Relative Prices and Relative Prosperity

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1. Summary

- The paper documents two very interesting facts:

– **F1**: While Corr (IR in PPP prices, Y)>0,

Corr (IR in domestic prices, Y)$\simeq$0.

This means that P_I / P_C must be higher in poorer countries.

– **F2**: $P_I \simeq$ constant across countries. P_C is responsible for the cross sectional variation in P_I / P_C .

1. Summary (continued)

- The paper explains these facts with a growth model that incorporates insights from the static B-S model.
- The contribution of this paper is potentially very important. Why? Because it rules out explanations for low capital accumulation in poor countries based on:

– Higher investment taxes in poor countries.

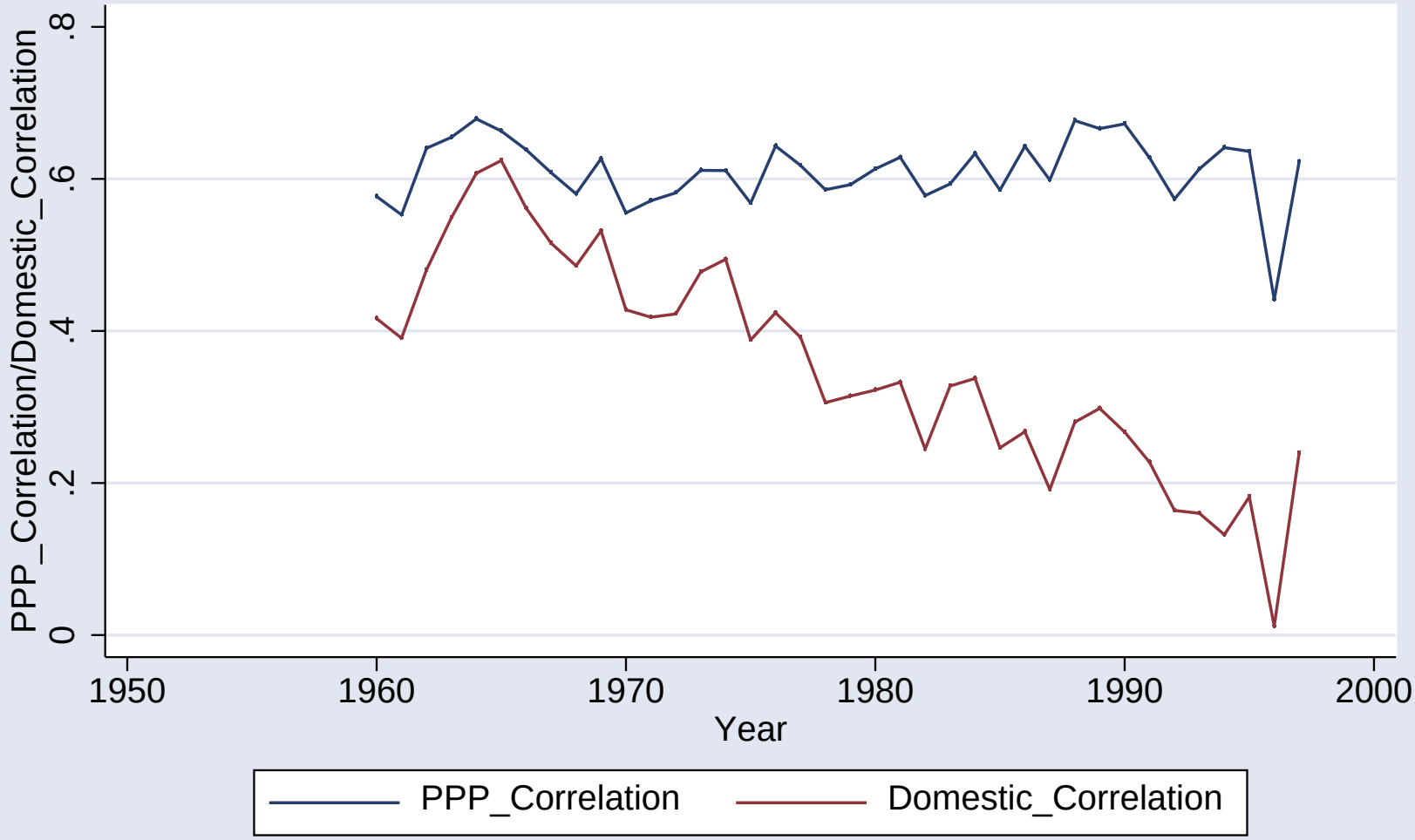
– Low-saving traps due to subsistence needs.

– Lower propensity to save in poor countries.

