in which they had not participated. Where interventions were targeted at women, some men commented that they had been excluded.

⁷ Community Development Assistant, date: 07/04/2010, location: Rufunsa

⁸ Camp Extension Officer, date: 07/04/2010, location: Chimusanya

⁹ Camp Extension Officer, date: 07/04/2010, location: Chimusanya

¹⁰ Kanakantapa Women's Cassava Association, date: 01/04/2010, location: Kanakantapa

¹¹ Key Informant Interview held with cassava grower (started growing cassava in 1998), date: 07/04/2010, location: Kanakantapa

5.4 Attribution of livelihood impacts to cassava

A form of ‘weak’ attribution was tested by asking respondents the extent to which they considered that livelihood changes were attributable to engagement in the cassava sector. Over the sample as a whole, livelihood changes resulting from cassava production and from other effects were acknowledged to be small. Positive impacts resulted from exploitation of new income sources and from higher product prices from IVs. Other sources of positive changes in livelihoods were considered to be unimportant overall, although there was variation among respondents about the part played by new income sources and market conditions for inputs and products. In addition to those causes listed below, good health and food security were cited by 7 respondents (6 percent) as the only other change factor affecting livelihoods.

The impacts of negative changes in livelihoods were considered to be unimportant overall and were attributed to exposure to weather extremes, higher costs, and to other shocks such as livestock damage. There was considerable variation among respondents about the scale of the negative impact of weather effects and market conditions.

5.5 Market orientation

The growers of IVs were like classical ‘early adopters’: more innovative and more dedicated to farming as an occupation. Non-growers, however, were not necessarily ‘laggards’ but demonstrated characteristics of rural people who were not necessarily committed to commercial agriculture, or indeed any agriculture. For whatever reasons – lack of labour seemed to be a contributory factor – they were more integrated into an urban type of economy of paid employment, had more credit and loans, exhibited lower food (maize) self-sufficiency, and participated less in community and marketing organisations. Thus structural characteristics and barriers to entry into commercial agriculture were relatively unimportant. Assets and thresholds played a minor role compared to questions of individual strategic orientation.

5.6 Market access

Data supported the contention that one of the most significant weaknesses in the Zambian cassava sector is the lack of linkages between farmers and markets necessary for value chain development. Focus groups of farmers and key informants repeatedly commented on the lack of institutions and entrepreneurship between supply and demand. The study found no pattern of commercial relationships between cassava growers and the private processing industry. Varietal choice and on-farm processing by smallholders were not based on buyers’ requirements. Firms were not only unwilling to invest in processing capacity for food and non-food products such as glue, but also unwilling to invest in supply chain management practices that involved any direct engagement with producers such as provision of planting materials and organising and training of producers. One firm was the exception, Authentic Foods, which had business arrangements with a new producer-processing group, the Kanakantapa Women Cassava Processors.

This is consistent with Cadoni’s interviews among industry players in the north which showed ‘a complete absence of contractual agreement between suppliers and buyers’ (2010: 17). Key informants who reflected widely-held views commented: ‘the private sector has a big role to play...’ but ‘it is risky [for the processing industry] to engage with farmers...’¹²; there are ‘no institutional linkages between cassava promoting organisations and the processing industry’¹³.

5.7 Summary comments

The principal finding from Chongwe reiterates that cassava production is mostly small-scale and orientated towards home food consumption. That is, in response to the initial research question, the

¹² Key informant interview, international organisation staff member, date: 12/05/10, location: Lusaka

¹³ Community Development Assistant, date: 07/04/2010, location: Rufunsa

smallholder farmer respondents demonstrated very little propensity to engage in the cassava market, from which they derived only small financial benefits. The producers' main objective was improved food security. The interventions to date and proximity to commercial outlets in Lusaka have not yet created a significant scale of commercial enterprise.

Secondly, while it is true that 'household assets are major determinants of the ability to participate in agricultural markets, secure livelihoods in subsistence farming, compete as entrepreneurs in the rural non-farm economy and find employment...' (World Bank, 2007: 8-9), in Chongwe – as in much of Zambia – the findings confirm that the 'core assets' of land and water are not limiting for cassava production (World Bank, 2009).

