Canadian Agricultural Economics Society
Société canadienne d'agroéconomie

Is GATT/WTO Membership Decreasing Poverty in Developing Countries?

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Contributed presentation at the 7th Annual Canadian Agri-Food Policy Conference, Ottawa, Ontario, 11-13 January 2017

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Introduction and Motivation

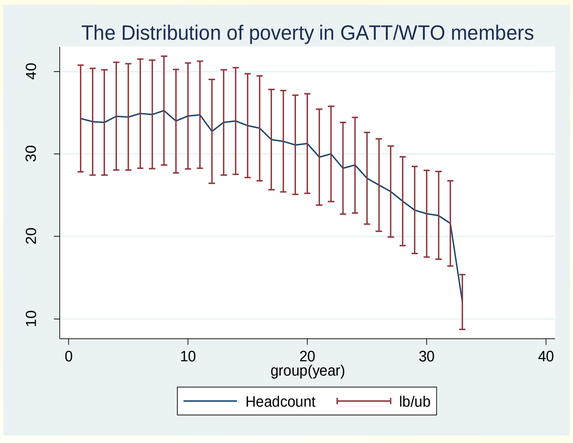
International trade theories posit that trade liberalization can generate welfare gains through different mechanisms, but the effect on income distribution is ambiguous. Developing countries are given more time to adjust and special privileges in WTO agreements but some still find it difficult to replace revenue from trade taxes to fund public goods. In offshoring models, trade in tasks tends to magnify the wage gap between high and low skilled workers. Similarly, trade liberalization can increase inequality in Melitz-like models with heterogeneous firms and unemployment. In contrast, the Stolper-Samuelson theorem predicts that low-skilled workers and farmers who are relatively abundant in many developing countries should see their real wage increase as trade is liberalized.

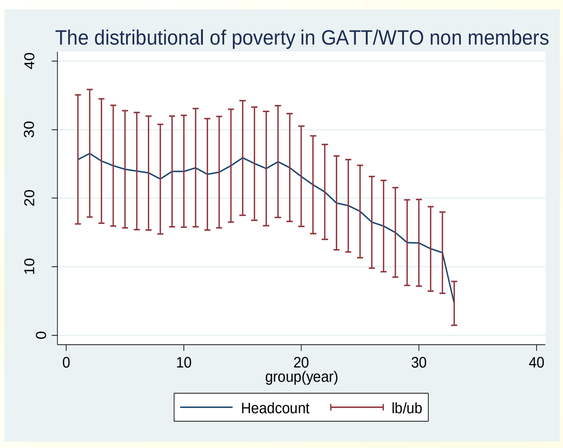
Objective

Our objective is to investigate empirically the causal effect of GATT/WTO membership effect on poverty in developing countries by estimating the average treatment effect on the treated to ascertain whether GATT/WTO membership has increased or decreased the number of poor people in member countries.

Data

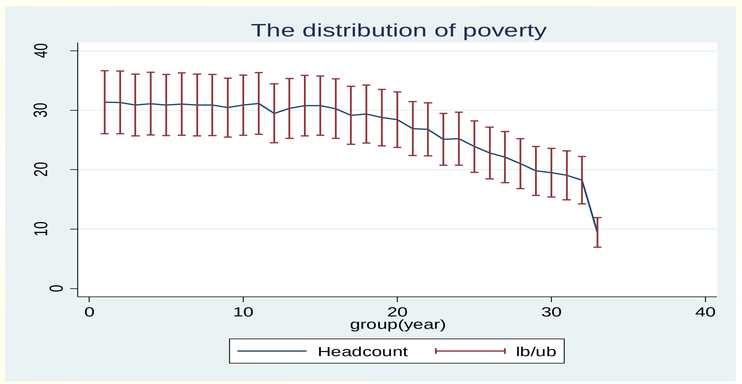
We rely on panel data covering a sample of 125 developing countries over the 1980-2012 period. We use poverty headcount as our main measure of poverty. It comes from the World Bank's dataset "World Development Indicators".





GATT/WTO non-members have on average a lower level of poverty than members. The maximum poverty rate among non-members countries is 28% while it is 35% among members. The corresponding minimums are respectively 7% and 17%.

