

Market Competition in Export Cash Crops and Farm Income

AFRICAN CENTER for ECONOMIC TRANSFORMATION

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 - commercialization of export agriculture: intermediaries, exporters, processors, farmers
 - atomistic smallholders may suffer from the non-competitive behavior of other agents along the chain
 - changes in the structure of value chain layers may affect the prices received by farmers for their output

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- We take a partial step to explore the interplay between market structure and concurrent domestic distortions

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- The volume comprises a collection of case studies (country-crop pair)
 - Cotton: Benin, Burkina Faso, Cote d'Ivoire, Malawi and Zambia
 - Cocoa: Cote d'Ivoire and Ghana
 - Coffee: Cote d'Ivoire, Rwanda and Uganda
 - Tobacco: Malawi and Zambia
- We combine lots of different data with some economic modeling to build some structure to guide the analysis

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- Equilibrium:
 - Firm side: depends on both the number of firms and on their share of the market, and on firm characteristics (production costs)
 - Farmer side: depends on factor endowments, preferences, and farm productivity (costs) in export agriculture

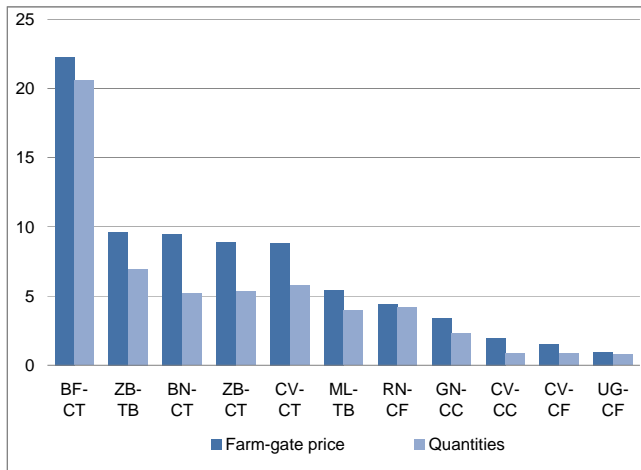
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- Once equilibrium of the model is found, and the solution is calibrated to match key features of the economy, we study comparative static results

- 1 Leader Split (with equal marginal costs)
- 2 Small entrant (with marginal costs equal to smaller firm)
- 3 Leader's merge and small entrant (with costs equal to that of the most efficient merger and that of the smaller incumbent, respectively)
- 4 Leaders merge (with costs of the most efficient merger)
- 5 Exit of largest firm
- 6 Equal market shares (all firms have the cost of the leader)
- 7 Perfect competition ($p^s(Q)$ equal to P less marginal cost of the most efficient firm)

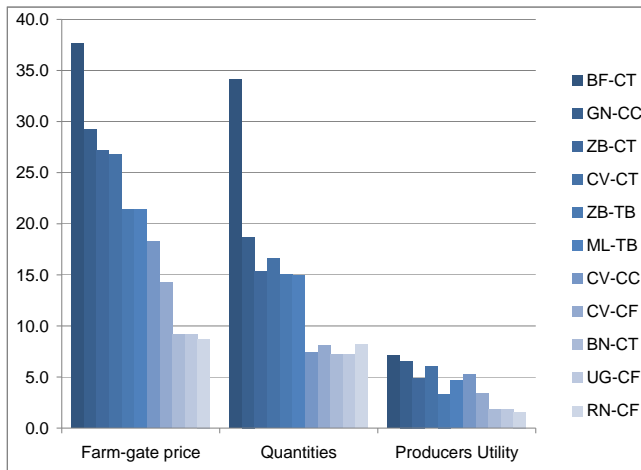
Simulation Results

CHANGES IN FARM-GATE PRICES AND QUANTITIES: LEADER SPLITS SIMULATIONS



Simulation Results

FARM-GATE PRICES, QUANTITIES AND UTILITY: EQUAL MARQUET SHARES



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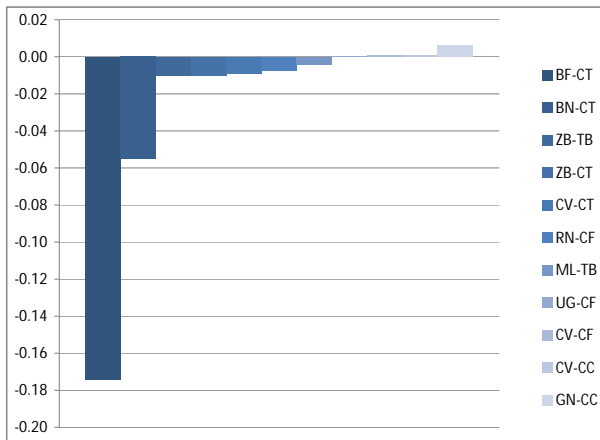
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- When we do the simulations and the number of firms n and the shares sh respond endogenously, this affects farm-gate prices and interest rate and, in turn, both affect the supply of the farmers (solve the model simultaneously)

