



Policy Brief

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Development effects of fifteen years of horticultural export growth in Senegal

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Key messages

- In Senegal, horticultural export growth has been associated with increased rural employment opportunities, increased household income, reduced inequality and poverty, improved child welfare and increased empowerment of women.
- Complementarities exist between large-scale and small-scale horticultural production in Senegal

This research documents the local development effects of the growth of horticultural export supply chains in Senegal. Using data from quantitative surveys with rural households in main horticultural regions and from qualitative interviews with horticultural export companies, collected over the past fifteen years, we document various positive rural development effects. We rely on insights from different studies and show that horticultural export growth has been associated with increased rural employment opportunities, increased household income, reduced inequality and poverty, improved child welfare and increased empowerment of women. In this policy brief we summarize these findings and focus on the implications towards policy-makers, donors and export companies.

Horticultural export boom

Figure 1 documents the very sharp increase in the export of fresh horticultural produce from Senegal. Especially from the early years 2000 onwards, exports increased very rapidly. The boom started with exports of green beans, tomatoes and mango but product variety has increased. Exports are mainly destined for various countries in the EU market.

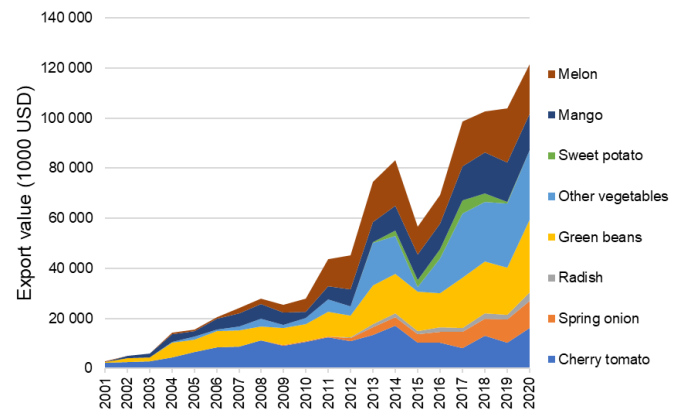


Fig. 1: Export values for horticultural products from Senegal (2001-2020). Source: ITC TradeMap (2021).

Data & methods

Socio-economic survey data were collected in the two main horticultural areas of Senegal: Senegal river delta region and the Niayes region. In the Senegal river delta region, farm-household surveys were conducted in 2006, 2013 and 2016; in the Niayes region, surveys were conducted in 2005, 2007 and 2010.

The original 2006 and 2005 samples in the Senegal river delta region and the Niayes region both included 300 households. In subsequent rounds, the original sample was revisited to create panel data, while gradually the sample as increased to 600 and 450 household in the Senegal delta and Niayes region respectively. A structured quantitative questionnaire with different modules was used. The implementation of original survey rounds was paper-based while the implementation of later survey rounds was tablet-based.



In addition, regularly throughout the period 2005 – 2018, interviews were done with horticultural export companies in both regions. Various analytical methods were used to reveal the development effects of the growth in horticultural exports in these two regions.

Findings

Value chain development

Early exports of green beans and mango in the early years 2000 were realized through contract-farming between export companies and smallholder farmers in the Niayes region. Under the impulse of increasing standards, especially GlobalGAP, in the EU market, export companies shifted from smallholder contract-farming to own vertically integrated and large-scale production on land leased from rural communities. Also the growth of tomato exports, and later a larger variety of fresh fruits and vegetables, from the Senegal delta region was realized through large-scale vertically integrated farming.

This supply chain structure implies that local households in the horticultural export regions increasingly participate in export supply chains through labour markets, rather than through product markets, or through wage employment on large-scale vertically integrated companies rather than through contract-farming with these companies. Only in the mango subsector, still a large share of the exported produce (an estimated 34% in 2018) is procured through contract-farming arrangements with smallholder producers.