Thirdly, identifying assets with land, water and human capital is too restrictive. Heterogeneity was not primarily associated with the level and thresholds of livelihood assets such as physical, natural, social, human and financial capitals: variations in these asset endowments were unimportant among the smallholders sampled. The differences observed between growers of cassava and non-growers focused attention on questions of individual motivation and orientation. Thus, predicting grower behaviour, and specifically assuming a market orientation, requires caution, precisely because there is heterogeneity among farmers.

The cassava sector development strategy is set to invest heavily in infrastructure, human capacity building and delivery of new production technologies. These are necessary but not sufficient: besides livelihoods assets, provision of support services and market access, it is individual and collective attitudes that condition the livelihood strategies of smallholder farmers.

5.8 Limitations

This case has limitations common to many such studies: purposive sampling, a small data set, significant contextuality, unresolved differences in data such as perceptions between men and women, and between farmers and key informants, and between qualitative and questionnaire data. There is only so much that can be deduced from a one sector study – albeit one of the World Bank's 'best bets', to address the broader questions posed about a commercialisation metanarrative. These do not detract from the real evidence gained about heterogeneity and the limited propensity of farmers to engage in commercial markets. They highlight the importance of plural approaches and methods for understanding complex development phenomena such as commercialising agriculture among smallholder farmers.

6 CONCLUSIONS AND IMPLICATIONS

6.1 A local narrative

The paper has drawn on a wide literature to question the validity and methods of a commercialisation 'metanarrative' for agricultural development in Africa. Secondly, the evidence from the study of the cassava sector in the 'maize' belt in Zambia – one of the 'best bets' of the Sleeping Giant report and the objective of the AAACP sector strategy – provides no reassurance that smallholders will respond automatically to initiatives to promote commercialisation and growth of the sector. The local context and farmer characteristics and attitudes need to be much better understood in order address the strengths and weaknesses of the sector participants and the opportunities and threats of the external environment.

Moreover, the conception and analysis of rural livelihood assets must be more comprehensive. Land and water assets are indeed both *sine qua non* – and in Zambia, generally they are not constraints. However, property rights to such natural assets should be examined within a dynamic framework (Merten and Haller, 2008): understanding the 'local' becomes vitally important where customary and insecure property rights are threatened by intensification of usage, and where the wide range of

external factors such as migration, climate change and ecosystem sustainability, and political, economic and social power relations, and where weak institutions and enforcement impact on individuals and households in particular ways.

Human capital is more complicated still. Conceptual space must be made to include individual and collective attitudes and aptitudes on which household strategies are founded. Understanding attitudes and value systems cannot be achieved without qualitative methods and heterodox conceptual frameworks: other disciplines including sociology, anthropology and psychology, and 'hetero-methodological' approaches are needed to supplement – or supplant - mainstream development economics, in order to get inside the 'hearts and minds' of smallholder farmers. Included in the issues for further research and integration into policy making are analyses within these disciplines of culture, risk and path dependency in smallholder strategy and decision making.

Expanding commercial agriculture requires a decided mindset: a commitment to farming and new technologies, a low threshold of risk aversion, willingness to invest in land and soils, access to finance, skills in managing business relations, price negotiation, time spent in markets, product and process quality control and assurance, continuous improvement and efficiency enhancement. Also, collective activity with the inherent operational and management challenges is necessary for minimising transaction and transformation costs, and involves significant individual and organisational learning. This commercialising metanarrative is much riskier than subsistence farming, rural wage labour and/or migration, and may not be an attractive profession.

6.2 Development design

This conclusion is not a rejection of rural restructuring, or of policies to promote commercial smallholder agriculture, or of policies to ease out of agriculture rural people who want another profession. Structural change is inevitable and necessary, and meta-analyses are important tools for scenario planning and development design. But as value systems and policies of major international development players vary, so too do they differ from the value systems particular to local cultures, communities and individuals. What is dangerous is the over-reliance on mono-disciplinary meta-approaches driving the demand for project and programme replicability, simplistic assumptions concerning responses to price incentives, and inadequate consideration of local and particular contexts of a heterogeneous rural population.

Not only should the narrative of Western donors and development agencies engage with the local and particular reality of peoples in developing countries, but also engage with competing narratives and values of influential newer donors from Asia and elsewhere. Research and policy formulation which do not take into account the cultural distances which underlie different value systems, perceptions of reality and a process of knowledge contestation are unlikely to reach desired goals.

