

Discussion of
Export Quality in Developing Countries

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Summary

- **What I took away from the paper:**
 - The authors (henceforth: HPS) have estimated the **quality of exports** for a large number of product categories and countries (following the approach of Hallak, JIE 2006).
 - They find that goods categories differ with respect to the variation in quality levels („long“ and „short“ **quality ladders**)
 - Some developing (but not all) countries are located at the lower end of long quality ladders, some are located at the upper end of short quality ladders.
 - The **evolution of export quality** is influenced by per-capita income, human capital and the quality of institutions.

Comments

- **Defining and measuring quality**
 - „We define quality to be any tangible or intangible attribute of a good that increases all consumers' valuation of it.“ (Hallak and Schott, QJE 2011)
 - Challenge: Quality is *not* observable
 - Solution: (Export) prices as a proxy for quality

Comments

- **Defining and measuring quality (contd.)**



Apple i-Phone 5s
(604 €)

An expensive
smartphone

**A high-quality
smartphone?**



Huawei Ascend
Y530 (123 €)

An inexpensive
smartphone

**A low-quality
smartphone?**

Comments

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 - Solution: (Export) prices as a proxy for quality
 - Problem 1: **Costs** as determinants of prices („Chinese shirts might be cheaper than Italian shirts in the U.S. market because of lower quality, but they might also sell at a discount because China has lower production costs; Hallak and Schott 2011:418)
 - Problem 2: **Market structure** as determinant of prices

Comments

- **Defining and measuring quality (contd.)**

- A simple model of Cournot competition

- Linear demand: $p = a - b \sum_{i=1}^N x_i$

with N = number of (identical) firms

- Constant marginal costs (identical for all firms): c

- Price in a symmetric Nash equilibrium

$$p^* = \frac{a}{N+1} + \frac{cN}{N+1} \quad \text{For } a > c: \text{ Price } \textit{decreasing} \text{ in number of firms } N.$$

Demand shifter
(proxy for quality)

Marginal
costs

Comments

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– Is the i-Phone so expensive because...

- it offers **higher quality**?
- **production costs** are higher?
- it is sold on a **quasi-monopolized market**?

Comments

- **Defining and measuring quality: The HPS approach**

- For a given good:

$$\ln p_{mxt} = \zeta_0 + \zeta_1 \ln \theta_{mxt} + \zeta_2 \ln y_{xt} + \zeta_3 \ln \text{Dist}_{mx} + \xi_{mxt}$$

Quality (unobservable) Exporter's per-capita income
(as a proxy for costs, technology)

- Estimated quality:

$$\delta \ln \theta_{mxt} = \zeta_1' \ln p_{mxt} + \zeta_2' \ln y_{xt} + \zeta_3' \ln \text{Dist}_{mx}$$

Estimate of good's
quality

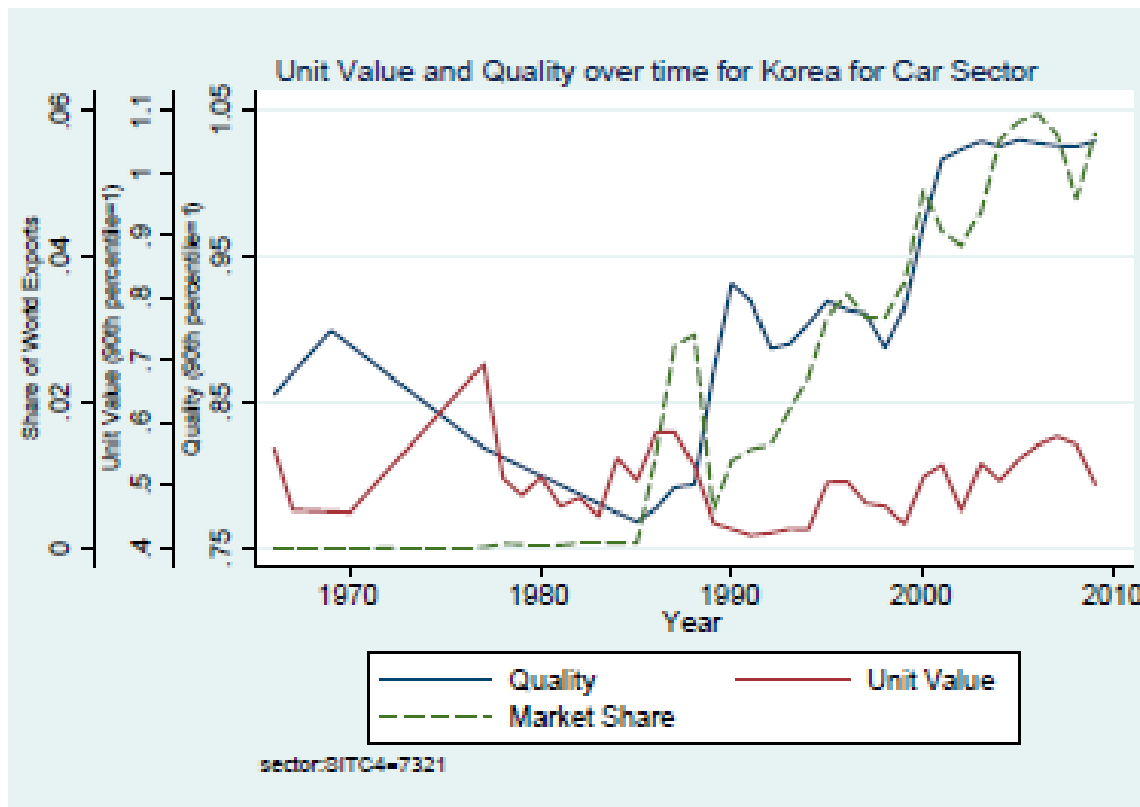
Estimated parameters (using a second
equation on bilateral imports)

Comments

- **Defining and measuring quality: The HPS approach (contd.)**
 - Note: Variation in prices adjusted for variation in per-capita income and distance interpreted as **variation in quality**.