Data



The overall poverty rate has been decreasing over time. The maximum value of the poverty rate is about 31% and the minimum value is about 10%.

Empirical Part

Method

It could be that developing countries joined GATT/WTO to mitigate/reverse an upward poverty trend. To sort out selection and causal effects, we rely on propensity score matching to estimate the average treatment effect (ATT) of GATT/WTO membership on poverty. We re-estimate ATT for two groups of countries (agricultural net exporters vs net importers) and we use conditional and unconditional quantile regressions to estimate the distributional effect while accounting for the endogeneity of membership.

Results and Discussions

Baseline matching results: all countries

method	nn	kernel	llr	ra	ipw	ipwra
ATT	2.598*	2.067*	1.506	2.72***	3.02***	1.72*
Obs	4,096	4,096	4,096	3,980	4,096	4,092
treated	2,672	2,672	2,672	2,592	2,672	2,672
control	1,424	1,424	1,424	1,388	1,424	1,420

NN=Nearest Neighbour; llr=local linear regression; ra=regression adjustment;; ipw=inverse probability weighting; ipwra=inverse probability weighted regression adjustment matching

Net exporters of agricultural products

method	nn	kernel	llr	ra	ipw	ipwra
ATT	-3.93*	-3.399	-7.44*	-8.94**	0.63	-8.33**
Obs	2,050	2,050	2,050	1,545	2,050	1,597
treated	1,483	1,483	1,483	1,318	1,483	1,365
control	567	567	567	227	567	262

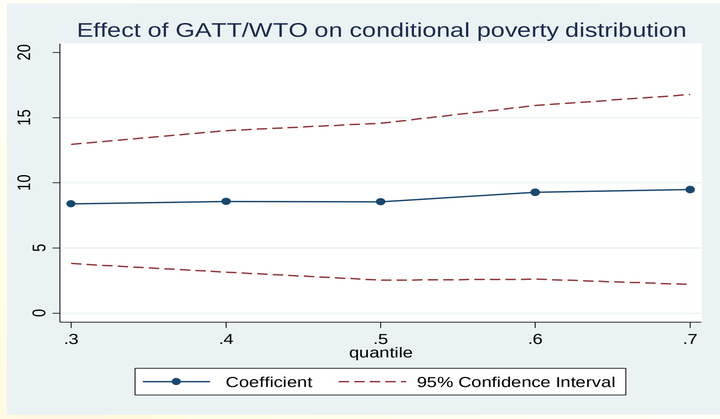
Net importers of agricultural products

method	nn	kernel	llr	ra	ipw	ipwra
ATT	2.87*	2,72*	2,38	0,56	4.97***	-2.02
Obs	2,046	2,046	2,046	1,995	2,046	2,046
treated	1,189	1,189	1,483	1,158	1,189	1,189
control	857	857	857	837	857	857

Results and Discussions

Treatment period sensitivity

method	nn	kernel	llr	ra	ipw	ipwra
ATT	-12***	-11***	-11***	-5***	-10***	-2***
Obs	4,096	4,096	4,096	3,980	4,096	4,092
treated	1,226	1,226	1,226	1,196	1,226	1,222
control	2,870	2,870	2,870	2,784	2,870	2,870



Results indicate:

- GATT/WTO membership increases poverty when all of 125 developing countries are pooled. These results are robust to alternative measures of poverty and to different methods of matching.
- GATT/WTO membership decreases (increases) poverty amongst countries that are net exporters (importers) of agricultural products.
- The year to sort GATT/WTO members and non-members is determinant. When 1996 (2000) is used, GATT/WTO increases (decreases) poverty.
- The size of the GATT/WTO effect on poverty varies depending on the countries' poverty level. Increases in poverty tend to be smaller for poorest countries, for conditional and un-conditional quantile regressions.

Policy recommendations

- GATT/WTO membership and trade liberalization more generally make winners and losers. It matters little to losers whether aggregate gains exceed losses if their real wage is never to recover. Better adjustment policies and "safety nets" must be designed to insure that as many people as possible benefit from policy reforms and to avoid that the poorest become even poorer.

References

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