Finally, agricultural development policies and development organisations must consider market access, but also its corollary, exclusion. Smallholder commercialisation may lead to agricultural development and improved productivity that is so important for Africa but it will not guarantee poverty reduction. In regard to strategic orientation, therefore, further research is necessary to understand rural heterogeneity and, in the bigger development picture, the phenomenon of rural 'livelihood migration' out of farming, before appropriate intervention targeting is possible: which individuals and households are pushed out farming, or how much they are positively pulled out of farming and into another, such as wage labour? What of the gender and age issues in household food production, and agricultural commercialisation?

Intervening organisations have a moral responsibility for the target population and also for those who are excluded. It is not enough to hope that local labour markets and urban development can absorb the 'rural resources' which are 'surplus' to an agricultural commercialisation metanarrative – these are real people with traditions and culture and support networks which need to be taken into

account. This ethical dimension, absent hitherto in many policy debates and intervention targeting, raises important issues of equity that are now coming to the forefront of thinking about growth policies post 2015.

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REFERENCES

- Akram-Lodhi, A.H. (2008). (Re)imagining agrarian relations? The World Development Report 2008: Agriculture for Development. *Development and Change* **39**(6): 1145-1161.
- All ACP Agricultural Commodities Programme. (2010). *Cassava: a Strategy for Zambia*. Lusaka, Zambia.
- Amanor, K.O. (2009). Global food chains, African smallholders and World Bank governance. *Journal of Agrarian Change* **9**(2): 247-262.
- Barratt, N., Chitundu, D., Dover, O., Elsinga, J., Eriksson, S., Guma, L., Haggblade, M., Haggblade, S., Henn, T.O., Locke, F.R., O'Donnell, C., Smith, C. and Stevens, T. (2006). Cassava as drought insurance: food security implications of cassava trials in Central Zambia. *Agrekon* **45**(1): 106-123.
- Bayliss, K., Fine, B. and Van Waeyenberge, E. (2011). *The Political Economy of Development: the World Bank, Neoliberalism and Development Research*. London, Pluto Press.
- Bezner Kerr, R. (2012). Lessons from the old Green Revolution for the new: social, environmental and nutritional issues for agricultural change in Africa. *Progress in Development Studies* **12**(2&3): 213-229.
- Broad, R. (2006). Research, Knowledge, and the Art of 'Paradigm Maintenance': The World Bank's Development Economics Vice-Presidency (DEC). *Review of International Political Economy* **13**(3): 387-419.
- Brooks, S. (2011). Is international agricultural research a global public good? The case of rice biofortification. *Journal of Peasant Studies* **38**(1): 67-80.
- Cadoni, P. (2010). *Value Chain Mapping and Cost Structure Analysis for Cassava in Zambia*. EU-AAACP Paper Series. No. 14. Rome, Food and Agriculture Organization of the United Nations.
- Chitundu, M., Droppelmann, K. and Haggblade, S. (2009). Intervening in Value Chains: Lessons from Zambia's Task Force on Acceleration of Cassava Utilisation. *Journal of Development Studies* **45**(4): 593-620.
- Conway, G. and Waage, J. (2010). *Science and Innovation for Development*. London, UK Collaborative on Development Sciences.
- Donovan, J. and Poole, N.D. (2013). Asset building in response to value chain development: lessons from taro producers in Nicaragua. *International Journal of Agricultural Sustainability* **11**(1): 23-37.

Dorosh, P., Dradri, S. and Haggblade, S. (2009). Regional trade, government policy and food security: recent evidence from Zambia. *Food Policy* **34**(4): 350-366.

Feldman, S. and Biggs, S. (2012). The politics of international assessments: the IAASTD process, reception, and significance. *Journal of Agrarian Change* **12**(1): 144-169.

Financial Times. (2011). *China's lending hits new heights*. London. Retrieved 16 November 2011 from <http://www.ft.com/cms/s/0/488c60f4-2281-11e0-b6a2-00144feab49a.html#axzz1BNU6VOXI>.

Food and Agriculture Organization. (2010). FAOSTAT. Retrieved 19 March 2013 from <http://faostat.fao.org/site/339/default.aspx>.

Foucault, M. (1980). *Power/Knowledge: Selected Interviews and Other Writings 1972-1977*. Translated and edited by Colin Gordon. Brighton, UK, Harvester Press.