Comments

- **Prices, unit value and quality in Korean manufacturing**



Interpretation:

Rapid growth after Asian crisis should have driven down prices.

The fact that this *didn't happen* is attributed to an **increase in quality**.

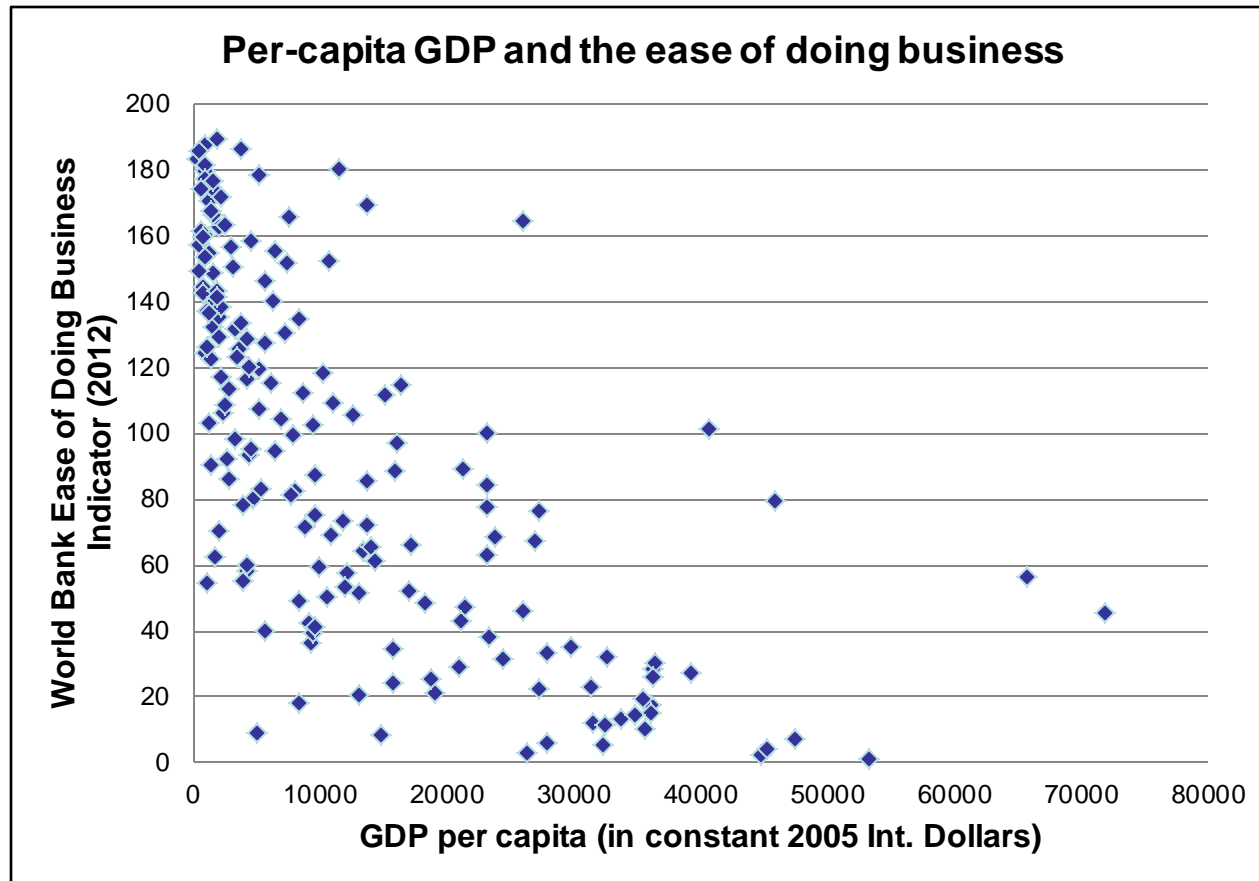
Comments

- **Defining and measuring quality: The HPS approach (contd.)**
 - Note: Variation in prices adjusted for variation in per-capita income and distance interpreted as **variation in quality**.
 - Question: Do per-capita income and distance capture all „**non-quality determinants**“ of prices?
 - How about **market structure**?

Proxy: The World Bank's „**ease of doing business**“ indicator

Comments

- **GDP and the ease of doing business**



Note: Lower value of indicator = lower entry barriers

Source: World Bank (WDI)

Comments

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Proxy: The World Bank's „**ease of doing business**“ indicator

Observation: Reasonable correlation between per-capita GDP and ease of doing business → Per-capita income can also be used as (rough) proxy for market structure.

Comments

- **Minor comments:**

- Identification of quality by using a **second equation**:

$$\ln(\text{Imports})_{mxt} = \text{ImFE} + \text{ExFE} + \alpha \text{Dist}_{mx} + \beta I_{mxt} + \delta \ln \theta_{mxt} \ln y_{mt} + \varepsilon_{mxt}$$

Mostly variables with little (or no) time series variation

Consequence: All time series variation is explained by the interactive term – which might result in biased estimates of δ .

- „All coefficients have the expected sign“ (page 8)

Note: We are talking about 851 sets of 8 coefficients

Comments

- **On the policy conclusions**
 - „Some of the more mature Asian countries may require **horizontal diversification** to enable more quality upgrading.“ (page 11)
 - How about **comparative advantage** and the **gains from trade**?
 - How should the government implement /support such a **structural change**?