Comments on “Supplier Responses to Walmart’s Invasion in Mexico” by Iacovone-Javorcik-Keller-Tybout

Carlos Noton - University of Warwick

April 2012

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This paper investigates the heterogenous impact of Walmex operation on domestic manufacturers of consumer goods.
The authors present the following dynamic game:

- Upstream manufacturers decide: 1) To exit the market or not; 2) To improve the quality of their good or not; and 3) To choose Walmex as a retailer or not.
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- There are potential entrants who decide to enter or not with a low-quality good.

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- At the end of each period, the stochastic quality is revealed determining payoffs. A new period starts.
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Predictions of the Model

Main predictions of the model: manufacturers are self-selected into two groups. Walmex induce larger suppliers to invest more in high-appeal products. Non-Walmex's supplier prefer to invest less (downgrading quality) or shut-down.
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Data on Upstream Manufacturers

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For each plant, they know:

- Investment decisions in physical assets, reliance on imported inputs and R&D expenditures.
- Domestic sales and physical quantities, hence unit values (at product level!).
- Wages and TFP.
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- Investment decisions in physical assets, reliance on imported inputs and R&D expenditures.
- Domestic sales and physical quantities, hence unit values (at product level!).
- Wages and TFP.

They do not know:

- Identity of the buyer (Walmex or not).
- Explicit quality of the good.
Data on Downstream Retailers

Regarding the retail sector, the authors know:

- Number and location of the stores.
- Estimated floor-space of each Walmex and Non-Walmex store.
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- Number and location of the stores.
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They do not know:

- Sales or similar measure of retail-specific activity.
- Payments to upstream producers.
The main regression for class $i$, region $j$ at time $t$ is the following:

$$Y_{jt}^i = \beta_1 PG^i + \beta_2 [PG^i \times s_{jt}] + \beta_3 s_{jt} + \beta_4 TUS_t^i + \beta_5 TMEX_t^i + \beta_6 GDP_{jt} + \beta_7 [PG^i \times GDP_{jt}] + \alpha_t + \mu_j + \varepsilon_{ijwt}$$

- Outcomes, $Y_{jt}^i$, are: Sales, R&D, Fixed Investments, Intermediate Imports, Wages, Prices, TFP.
- $PG^i$: one if class $i$ is sold by Walmex, zero otherwise.
- $s_{jt}$: Walmex’s share of retail floor space in the plant’s state $j$ at time $t$.
- Other controls are tariffs, GDP and fixed effects.
Reduced Form Evidence

- Walmex, through \([PGi \times s_{jt}]\) affects all players in the market with heterogenous effects.
- The analysis is based on the comparison of \(\hat{\beta}_2\) across initial sales quartiles.
- \(\beta_2\) should be negative for small firms and positive for large firms.
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Focused on perishable goods to ensure the regional component.

The authors successfully addressed the endogeneity of \(s_{jt}\) (using lagged GDP and retail floor-space of both type of retailers as IV).
So far, most results are consistent with the model but non-significant.
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**Walmex Effects on Producer Characteristics ($\hat{\beta}_2$) by Initial Plant Sales**

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Including Plant Fixed Effects

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Supplier Responses to Walmex
Consumer Side Effects:

New Customers or New Format?
Larger customer base, higher standards, Lower prices. Informal versus Formal sector. Economies of Scale?

Quality and Investment definition:
Investment that goes to Walmart's profits? (reduction of costs) Investments aiming to create a stronger brand? Advertisement, differentiation.
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Distinction between Wholesale prices and Retail prices:
No discussion about markups of retailers or the underlying microeconomics of Walmex’s pricing rule. (Upper bound of quality)

\[ P_j = \begin{cases} 
C + MK(\bar{\xi}_j), & \text{if Non-Walmex;} \\
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**Weintraub et al.** More discussion regarding the assumed steady-state and the light-tail condition. More on the empirical features that are matched.
Suggestions to Improve Results

- Do we observe dynamic changes of classes $i$? This variation might help.
- Going deeper in the product category? Why aggregation? Why normalization?
- Important for categories: Homogenous vs Differentiated goods.
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- Drop when wages are zero. More on how exit is recorded.
- Alternative criterium for quartiles?