Box 1: Heading

Rural development

Research results indicate that both contract-farming with export companies and wage employment in those companies increases the income of farm-households, with

an estimated 110% and 50 to 60% respectively. Yet, we find that contract-farming is exclusive and biased towards the relatively larger farms and more capitalized farmers while wage employment in the export companies is more

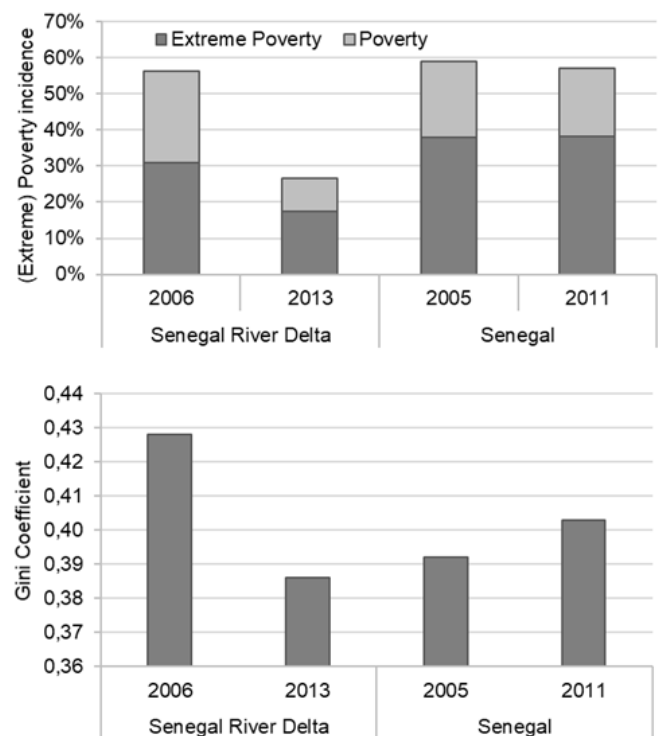


Fig. 2: Poverty headcount ratio and Gini coefficient for Senegal and for the Senegal river delta region. Source: adapted from Van den Broeck, Swinnen and Maertens, *Food Policy* (2017).

inclusive towards poor households, lower educated people and women. As a result, we find that wage employment in the horticultural export sector has a strong poverty and inequality reducing effect, as depicted in figure 2.

Rural labor market development

The horticultural export sector has contributed enormously to the development of a rural labor market in the main horticultural export regions in Senegal. Our studies point to the following findings concerning this labor market:

- Employment in the horticultural export sector increases rural incomes especially at the lower end of the income distribution.
- Compared with employment in other sectors, employment in the horticultural export sector is more inclusive and more redistributive.
- Employment in the sector has a direct and an indirect effect on household income. The first relates to the direct contribution of wages earned in the export sector to household income. The latter stems from spillover effects: wages earned in the horticultural export sector are partially invested in own farm and non-farm businesses, resulting in reinforced income effects.

- GlobalGAP certification of export companies has contributed to higher wages and more secure employment in the sector.
- Overall job quality and incidence of decent work is higher in the export agro-industry than in small-scale horticultural farms producing for the local market. However, agro-industry employers could improve decent work in their sector by better respecting working times and by offering more stable jobs and written contracts, in particular for migrant workers, women and youth.

Gender implications

A large share of the workers in horticultural export companies, about 90% in the Senegal delta region and about 60% in the Niayes region, are women. Our research results show that female employment in horticultural export companies increases the bargaining power of women in their households and increases their empowerment in society. This has positive effects on food security in the household and on the school enrolment of children.

In addition we observe that female employment in export companies contributes to increasing the age of marriage of women in the research areas and to reducing the number of children.

Conclusion & implications

We conclude that fifteen years of horticultural export growth in Senegal has resulted in large positive development effects. The most important effects have emerged through the development of a rural labor market. The growth of vertically integrated horticultural export chains has contributed importantly to increasing employment opportunities in the main horticultural production regions, especially for poor households and women. Employment in horticultural export companies has increased rural incomes and reduced poverty and inequality. Women's employment in particular has contributed to increased female empowerment, improved food security, decreased fertility rates and improved child wellbeing.

The results imply that there are complementarities between export production and food production for the local market, and between large-scale agro-industrial production and smallholder agricultural production. Fostering the development of the horticultural export sector – through attracting foreign direct investments, through enabling land-lease deals with rural communities, through export promotion – has been an effective rural development and poverty reduction strategy in Senegal

Further readings

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