

Trade in Services: IT and Task Content

Andrea Ariu and Giordano Mion

Comments by
Lindsay Oldenski
Georgetown University
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Summary

- Merge two very rich datasets: NBB data on firm-level trade in services and BIBB-IAB data on job tasks
- Look at the relationship between technology and services trade both directly using data on computer use and indirectly through the channel of routine vs nonroutine tasks
- Find that increases in computer usage and nonroutine task intensity are associated with increases in the number of firms that trade in services

Contributions of the Paper

- Very important topic which is only just starting to be explored by economists
- Merge two detailed datasets
- Results complement other work in this area (e.g. Autor, Levy and Murnane, Spitz-Oener)
- Include explicit measures of both routineness and technological content

Questions and Suggestions

Data and Measurement:

- Why measure firm size using employment rather than sales?
- Task intensity and technology are measured at the industry level, however the number of service industries in the sample is very small. There is likely to be a lot of variation within each broad service industry
- Task “intensity” counts the number of each type of task used. Don’t know relative importance of these tasks.
- Trade is not the same thing as tradability

Questions and Suggestions

Theoretical Context:

- Reference Autor, Levy and Murnane when discussing the use of changes in the routine task content to proxy for technological change, but this link could be made more explicit. How do you know that changes in job tasks are due to technology and not something else?
- The main results are about firm entry into exporting. It would be nice to interpret these results in the context of a Meliz-type model

Questions and Suggestions

Alternate Explanations:

- Belgium has a comparative advantage in more nonroutine and technology intensive tasks.
 - This concern is mitigated by the fact that the authors get the same result for imports.
 - However, we don't know if these imports are intermediate inputs.
 - Suggestion: look at trade w/ similar OECD countries.

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Questions and Suggestions

Alternate Explanations:

- More productive firms export. More productive firms also use nonroutine tasks more intensively. Thus a shock to productivity will lead to a simultaneous increase in both service exports and the use of nonroutine tasks.

Questions and Suggestions

Empirical Specification and Results:

- Could look at all firms that don't export in t and, of those firms, compare the ones who eventually end up becoming exporters in $t+1$ to those that don't (following Bernard and Jensen 1999). Are firms in initially more technology-intensive industries more likely to become exporters?
- The authors do something like this in the robustness checks, and get the desired results. This could be a more prominent part of the paper.

Questions and Suggestions

Empirical Specification and Results:

- What is the economic magnitude of the results?
- The results likely underestimate the relationship between technology and service trade.
- By focusing on one extensive margin (the number of firms), they neglect other extensive margins of trade (e.g. the number of services traded by each firm).

Questions and Suggestions

The role of offshoring:

- Technological change is not the only thing that impacts the mix of tasks in an industry. Offshoring can also lead to a greater share of nonroutine tasks.
- The authors control for this by dropping all service importers, foreign-owned firms, and multinationals from the dataset. The main results still hold.
- Question: Do you recalculate the industry-level task measures using only workers in non-offshoring industries?

Conclusions

- This paper makes an important contribution by estimating the task and technology content of services trade.
- More work still needs to be done to pin down a causal link between changes in tasks and technology and changes in the number of trading firms.