2. Consistency of the findings (Time Series).

- I first looked back at the patterns of correlations from 1960 to 2000.
- The Corr(IR in PPP prices, Y) is high and relatively constant over the period.
- The Corr(IR in domestic prices, Y) was very high in 1960, and has been declining since. In particular, the correlation for 1996 that H&K document is almost 0. (Fig. 1)

Figure 1: Correlations between Investment Rates and Income 1950−2000



2. Consistency of the findings. (TS cont'd)

- I think a simple extension of H&K's model can explain the increasing gap between the two correlations.

- However, it leaves unexplained the puzzling **decline** in **Corr(IR_domestic prices, Y**) over time.

2. Consistency of the findings. (TS cont'd)

- The increase in the gap can result from P_I / P_C growing faster for poor countries. Is this true?
- I looked at the growth rate of P_I / P_C from 1960-1996 and regressed it on initial income. Indeed it is true: Poor countries have experienced a larger increase in P_I / P_C in the past decades.
- I also looked at the growth rates of P_I and P_C relative to initial income. P_C is the big responsible.

Table 1. Growth of Prices 1960-1996 and GDP 1960

	PI/PC	PI	PC
Log GDPpw	-0.27040**	0.09027	0.36067**
	(0.05316)	(0.06082)	(0.07166)
R-squared	0.170	0.020	0.190

Robust standard errors in parentheses. * significant at 5%; ** significant at 1%. Constant included. N=90

2. Consistency of the findings. (TS cont'd)

- Sum up: H&K can explain:
  - The cross sectional patterns of correlations (particularly for later years).
  - The increasing gap between the two correlations over time. For this, the model should be extended to feature higher growth of A_I/A_C in richer countries.
- Still in need of explanation is the declining correlation of investment rates in domestic prices and income over time.

3. Conclusions from this exercise:

- Poor countries have low levels of physical capital. The paper claims that this is NOT because they have sacrificed little consumption (or invested little in domestic $).
- There is some truth to this. Poor countries did not save necessarily less in the 90's (in domestic $). However, current levels of capital are the result of decades of accumulation, and it seems that a few decades ago, poor countries were indeed sacrificing less consumption.
- So, it can still be true that the low levels of capital today are the result of little sacrifice in the past. We need finer development accounting...

4. The model and some other testable implications:

- The benchmark model has one "tradable."
- Investment goods are tradable. Consumption goods are not tradable.
- No good is traded in equilibrium. There is no motive for trade, because there is only one tradable.
- What happens when trade is allowed for? I.e., when the poor can produce tradable consumption goods with a comparative advantage.

4. The model and some other implications (cont'd)

- With trade, the prediction that Corr (IR in PPP prices, Y)>0 weakens. I.e, this correlation is lower with than without trade. (This is because the share of tradables in consumption declines with income)
- Since in the data Corr (IR in PPP prices, Y)>0 is robust, this suggests that in practice trade between developed and developing countries is negligible.
- Why is trade so low?

  (a) Barriers to trade in DC. (Protection of primary sectors.)

  (b) Productivity of tradables too low in LDC.
- Suggests another test: Corr (IR in PPP prices, Y) should be higher for countries that trade little with DC.

5. Checking Consistency (Open versus closed Countries)

- I split the sample into two groups: Low and High Trade.
- Corr (IR PPP prices, Y) is higher for low-trade countries (openc<median):

– Corr (IR PPP prices, Y)= 0.71 if Openness<Median, 1996.

– Corr (IR PPP prices, Y)= 0.16 if Openness>Median , 1996.

- Good for H&K! But do check other years!

6. Is P_I equal across countries?

- While measured P_I can be equal, "effective" P_I might differ. Higher risk in Developing Countries (e.g: risk of expropriation is higher).
- This higher risk constraints the technology choice set, leading countries to adopt less efficient technologies. This could be behind the choice of less productive technologies.

7. Summing up.

- On the Motivation and F1:

– Poor countries have low levels of physical capital. In the 90's they did not invest less than the rich (in domestic $). But they seemed to have invested less in the 60's-80's.

– So, to some extent, current low levels of capital might still be the result of low sacrifice of consumption early on.

7. Summing up (cont'd)

- H&K model can explain the cross sectional data as well as the growing gap between correlations.
- It's also consistent with the implications for open versus closed economies (although a deeper look--deeper than my superficial exercise-- is encouraged).
- Need more work to understand why the corr(IR_in_domestic_prices, Y) has fallen over time.
- Need more thought on the difference between measured and effective P_I. Risk might create a gap between these too concepts. Risk particularly relevant for LDC.