

Structural Transformation of Occupation Employment: Discussion

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A summary

- This paper looks at structural transformation through a new lens.
- Focuses on the transformation in occupations, within labor market data, rather than sectors within production data.
- A virtue of this approach is that it is less sensitive to changes in the activities that take place within firms;
 - ▶ e.g., outsourcing of certain service activities within a manufacturing firm.
- The authors find that structural transformation in occupations follows some familiar patterns:
 - ▶ As economies grow, more people work in service occupations and fewer in goods occupations.
- A model with occupation-specific technical progress can improve understanding of transformation patterns observed in the data.
- Interesting work with potentially important contribution.

Outline of comments

- Because the paper is straightforward (and because I anticipate a highly lucid presentation!), I focus on a set of conceptual issues.
 - ▶ The distinction between goods sectors and service sectors.
 - ▶ The distinction between goods occupations and service occupations.
 - ▶ The challenges created in the data (especially for low-income countries) by self-employment.
- A few additional words about the model and about structural change.

Goods vs services

- Arguably a distinction that has historical roots in classical economics (and Marxist economics).
- Not clear that it was *ever* a valid or useful distinction.
- Intangibility is a key distinction: a service does not involve an exchange of a physical good.
 - ▶ No inventory.
 - ▶ No physical object separable from producer and consumer.
- Smith (1776) and subsequent classical economists argued that labour used in producing goods was “productive” and labour in other activities was “unproductive” since the products could not be stored and accumulated.

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 - ▶ Bought already washed and hulled in a plast, and packed in plastic at a processing plant: (food processing manufacturing)

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 - ▶ If Starbucks bakes bagels at a central facility and then distributes to its own outlets for sale, the treatment probably depends on the nature of the legal arrangement between the franchise outlets and the central company – similar to the issue of outsourcing raised in the presentation.

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 - ▶ A standardized product delivered through an assembly line process.
 - ▶ Is this a service?
 - ▶ Or is it better described as physically decentralized just-in-time manufacturing?

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- What are “apps” if not manufactured items?
- But then should we think of computer programming as a goods occupation or a service occupation?

Categorization of occupations

- A crucial element of the analysis.
- Challenging to do this cleanly.
- Is there some underlying principle that defines “goods occupations” as distinct from “service occupations”?
 - ▶ The authors refer to a distinction between “brawn-intensive” and “brain-intensive,” but this probably does a disservice to both.
 - ★ Machine-tool operation (“goods”) is a pretty brain-intensive line of work.
 - ★ home health care (“services”) and fire fighting (“services”) are pretty brawn-intensive.
 - ▶ There is arguably something of a gender link in the ways that certain activities are classified:
 - ★ maids and housekeepers are a service occupation
 - ★ gardeners and groundskeepers are treated (I think) as “related agricultural occupations” and are thus a goods occupation
 - ★ painters and electricians are treated as industry occupations
 - ★ Why?

Does the categorization matter?

- The authors show that results are not overly sensitive to changes in categories.
- But does our classification of occupation categories itself reflect an underlying categorization of sectors?
- How do we know that this analysis is not just capturing the sectoral transformation with some relabelling?
- What is the fundamental distinction between people who perform distinct roles in complex value chains, such that some are in goods occupations and some are in service occupations?
- Who is actually producing the tangible goods, as opposed to performing intermediate steps in production processes that *lead* to goods production?

Example: A Set of Goods Occupations

- Precision Metal Working Occupations:
 - ▶ Tool and die makers and die setters
 - ▶ Machinists
 - ▶ Boilermakers
 - ▶ Precision grinders and filers
 - ▶ Patternmakers and model makers
 - ▶ Lay-out workers
 - ▶ Engravers
 - ▶ Tinsmiths, coppersmiths, and sheet metal workers

Example: A Set of Service Occupations

- Food Preparation and Serving Occupations
 - ▶ Chefs and Head Cooks
 - ▶ First-Line Supervisors/Managers of Food Preparation and Serving Workers
 - ▶ Cooks
 - ▶ Food Preparation Workers
 - ▶ Bartenders
 - ▶ Combined Food Preparation and Serving Workers, Including Fast Food
 - ▶ Counter Attendants, Cafeteria, Food Concession, and Coffee Shop
 - ▶ Waiters and Waitresses
 - ▶ Food Servers, Nonrestaurant
 - ▶ Dining Room and Cafeteria Attendants and Bartender Helpers
 - ▶ Dining Room and Cafeteria Attendants, Bartender Helpers, and Miscellaneous Food Preparation and Serving Related Workers
 - ▶ Dishwashers
 - ▶ Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop
 - ▶ Food Preparation and Serving Related Workers, All Other

Self-employment and own account work

- In developing countries, lots of people work in self-employment and tiny firms.
- Census data record them as having occupations that are often sector-specific.
 - ▶ e.g., farmers; carpenters; metal workers
- Many self-employed people probably spend a significant fraction of their time in non-production activities.
 - ▶ purchasing, marketing, retail sales, clerical
- For the most part, the data treat these individuals as entirely engaged in goods occupations.
- Would be interesting to know (perhaps from time use data?) how hours worked are distributed across occupation categories.
 - ▶ Conjecture: hours worked transitions will be less striking than numbers of people.
 - ▶ Conjecture: data probably don't exist

Some questions

- The paper is motivated by two different literatures:
 - ▶ Discussion of outsourcing as a source of transformation and growth in rich countries.
 - ▶ Long-term trends in transformation across countries.
- Are these necessarily usefully combined in a single paper?
 - ▶ Are the forces driving long-term transformation better understood as linked to occupations or sectors?
 - ▶ Some sectors (especially agriculture) seem inextricable from occupations.
 - ▶ Are the long-term drivers of change the same as the short-term ones?

Conclusion

- A valuable and thought-provoking paper.
- More description of the OCCISCO categories belongs in the paper.
- More discussion needed about the relationship between occupations and sectors.
 - ▶ It would be useful to see a mapping of occupations to sectors at a somewhat more detailed level.
 - ▶ Need to persuade readers that the transition from agriculture to non-agriculture is driven by occupation-specific technical change as opposed to other channels; e.g., non-homotheticity or sector-specific change.

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 - ▶ Need to persuade readers that the transition from agriculture to non-agriculture is driven by occupation-specific technical change as opposed to other channels; e.g., non-homotheticity or sector-specific change.
- What makes an occupation a “goods” job as opposed to a “service” job in a world where most production processes are complex multi-stage activities and where the difference between goods and services is already blurry?