

Is Tunisian Trade Policy Pro-Poor?

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Outline

Introduction

Method

Data

Results

Conlusion



Introduction

- ▶ Trade liberalization raises important distributional questions
- ▶ Tunisia has comparatively high level of tariffs and NTMs
- ▶ Level of protection rapidly declining
- ▶ Main channel: Change in prices
- ▶ Impact of tariffs comparatively low



Literature

Similar Studies

- ▶ Porto (2006) introduces general methodology; Nicita (2009) evidence for Mexico, Nicita et al. (2014) for Sub-Saharan Africa; Ural Marchand (2012) for India

Tunisian Trade Policy

- ▶ Minot et al. (2010) CGE model

Companion paper

- ▶ Baghdadi et al. (2016) estimate tariff pass-through in Tunisia to be about 10%



Method (Porto, 2006) I

Income-expenditure identity:

$$e^h(\mathbf{p}_T, \mathbf{p}_N, \bar{u}^h) = w^h + \varphi^h \quad (1)$$

where:

\mathbf{p}_T Price vector of tradeables

\mathbf{p}_N Price vector of non-tradeables

\bar{u}^h Constant household utility

w^h Household wages

φ^h Transfer (Compensating Variation, CV)



Method (Porto, 2006) II

Let $\mathbf{p}_T = \mathbf{p}_T(\tau)$ and $w^h = w^h(\tau)$, where τ is a vector of tariffs

Counterfactual Question: *How high would φ^h have to be to leave household welfare (\bar{u}^h) unaffected from a change in tariffs (τ)?*

1. The effect of tariffs & NTMs on prices

- ▶ Tariff: Quite low pass-through in Tunisia (ca. 10%) (Baghdadi et al., 2016)
- ▶ NTMs: Often subsidies/standards in Tunisia (Ghali et al., 2013). Pass-through elasticity: 21% (Baghdadi et al., 2016)

$$\frac{\Delta\varphi_{hpt}}{e_{ht}} = \sum_k \left(s_{hkt} \xi \frac{\Delta\tau_{kt}}{1 + \tau_{kt}} \right) \quad (2)$$

- ▶ where $\xi = \frac{d \ln P_{kt}}{d \ln(1 + \tau_{kt})}$ is the tariff pass-through, and s_{hkt} is the share of good k in household h 's expenditure



Method (Porto, 2006) III

2. The effect of tariffs on wages:

- ▶ Mincerian wage equations:

$$\ln w_{ijt} = \lambda_0 + \lambda_1 \tau_{jt} + \lambda_2 (\tau_{jt} * SKILL_{it}) + \lambda_3 SKILL_{it} + \beta_1 AGE_{it} + \beta_2 AGE_{it}^2 + \beta_I I_{it} + \epsilon_{ijt} \quad (3)$$

- ▶ Effect on φ :

$$\frac{\Delta \varphi_{hwt}}{e_{ht}} = - \sum_j (\lambda_1 \mathbf{EM}_{hjt} + \lambda_2 \mathbf{SK}_{hjt}) \frac{\Delta \tau_{jt}}{\tau_{jt}} \quad (4)$$

- ▶ where:

EM_{hjt} No. of earners in household h working in industry j in year t .

SK_{hjt} No. of skilled earners in household h working in industry j in year t .



Method (Porto, 2006) IV

Advantage: Parametrically agnostic approach. Merely 3 identities used:

- ▶ Income-expenditure identity
- ▶ Roy's Identity
- ▶ Shepard's Lemma

Disadvantage: Substitution effect is not captured: Composition of consumption basket fixed



Data

- ▶ Trade data (import shares): UN COMTRADE
- ▶ Tariffs: WITS
- ▶ NTM ad-valorem equivalents (AVE): Baghdadi et al. (2016)
- ▶ Household expenditure shares & household characteristics: INS Household Survey harmonized by ERF
 - ▶ Years of schooling unavailable. Definition of skilled labour: Secondary education or higher
 - ▶ Income not available. Occupations at ISIC 2-digit level
- ▶ Sectoral wages: INS. Combined with ISIC using author made concordance.