Global Health Strategies Initiatives. (2012). *Shifting Paradigm: How the BRICS are Reshaping Global Health and Development*. New York, Global Health Strategies. Retrieved 19 March 2013 from http://ghsinitiatives.org/downloads/ghsi_brics_report.pdf.

Gore, C. (2000). The Rise and Fall of the Washington Consensus as a Paradigm for Developing Countries. *World Development* **28**(5): 789-804.

Govere, J., Chapoto, A. and Jayne, T.S. (2010). Assessment of maize trade and market policy interventions in Zambia. Ch 13, pp. 354-389. In Sarris, A. and Morrison, J., Eds. *Food Security in Africa: Market and Trade Policy for Staple Foods in Eastern and Southern Africa*. Rome, Food and Agriculture Organization of the United Nations and Edward Elgar, Cheltenham, UK.

Government of India Ministry of External Affairs. (2012). *Fourth BRICS Summit - Delhi Declaration*. New Delhi, India. Retrieved 3 April 2012 from <http://mea.gov.in/mystart.php?id=190019162>.

Haggblade, S. and Nyembe, M. (2008). *Commercial Dynamics in Zambia's Cassava Value Chain*. Food Security Research Project Working Paper. **32**. Lusaka, Zambia. Retrieved 19 March 2013 from http://fsg.afre.msu.edu/zambia/wp_32.pdf.

Havnevik, K., Bryceson, D., Birgegård, L.-E., Matondi, P. and Beyene, A. (2007). *African Agriculture and the World Bank: Development or Impoverishment?* Policy Dialogue **1**. Uppsala, Sweden, The Nordic Africa Institute. Retrieved 13 March 2013 from <http://nai.diva-portal.org/smash/record.jsf?pid=diva2:275867>.

Hazell, P.B.R. (2009). Transforming Agriculture: the Green Revolution in Asia. Ch. 3, pp. 25-32. In Spielman, D.J. and Pandya-Lorch, R., Eds. *Millions Fed: Proven Successes in Agricultural Development*. Washington DC, International Food Policy Research Institute.

Herdt, R.W. (2012). People, institutions and technology: a personal view of the role of foundations in international agricultural research and development 1960-2010. *Food Policy* **37**(2): 179-190.

Hoda, A. and Gulati, A. (2007). *WTO Negotiations on Agriculture and Developing Countries*. Baltimore, Johns Hopkins University Press.

Homewood, K. (2005). Conclusion: Rural Resources, Local Livelihoods and Poverty Concepts. Ch 10, pp. 198-205. In Homewood, K., Ed. *Rural Resources and Local Livelihoods in Africa*. London, Palgrave Macmillan.

International Food Policy Research Institute. (2002). *Green Revolution: Curse or Blessing?* Washington DC, International Food Policy Research Institute. Retrieved 19 March 2013 from <http://www.ifpri.org/pubs/ib/ib11.pdf>.

International Fund for Agricultural Development. (2011). *Feeding future generations: Young rural people today - prosperous, productive farmers tomorrow. Proceedings of the Governing Council High-Level Panel and Side Events, in conjunction with the Thirty-fourth Session of IFAD's Governing Council*. Retrieved 19 March 2013 from <http://www.ifad.org/events/gc/34/panels/proceedings.pdf>.

Kay, C. (2009). Development strategies and rural development: exploring synergies, eradicating poverty *Journal of Peasant Studies* **36**(1): 103-137.

Koehn, D. (1999). What can Eastern philosophy teach us about business ethics? *Journal of Business Ethics* **19**: 71-9.

Kolthammer, F.W. (1911). *Introduction to The Principles of Political Economy and Taxation, David Ricardo (first published 1817)*. London, J.M. Dent.

Long, N. and Long, A. (1992). *Battlefields of Knowledge: The Interlocking of Theory and Practice in Social Research and Development*. London, Routledge.

Lyotard, J.-F. (1984). *The Postmodern Condition: A Report on Knowledge. (Translation from the French La Condition Postmoderne: rapport sur le savoir, 1979, Les Editions de Minuit, by Geoff Bennington and Brian Massumi)*. Manchester, Manchester University Press.

