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THE CASE OF THE SOUTH-WEST PROVINCE OF CAMEROON

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Résumé — Cet article utilise l'approche des capacités pour analyser l'impact de l'horticulture urbaine et périurbaine sur le développement en Afrique. Est-ce que l'horticulture, considérée comme une innovation, peut améliorer les capacités des gens? Cet article suggère que ce n'est pas la pratique de l'horticulture qui augmente les capacités des agriculteurs, mais le niveau de compétences qui augmente les chances d'adopter l'horticulture. Afin de répondre à la question, nous avons tenté de comprendre le contexte dans lequel le secteur agricole et les agriculteurs évoluent en Afrique, caractérisé par la transition vers une population à majorité urbaine et l'augmentation des revenus non agricoles au sein des foyers. Il est apparu important de comprendre les conditions qui sous-tendent des pratiques horticoles, en particulier les contraintes d'accès aux intrants et au crédit.

Mots clés : Capacités; Horticulture; Cameroun; Conditions de vie

Abstract — This paper uses the capability approach to analyse the impact of urban and peri urban horticulture on development in Africa. Is horticulture, considered as an innovation, able to improve the capabilities of people? This paper states that it is not the practice of horticulture which increases the capabilities of farmers but the level of capabilities that increases the chances of adopting horticulture. In order to answer the above question we have attempted to understand the context in which the agricultural sector and the farmers evolve in Africa, characterized by the urban transition towards a majority of urban population and the rise of nonfarm incomes. It appeared important to understand the underlying prerequisites for horticultural practices, that is, expensive agrochemical inputs and credit requirements.

Key words : Capabilities; Horticulture; Cameroon; Livelihoods

INTRODUCTION

This paper uses the capability approach to analyse the impact of urban and peri urban horticulture on development in Africa. Does horticulture, considered as an innovation, can improve the capabilities of people? This paper states that it is not the practice of horticulture which increases the capabilities or farmers but the level of capabilities that increases the chances of adopting horticulture.

In order to answer the above question we have attempted to understand the context in which the agricultural sector and the farmers evolve in Africa. We have considered in particular the trends of urban transition and the rise of nonfarm incomes. We also considered the underlying prerequisites for horticultural practices, that is, expensive agrochemical inputs and limited access to credit.

According to the World Urbanization Prospects, 50 percent or more of the African population is expected to live in cities by 2030. Along with the rise of mega-cities, secondary towns and small urban settlements are spreading into rural areas. There is increasing population densities even in remote areas, with households diversifying into farm and nonfarm activities. A consequence of this urban transition is the growing difficulty to distinguish between urban and rural lifestyles. Another consequence is the emergence of new dietary patterns, especially for high value crops such as fruits, vegetables, and other marketing trends (organic, fair trade, safe guaranteed at least).

Little information is available about the social impact of horticulture among farmers in Africa. This is largely due to the prevalence of the informal sector. In Cameroon, the informal sector represents more than half of GDP and 90% of the workforce in the country does not have a formal contract. On a more conceptual basis, the rural-urban dichotomy still prevails for models, whereas the distinction between the two sectors is increasingly difficult to define.

The capability approach is defined according to Armartya SEN (1999) as "(…) a kind of freedom: the substantive freedom to achieve alternative functioning combinations (or, less formally put, the freedom to achieve various lifestyles)". Therefore, what are the prerequisites for the adoption of horticulture by urban farmers? Do these prerequisites favor the capabilities of farmers? According to DUBOIS and MAHIEU (2002) the building of these capabilities depends on three factors: first, goods and potential possessions which include available capital, diverse equities, social relations and, beliefs; second, personal characteristics and; third, social opportunities and in particular the position of women in society.

1. THE IMPACT OF THE URBAN TRANSITION ON HORTICULTURE

The definition of the capabilities enlarges the frame of analysis for poverty by bringing in more subjective concepts than those related to income, notably the notion of liberty. According to SEN:(2001) "Political liberties and democratic rights are among the constituent components of development." The notion of « liberty » can be identified around political liberty, economic liberty, and social opportunities. Liberty is considered not only as an end but as a means.

1.1. The capability approach is also a broad normative framework

The capability approach is also a broad normative framework (ROBEYNS, 2003, 2005). It develops along with the evolution of measuring and analyzing poverty from a social durability point of view. Incomes are no longer systematically tied to solving basic problems such as

food, education and health. Incomes remain of course a major factor for a better access to basic needs, but they are no longer sufficient. In this sense, the approach by capability defends the idea that what counts are the achieved results. The main characteristics of the capability approach is the emphasis on the idea that individuals are capable of realizing and becoming on the basis of their capacities (ROBEYNS, 2005). Three arguments act in favor of the capability approach. First, poverty can be characterized by privations in terms of capability since capabilities are inherently important for the individual; whereas low incomes are significant only at an instrumental level. In addition, low incomes are not the only cause for capability privation: monetary impacts on capabilities differ according to the community, family and the individual. Finally, there is also a positive relationship between the improvement of capabilities and purchasing power, but this is true one way, not the other. Income thus becomes a variable among other variables, in the same way as liberty, to identify the causes of poverty. In a wider sense, cultural values and the concept of individual liberty become indicators to determine and reach goals.