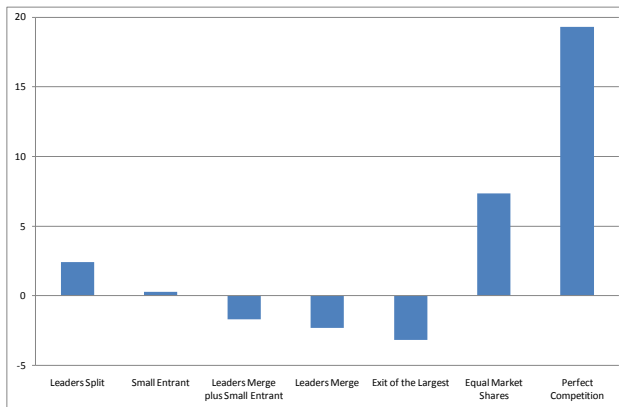
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SIMULATIONS

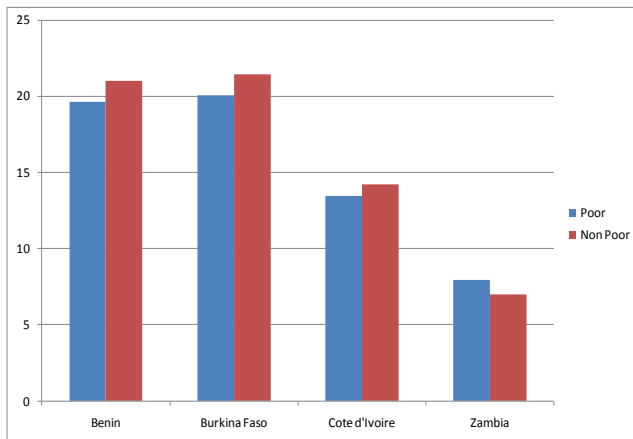
- Differences in Farm-gate prices: Standard model and Outgrower contract model leader splits simulations



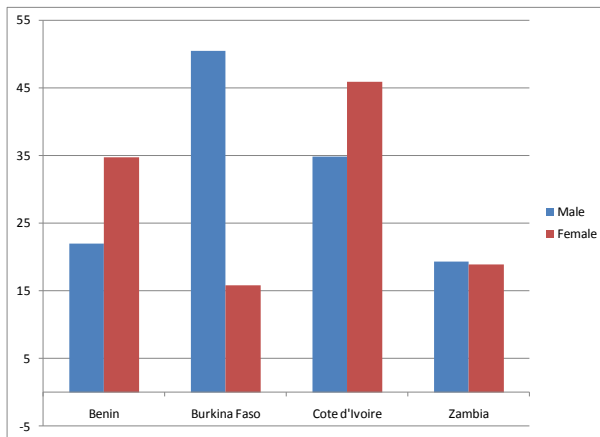
Different competition scenarios in Cotton - Zambia



Equal market shares for poor vs non poor in Cotton



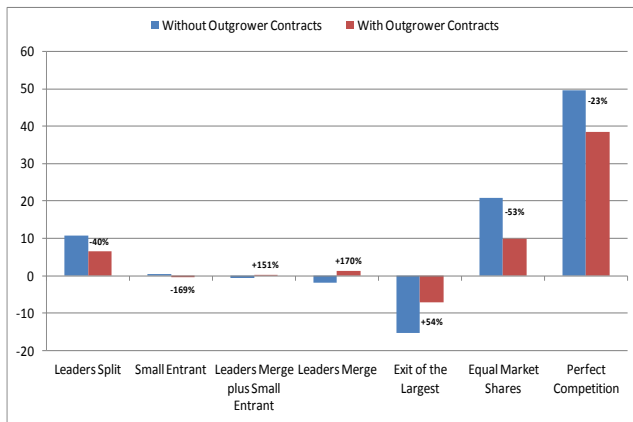
Perfect competition for male vs female-headed households in Cotton



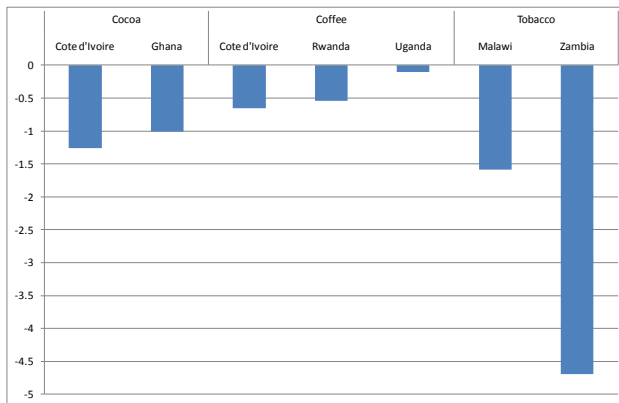
Welfare analysis

INCOME IMPACTS

Basic model with vs without outgrower contracts in Cotton - Burkina Faso



Exit of the largest in Cocoa, Coffee, and Tobacco



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- Small changes to the level of competition are unlikely to have significant effects on farmers livelihood
- Male-headed, non poor households tend to benefit the most
- With outgrower contracts, the positive effects of increasing competition and the negative effects of a more concentrated market are both reduced. The effect in level is small except for the case of cotton in Burkina Faso

- Further work is needed:
 - Study Bertrand solution
 - Incorporate other layers, farmers unions, etc
 - Multi-crops and quality differentiation (premium)
 - Domestic market configuration related to oligopsonic power of international markets (allocative effect vs profit sharing)
 - Farm gate price that varies across type of households
 - Second order effects in the empirical framework
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- Most of these issues could be incorporated in a richer model but a further problem would be availability of detailed data

The Book

THE COVER