Manyong, V.M., Nindi, S.J., Alene, A.D., Odhiambo, G.D., Omany, G., Mignouna, H.D. and Bokanga, M. (2008). *Farmer Perceptions of Imazapyr-Resistant (IR) Maize Technology on the Control of Striga in Western Kenya: An agricultural collaborative study on Striga control by the African Agricultural Technology Foundation and the International Institute of Tropical Agriculture*. Nairobi, Kenya, African Agricultural Technology Foundation. Retrieved 19 March 2013 from <http://aatf-africa.org/userfiles/StrigaPerceptionStudy.pdf>.

McMichael, P. (2009). Banking on agriculture: a review of the *World Development Report 2008*. *Journal of Agrarian Change* **9**(2): 235-246.

Merten, S. and Haller, T. (2008). Property rights, food security and child growth: dynamics of insecurity in the Kafue Flats of Zambia. *Food Policy* **33**(5): 434-443.

Naranjo, S. (2010). Food sovereignty's potential to address poverty and hunger by creating sustainable peasant-led agri-food systems: A case study from the Brazilian Food Acquisition Programme in Mirandiba, Pernambuco. School of Civil Engineering and the Environment, University of Southampton.

Nweke, F., Haggblade, S. and Zulu, B. (2004). *Building on Successes in African Agriculture: Recent Growth in African Cassava. Focus 12: Brief 3*. Washington, DC, IFPRI. Retrieved 19 March 2013 from <http://www.ifpri.org/sites/default/files/publications/focus12.pdf>.

Nyanga, P.H., Johnsen, F.H. and Aune, J.B. (2011). Smallholder farmers' perceptions of climate change and conservation agriculture: evidence from Zambia. *Journal of Sustainable Development* 4(4): 73-85.

Oakland Institute. (2011). *Understanding Land Investment Deals in Africa: Country Report Mali*. Oakland, CA. Retrieved 19 March 2013 from <http://allafrica.com/download/resource/main/main/idatcs/00021029:0d0f31641207deae38bb314ff8a1bccd.pdf>.

Otsuka, K. (2000). Role of agricultural research in poverty reduction: lessons from the Asian experience. *Food Policy* 25(4): 447-462.

Oya, C. (2004). The empirical investigation of rural class formation: methodological issues in a study of large- and mid-scale farmers in Senegal. *Historical Materialism* 12(4): 289-326.

Oya, C. (2011). Agriculture in the World Bank: Blighted Harvest Persists. Ch 7, pp. 146-187. In Bayliss, K., Fine, B. and Van Waeyenberge, E., Eds. *The Political Economy of Development: the World Bank, Neoliberalism and Development Research*. London, Pluto Press.

Poole, N.D. (2000). Production and marketing strategies of Spanish citrus farmers. *Journal of Agricultural Economics* 51(2): 210-223.

Poole, N.D. (2005). Poverty, inequality and ethnicity: a note to policy makers on Latin America. *Eurochoices* 4(3): 44-49.

Poole, N.D. (2010). *Zambia cassava sector policy – recommendations in support of strategy implementation*. EU-AAACP Paper Series. **No. 16**. Rome, Food and Agriculture Organization of the United Nations. Retrieved 19 March 2013 from <http://www.euacpcommodities.eu/files/1ESAA01FAO%20AAACP%20Paper%20Series%2016%20Recommendations%20Zambia%20Cassava%20Strat.pdf>.

Poole, N.D. (2011). Book Review: Hoda, A. and Gulati, A. (2007). *WTO Negotiations on Agriculture and Developing Countries*. Baltimore, Johns Hopkins University Press. Published for the International Food Policy Research Institute, Washington DC. *Food Chain* 1(1): 128-130.

Poole, N.D. and de Frece, A. (2010). *A Review of Existing Organisational Forms of Smallholder Farmers' Associations and their Contractual Relationships with other Market Participants in the East and Southern African ACP Region*. EU-AAACP Paper Series. **No. 11**. Rome, Food and Agriculture Organization of the United Nations. Retrieved 19 March 2013 from http://www.fao.org/fileadmin/templates/est/AAACP/eastafrika/FAO_AAACP_Paper_Series_No_11_1.pdf.

Poole, N.D., Chitundu, M., Msoni, R. and Tembo, I. (2010). *Constraints to participation in cassava value chain development in Zambia. Paper presented at a workshop on Institutional Innovations and Policy Interventions in Support of Smallholder Market Participation, 3-4 June*. Rome, Food and Agriculture Organization of the United Nations.