The capability approach complements the poverty approach. The definition for poverty follows the evolution of societies and it sets the grounds at the same time for economic policies. Not until the 1980s does the concept of capability emerge to complete a purely monetary approach to appraise the living conditions of households. According to the Merriam-Webster Collegiate Dictionary, poverty is defined as “The state of one who lacks a usual or socially acceptable amount of money or material possessions”. This definition of course reminds us of the importance of monetary resources, but it also underlines the notion that poverty can vary according to the time and to the society in which it is attached (KANBUR and SQUIRE, 2001).

1.2. The social impact of the urban transition

The urban transition affects the capability approach among farmers. The urban transition can affect the capabilities of people positively with new job opportunities in the rural non farm sector; as well as negatively with new constraints on land access for example. The urbanization process affects in several ways the agricultural sector. First, the urban transition is highly heterogeneous, covering clusters, towns, conurbations, and the reclassification of villages into towns (COHEN, 2004). This implies that the agricultural responses may be also heterogeneous. Second, the urban transition implies a rise of city supplies with mostly domestic food and regional and domestic trade for city supplies as most countries may not have sufficient currencies for importing food as the 2008 commodity price crisis revealed. Third, the rise of the rural non farm economy improves opportunities between farm and non farm activities for households and therefore affects the adoption or not of farming activities (HAGGBLADE et al., 1989). An increasing literature suggests that non farm incomes now account for as much as 80% of rural household incomes (REARDON, 1997; BARRETT et al., 2001; HAGGBLADE et al., 2007). The rise of the rural non farm sector among farmers probably impacts household decisions about future prospects for farming activities. Fourth, the urbanization process occurs at a fast rate and is embedded mostly in the informal sector. The agricultural sector therefore needs to react quickly and the prevalence of the informal sector explains the need for panel surveys and the lack of official data for domestic crops and horticultural crops in particular.

1.1. The horticultural sector

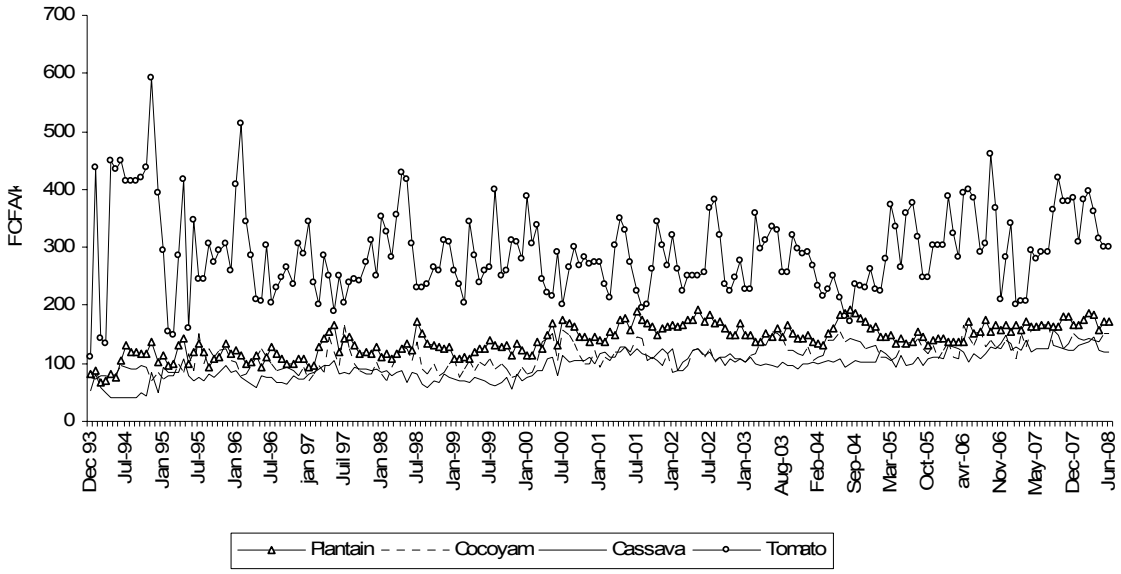

Figure 1. Nominal retail prices per kg for plantain, cocoyam, cassava and tomato in Douala, Cameroon. *Source: Institut National de la Statistique, Ministry of Planning and Territorial Administration.*

The horticultural sector is particularly adapted for such urban contexts. Considered as high value crops, horticultural crops require small areas of land and they come into production on a rapid pace.