Mincerian wage equation

VARIABLES	(1) Robust OLS
Weighted tariff	-1.025*** [0.0920]
NTM (Ad-valorem equ.)	-0.529*** [0.0619]
Weighted tariff*Skill dummy	-0.335*** [0.0937]
NTM*Skill dummy	-0.157** [0.0625]
Skill dummy	0.0348** [0.0136]
Age	0.00153* [0.000782]
Age squared	-1.10e-05 [6.93e-06]
Urban dummy	-0.00799* [0.00472]
Male dummy	0.000951 [0.00363]
Constant	7.827*** [0.0282]
Observations	9,820
R-squared	0.891
Industry FE	Yes
Time FE	Yes

Note: Robust standard errors in brackets.

*** p<0.01, ** p<0.05, * p<0.1.



- ▶ Caveat: Based only on sectoral data

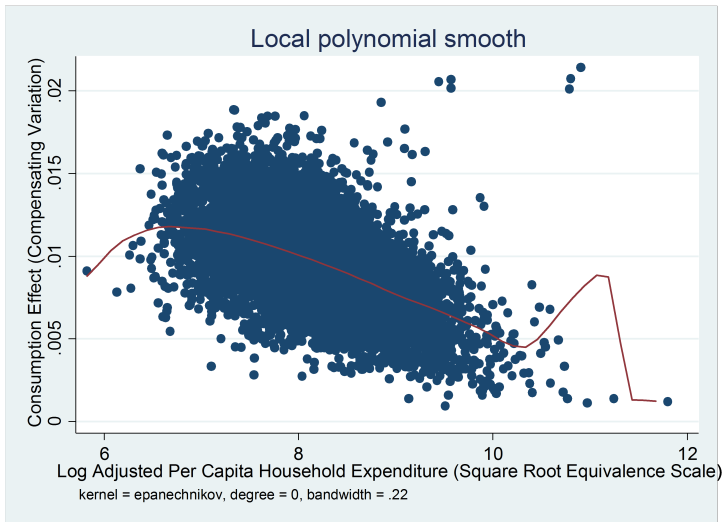
Different Scenarios:

Scenario 1: Tariffs are abolished ($\Delta\tau_i = -\tau_i, \forall i \in K, J$)

Scenario 2: All types of NTMs are introduced for all products

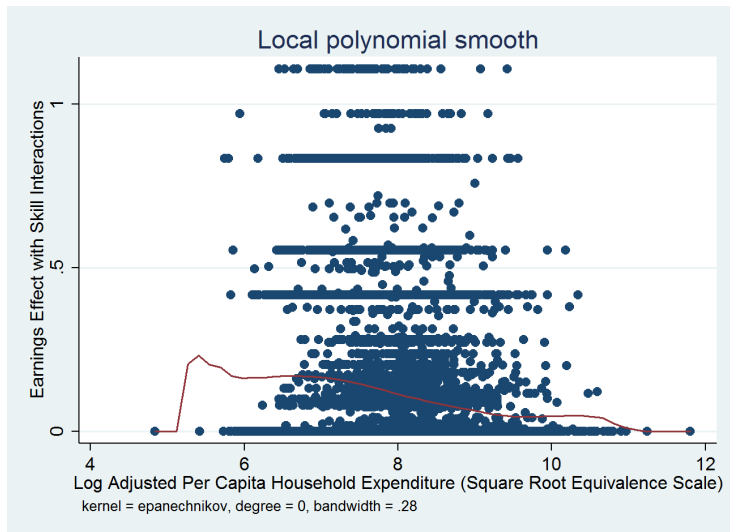


Scenario 1: Consumption effect



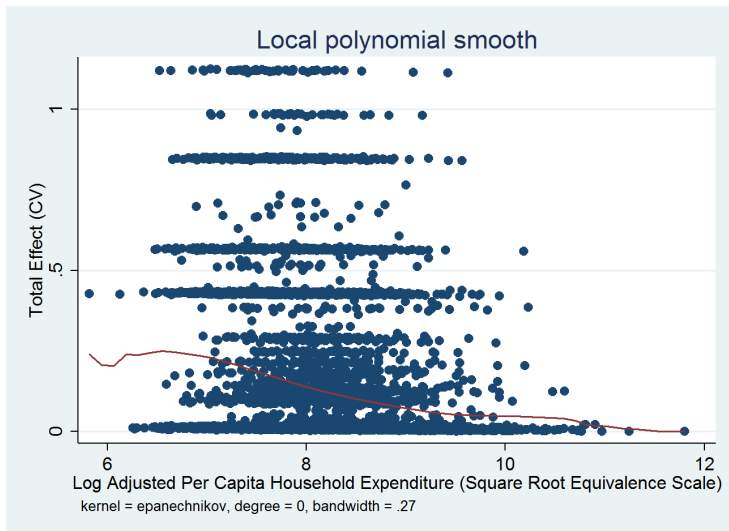
Note: author's elaboration using incomplete pass-through of 10%