Poole, N.D., Chitundu, M., Msoni, R. and Tembo, I. (2010). *Constraints to participation in cassava value chain development in Zambia*. EU-AAACP Paper Series. **No. 15**. Rome, Food and Agriculture Organization of the United Nations. Retrieved 19 March 2013 from

http://www.fao.org/fileadmin/templates/est/AAACP/estafrica/FAO_AAACP_Paper_Series_No_15_Constraints_to_smallholder_participa%C3%83_1_.pdf.

Poole, N.D., Alvarez, F., Vazquez, R. and Penagos, N. (2013 forthcoming). Education For All and For What? Life-skills and livelihoods in rural communities. *Journal of Agribusiness in Developing and Emerging Economies* **3**(1).

Rodrik, D. (2006). Goodbye Washington Consensus, hello Washington Confusion? A review of the World Bank's Economic Growth in the 1990s: Learning from a Decade of Reform. *Journal of Economic Literature* **44**(4): 973-987.

Rosset, P.M. and Martínez-Torres, M.E. (2012). Rural Social Movements and Agroecology: Context, Theory, and Process. *Ecology and Society* **17**(3 C7 - 17). 10.5751/es-05000-170317

Scoones, I. (2009). Livelihoods perspectives and rural development. *Journal of Peasant Studies* **36**(1): 171-196.

Shun, K.-L. and Wong, D.B., Eds. (2004). *Confucian Ethics: A Comparative Study of Self, Autonomy and Community*. Cambridge, Cambridge University Press.

Simwambana, M. (2005). *A Study on Cassava Promotion in Zambia. Prepared for the Task Force on Accelerated Cassava Utilisation*. Lusaka, Zambia. Retrieved 19 March 2013 from http://www.aec.msu.edu/fs2/cassava/simwambana_Cassava_Study-Final_Report_October_2005.pdf.

Stiglitz, J. (1999). *Whither Reform? Ten Years of the Transition*. World Bank Annual Bank Conference on Development Economics. Keynote Address, April 28-30. Washington, DC.

Toenniessen, G., Adesina, A. and De Vries, J. (2008). Building an Alliance for a Green Revolution in Africa. *Annals of the New York Academy of Sciences* **1136**: 233-242.

Van Waeyenberge, E., Fine, B. and Bayliss, K. (2011). The World Bank, Neoliberalism and Development Research. Ch 1, pp. 3-25. In Bayliss, K., Fine, B. and Van Waeyenberge, E., Eds. *The Political Economy of Development: the World Bank, Neoliberalism and Development Research*. London, Pluto Press.

von Braun, J. and Meinzen-Dick, R. (2009). 'Land Grabbing' by Foreign Investors in Developing Countries - Risks and Opportunities. Policy Brief. **13**. Washington DC, International Food Policy Research Institute.

Weis, T. (2007). *The Global Food Economy: the Battle for Future of Farming*. Black Point NS, Canada, Fernwood.

White, B., Borras, S.M.J., Hall, R., Scoones, I. and Welford, W. (2012). The new enclosures: critical perspectives on corporate land deals. *Journal of Peasant Studies* **39**(3-4): 619-647.

World Bank. (2007). *World Development Report 2008: Agriculture for Development*. Washington, DC, World Bank. Retrieved 19 March 2013 from http://siteresources.worldbank.org/INTWDR2008/Resources/WDR_00_book.pdf.

World Bank. (2009). *Awakening Africa's Sleeping Giant: Prospects for Commercial Agriculture in the Guinea Savannah Zone and Beyond*. Washington DC, World Bank. Retrieved 19 March 2013 from http://siteresources.worldbank.org/INTARD/Resources/sleeping_giant.pdf.

Zafar, A. (2007). The growing relationship between China and Sub-Saharan Africa: macroeconomic, trade, investment, and aid links. *World Bank Research Observer* **22**(1): 103-130.

Zaman, M.R. (2002). Islamic Perspectives on Territorial Boundaries and Autonomy. Ch 4 pp. 79-101 in. In Hashmi, S.H., Ed. *Islamic Political Ethics: Civil Society, Pluralism and Conflict*. Princeton, New Jersey, Princeton University Press.