AJAE Appendix: Agro-Manufactured Export Prices, Wages and Unemployment*

Guido G. Porto†
Development Research Group
The World Bank

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†Correspondence: Guido Porto, MailStop MC3-303, The World Bank, 1818 H Street, Washington DC 20433. email: gporto@worldbank.org

1 Introduction

In this Supplementary Appendix, I present the code used to perform the maximum likelihood estimator of the main text (Section 2) and I set up a sensitivity analysis (Section 3).

2 Maximum Likelihood Code

The estimation of the maximum likelihood was carried out with the ml built-in stata maximizer. Once the data is loaded, the code runs as follows

```
clear
program drop _all
set more off
*This is the code for the program called ‘reservation’

    capture program drop reservation
    program define reservation
    args lnf theta1 theta2 theta3 theta4 theta5

    *estado 1: employed   P(yi*>0)P(oi*>0) *
    *estado 2: unemployed P(yi*>0)P(oi*<0) *
    *estado 3: inactive   P(yi*<0)         *

    quietly replace ‘lnf’ = ln(normprob(‘theta3’)*(‘theta4’)
        *normd((lwage-‘theta2’)*‘theta4’)
        *normprob(((1-(‘theta5’)^2)^(-0.5))
        *(‘theta1’+‘theta5’*(lwage-‘theta2’)*‘theta4’))) if estado==1
    quietly replace ‘lnf’ = ln(1-normprob(‘theta1’)) if estado==3
    quietly replace ‘lnf’ = ln(normprob(‘theta1’)*(1-normprob(‘theta3’))) if estado==2
    quietly replace ‘lnf’ = ln(0.00000000001) if ‘lnf’==.
    end

ml model lf reservation (‘vector z’) (‘vector x’) (‘vector m’) () (), cluster(clus)

ml check
ml search
ml maximize, difficult
```

The notation `vector z` refers to the vector of explanatory variables in the labor participation (net wage) equation, `vector x` refers to the vector of explanatory variables in the market wage equation, and `vector m` refers to the explanatory variables in the job offer equation. See text and Table 2 for details.

3 Sensitivity Analysis

In this section, I provide a simple sensitivity analysis of the empirical model of section 2. In the text, I allowed export prices to affect wages across all sectors of the economy. This assumption is consistent with a model where there are general equilibrium effects through labor mobility and spillovers. Labor mobility, for instance, forces wages to equalize across sectors so that an expansion of the export sector that increases wages in that sector will affect wages in other sectors as well. Spillovers effects will be present when the export sector uses non-tradable goods as inputs. In these cases, an expansion of the export sector will cause an expansion of the non-tradable sector and thus in the wages paid in those sectors. As a sensitivity analysis, I estimate the model only allowing for wage effects across the tradable sectors.

Results are reported in Table A1, where I report the price elasticities of the three equations of the model. Overall, the relevant elasticities are quite similar to those reported in the Table 2 in the text. This is specially the case for the wage-price elasticities (column 1). It is interesting to see how the job offer elasticities are larger in the tradable-sector model (see column 3). These observations imply that, after a shock to export prices, wages will respond in a similar fashion in the two models, but job offers will be more sensitive in the only-tradables model. In consequence, if anything, I expect larger impacts via quantity adjustments in this model than in the all-sectors model of the text. This conclusion just reinforces the need to incorporate labor market adjustment mechanisms into the empirical evaluation of trade policies.

Table A1
Estimated Coefficients: Agro-Manufactured Export Prices

	Wage Equation	Net Wage Equation	Job Offer Equation
Unskilled Labor	0.55	0.42	0.98
	[0.098]	[0.05]	[0.14]
SemiSkilled Labor	0.52	0.28	1.13
	[0.13]	[0.067]	[0.17]
Skilled Labor	0.39	0.45	0.99
	[0.26]	[0.16]	[0.28]
Price Index for Imports	yes	yes	yes
Regional Dummies	yes	yes	yes

Note: Standard errors (cluster corrected) within brackets. The model estimates a wage regression (first column), a net wage equation (market wage net of reservation wages, second column) and a job offer equation (last column). The sample is restricted to the tradable sector.