Scenario 1: Earnings effect



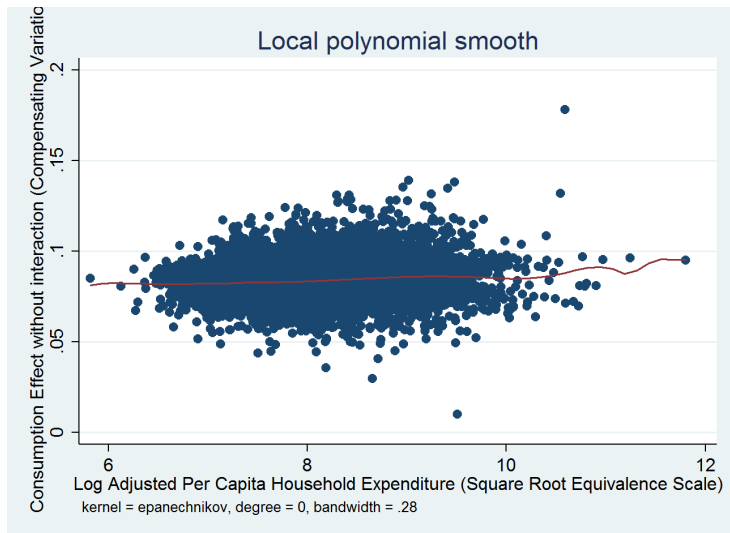
Note: author's elaboration using coefficients from Mincerian wage equation

Scenario 1: Total effect



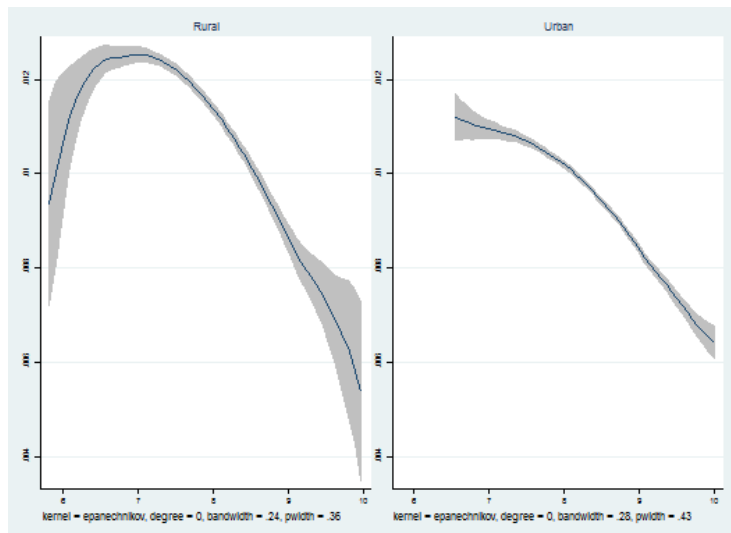
Note: author's elaboration using coefficients from Mincerian wage equation and incomplete pass-through of 10%

