Transportation Costs and Firm Performance by Catarina Branco, Dirk C. Dohse, João Pereira dos Santos, and José Tavares

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Paper Overview

- Research Question: how does transportation costs affect firm performance?
- Methodology: firm-level data and diff-in-diff based on a quasi-natural experiment of the Portuguese SCUT highway system
 - \blacktriangleright toll free \rightarrow toll introduced, due to sovereign debt crisis in 2010
- Findings:
 - Wide array of firm-level performance, i.e., turnover, productivity, employment, imports and exports, all deteriorated
 - No significant impact on inter-regional firm migration
- Main Contributions:
 - Endogeneity problem mitigated by the quasi-natural experiment
 - Relocation analysis and overall effects assessment

Paper Overview

- Excellent data and interesting empirical strategy, enjoy reading
- Rigorous and well-executed, learned a lot
- Major comments are around the main contributions:
 - Endogeneity problem mitigated by the quasi-natural experiment Concerns on the DID design

 Relocation analysis and overall effects assessment Room to expand the discussion

Major Comment 1: The DID Design

The Shock: transportation cost or sovereign debt crisis?

- Fiscal contraction and transportation cost increase happen simultaneously
- The treated municipalities with previously toll-free SCUT, are very likely also more affected by the sovereign debt crisis
- Can the results be interpreted as municipal fiscal contraction and firm performance?

Suggestion 1

- Provide more evidence to exclude the interpretation of municipal fiscal contraction
- For instance, show the trend of corporate tax rate and municipal fiscal deficit in the treated group are not different from the control group

Major Comment 2: The DID Design

The Treated and Control Group: Municipality Level

- Treated: municipalities with segment of SCUT highways Toll-free → Toll charge Control: municipalities without segment of SCUT highways Toll charge → Toll charge
 - Are there non-SCUT highways in the treated group?
 - Municipalities with segment of SCUT highways are equally treated?

Suggestion 2

- Treatment intensity
 - The length of SCUT highways in the treated group
 - The ratio of SCUT to non-SCUT highways in the treatment group
- An extension: utilize the two waves in 2011 and 2012
 - Only 2010-2012 for the municipalities with SCUT highway
 - Treated: Toll-free \rightarrow Toll charge Control: Toll-free \rightarrow Toll-free

Major Comment 2: The DID Design

The Treated and Control Group: Municipality Level



- The substance of transportation: connecting locations
 - Unrealistic to assume firms only transport within the municipality
 - In the current control group, A and B are more likely to be treated; while in the current treated group, D might not be treated if the firms there always transport by sea

Suggestion 2 (Cont.)

 Municipalities cornered by treated or control groups, or far away from the other groups, might be different

Major Comment 3: The DID Design

The Treated and Control Group: Firm Level

Irrms assigned to treated or control group based on their location

- Do not know whether the firm actually use the SCUT or not
- Heterogenous impact on firms with different transportation needs e.g. manufacturing vs service firms; local shops vs national and international companies

Suggestion 3

- Utilize the firm-level data and construct a more granular Treated
- Proxies of firms' transportation needs such as manufacturing and service sectors, or even better, historical transportation costs

Major Comment 4: The Relocation Analysis

- What are the incentives of relocation? Where to relocate? Treated: toll-free → toll charge; control: toll-charge → toll charge
 - ► A possibility: firms affected by the first wave in 2010 relocate to the second wave regions in 2011 (one year window remaining toll-free)
 - Do firms know in advance there will be toll charge in 2012? Is the temporary toll-free benefits large enough for firms to relocate?
- Overall welfare assessment is actually absent

Suggestion 4

- More information of relocation: from toll charge to toll-free regions?
- Maybe look at the productivity dispersion and explore whether misallocation is deteriorated when toll charge is imposed
- Or look at the entry and exit as another firm performance
- Or look at the market power and test whether firms can impose the increased transportation costs to customers, or whether the control group firms gain larger market share

- Is the R2 too-low for a large dataset controlling firm and year FE?
- On page 8, explanations of equation (3), should the base year be 2010 instead of 2009?
- Table 3, empty results on expenses
- Table 5, estimates for average wages in column 2 do not lie between that of managers and employees. What are the rest employment?

Conclusion

- A nice contribution to the transportation infrastructure literature
 - Administrative firm-level data
 - Quasi-natural experiment
- Increased transportation costs are associated with decreased firm-level turnover, productivity and employment

- Already rich results, could be even better with more robustness checks on the DID design and relocation analysis
- Good luck with the paper!