As displayed on Figure 1, a horticultural crop like tomato is sold at better prices than staples but it is less easy to manage due to its perishability. On the other side, horticultural crops rely heavily on agro chemical inputs, which can be not only cost prohibitive but also a potential danger for human health and for the environment. For these reasons horticulture is considered as knowledge intensive.

2. THE SOUTH-WEST PROVINCE OF CAMEROON

2.1. South-West Province

The South-West Province stretches from the Atlantic Ocean, between Douala and Nigeria, to the lower hills of the highlands of the North-West Provinces. The Province is divided into four administrative divisions: Manyu to the North, Ndian to the West, Meme in the Center and Fako to the South. The town of Kumba is the largest center and the commercial and industrial hub, Buea is the provincial capital, with a growing industrial belt along the Tiko-Limbe road. The South-West Province covers an area of 25,410 km2 with an estimated population of 1,475,293 in 2007 (INS, 2008). In 2007, the mean population density of the South-West Province was 58 inhabitants per km2; 208 inhabitants per km2 for the Fako division itself, where the town of our study is located. The South-West Province benefits from a favorable agro-climatic zone. Two thirds of the soil is of volcanic origin of varying ages, and one third is sedimentary. Rainfall is mono-modal from March-April through October-November. Rainfall extends from 2,000 mm per year to over 9,000 mm per year. During the rainy season it is impossible to get newly sown plants in most zones due to heavy rain and lack of sunlight.

2.2. City supplies

City supply is a driver for rural town markets. The South-West Province is next to the Littoral Province, where Douala, the industrial capital of the country is located. The population density of the Wouri division, which includes Douala, increased from 904 to 1,948 people per km^2 between 1987 and 2007 (INS, 2008). These high population densities have certainly positive impact on market access for farmers in the hinterlands, but they also raise the challenges of adequate city supplies. Due to passable main road structures most of the food supply for Douala comes from the peri-urban areas of several Provinces, some as far away as several hundred kilometers.

2.3. The town of Muea

The town of Muea in Cameroon has been used as case study. Muea is located in the Fako division on the flanks of Mount Cameroon in the mid-volcanic zone. It has been undergoing a recent and rapid urbanization process. Between 1995 and 2004, the estimated population of Muea fell slightly, from 6,545 to 6,444, along with a decreasing household size, from 5.0 to 4.36. However, during the same period, the number of occupied houses increased by 67%, with a large number of houses still under construction at the time of the last survey. The share of nonfarm income in the total income of the population increased from 40% in 1995 to 79% in 2004. There are numerous similar towns and villages in the South-West Province and it may be hazardous to draw a conclusion concerning general demographic tendencies. However, the densification of the urban network can easily be applied to other localities in the province. In the coming decades, since most towns and villages will probably overlap, the census of towns such as Muea may raise political conflicts.

Cross-cutting surveys among households and traders were conducted in order to overcome the lack of official information. Our census conducted in 1995 revealed 1,505 households. Muea was surveyed in August 1995 and again in June 2004 using independent surveys. The surveys included a complete census of households (all houses and households were recorded for a random selection), a household survey (300) and a market survey. Due to their nature and scope, the household and market surveys provided complementary and cross-checked information. Farm-gate prices are derived from the household survey, whereas wholesale prices are derived from the market survey.

3. RESULTS

3.1. The rise of the rural non farm economy

Results revealed the rise of the rural non farm economy in rural towns and the rise of horticulture. Total household income increased by 14% at real price due to the rise of nonfarm income. This result more than offset the fall of farming income as shown in Figure 2.

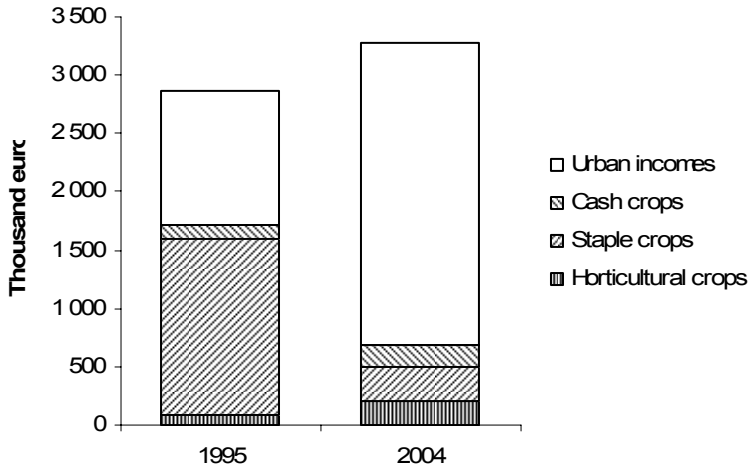

Figure 2. Total annual income in Muea by source, 1995 and 2004 (thousand euros at real 1995 price)