Scenario 2: Consumption effect



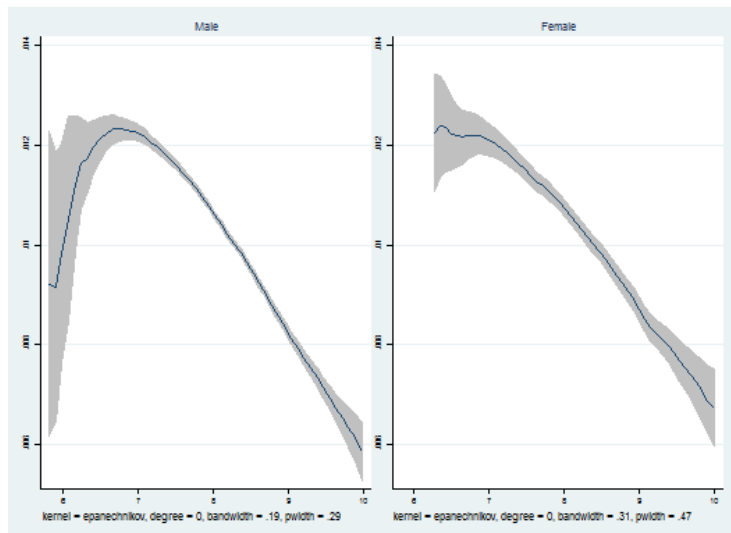
Note: author's elaboration using incomplete pass-through of 21%

Welfare effects by region



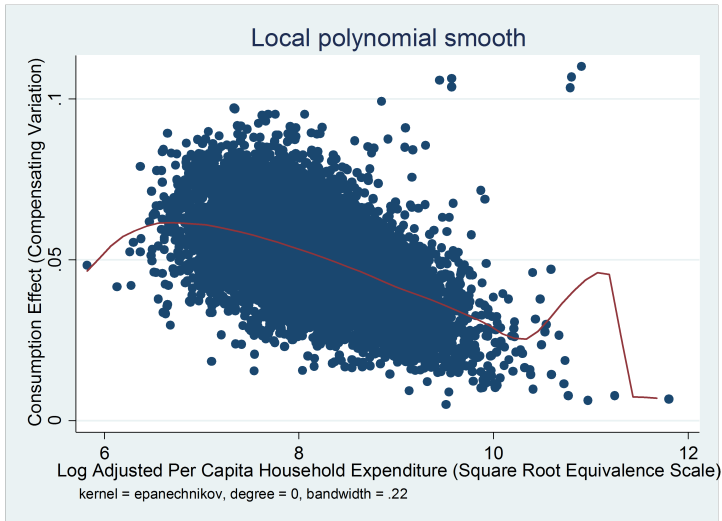
Note: author's elaboration using incomplete pass-through of 10%

Welfare effects by gender



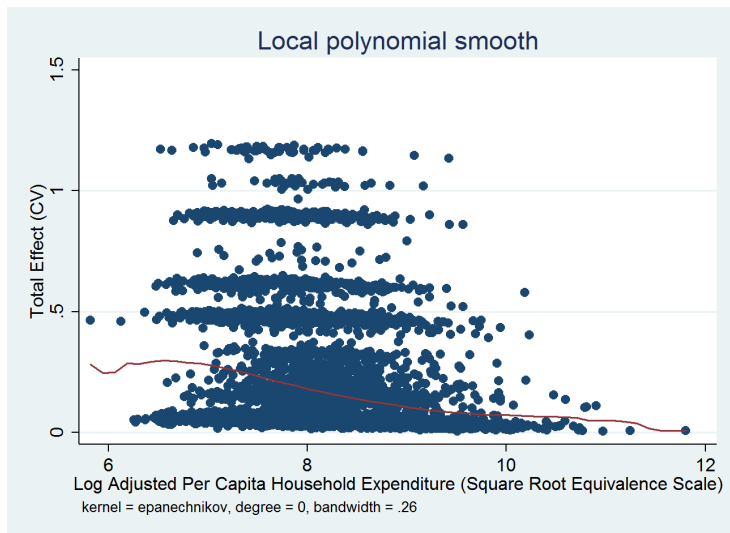
Note: author's elaboration using incomplete pass-through of 10%

Alternative Pass-through (50%): Consumption Effect



Note: author's elaboration using incomplete pass-through of 50%

Alternative Pass-through (50%): Total Effect



Note: author's elaboration using incomplete pass-through of 50%

Conclusion

- ▶ Consumption effect of tariff reduction positive for all income levels
- ▶ The poor are more (negatively) affected by the existing tariff scheme (would benefit more from liberalization)
- ▶ Increase in NTMs uniform effect across distribution

Limitations:

- ▶ Wage data only sectoral
- ▶ No dynamic effects of trade policy (i.e. sectoral change)



Thank you very much for your attention!

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