The share of non-farm income in total income increased from 40% in 1995 to 79% in 2004 (PARROT et al., 2008). About one third of farmers diversified income sources into nonfarm income. About one third of workers had two or more activities, which is in concordance with nationwide studies (INS, 2005). The decline in agriculture hides substantial disparities between staple crops, cash crops, and horticulture. A very strong substitution effect occurred between staple crop and horticulture incomes and self-consumption, closely linked to the decline of staple crops (PARROT et al., 2008). Staple crop incomes and self-consumption declined while horticultural crop incomes and self-consumption increased. Despite a fall of income, farming activities still contributed to employment as the total number of workers involved in farming increased by about 20%.

3.2. Intensive horticulture

A multiple correspondence analysis conducted for 1995 and 2004 displayed two distinct population sub-groups involved in horticulture between 1995 and 2004. In 1995, a sub-group of horticultural farmers was characterized by a strong participation in informal financial associations measured by the number of attended associations, and regularly sending remittances, generally small amounts of money, to the village of birth. Horticultural practice was characterized by the use of about one agro-chemical input. In 2004, a sub-group of horticultural farmers was identified and characterized primarily by older women (49 years old or more) living in large size households, strongly involved in informal financial associations and regularly sending remittances out of town. We can assume that these women were already operating in horticulture in 1995, but gender was not significant in 1995 for this sub-group. Interestingly, horticulture was practiced by older women, a result which calls for some comments on access to the job market in rural towns. The younger generations seemed to be attracted by the opportunities offered by the rural nonfarm economy. It is understandable as official statistics stated that on average wages are 3.5 times higher in towns than in the rural sector in Cameroon (INS, 2005).

Horticulture required less land but more agro-chemical inputs than staple crops. The use of agro chemicals, fertilizers and phytochemicals both increased strongly in horticulture as horticulture was often associated with cash crops (cocoa, coffee, palm oil). Agro-chemical input use increased from about one agro-chemical input in 1995, to two or more in 2004. Total expenditures for agro-chemical inputs in Muea, as well as the number of farmers using them, doubled between 1995 and 2004.

Participation in informal financial associations was more important in horticulture than among the rest of the population. The involvement of horticultural farmers in two or more informal financial associations, measured by the number of associations attended, doubled between 1995 and 2004, from 29 to 66 per cent of the population of horticultural farmers. In 2004, only a small fraction of non horticultural farmers were involved in two or more associations: 21 percent as compared to 66 and 49 per cent of horticultural farmers and non-farmers respectively. Horticultural farmers were still involved in cash crop production to a much larger extent than the rest of the population. About a third of horticultural farmers were involved in non-farm activities whereas non-farm activities declined among non horticultural farmers.

3.3. Horticulture and capabilities

Table 1. Capabilities declined over horticultural intensive practices in South-West Cameroon

Capabilities declined over:	Horticultural prerequisites
… Goods and potential possessions	Agro-chemical inputs, credit access, land access
… Personal characteristics	Age (> 45), large size households
… Social opportunities	Gender, Informal financial associations, sending remittances to village of origin, non farm diversification

Table 1 displays the three factors suggested by DUBOIS and MAHIEU (2002) over the horticultural prerequisites suggested by the multiple correspondence analysis. Strong social and family ties are correlated to the practice of intensive horticulture. Age and access to credit are crucial factors for moving from traditional or subsistence horticulture to small commercial farming.

4. CONCLUSION

The rise of small scale commercial farmers and the social prerequisite for practicing intensive horticulture in a particular context have been revealed in this study. The building of such capabilities depended on goods and potential possessions which included available capital, diverse equities, social relations, beliefs; personal characteristics; and social opportunities, and in particular, the position of women in the local society. We have shown that the practice of horticulture required several assets such as credit access (for agro chemical inputs in particular), diversification in the rural nonfarm economy and access to informal social networks. These assets were necessary in order to achieve a kind of agricultural transformation from traditional farming, involving low level of inputs and low productivity levels, to commercial farming involving an intensification process including knowledge.

The urban transition may act positively in the long run for the transformation of agriculture, enabling young people to migrate to towns in a first round. Then, after acquiring sufficient capital and skill, migrate back to intensive agriculture. Therefore, these results call for parallel policy making in favour of urban services and agricultural practices.

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