

THE GERSCHENKRON EFFECT IN INTERNATIONAL COMPARISONS, 2011 AND 2017

COMMENTS ON COMMENTS BY S. SERGEEV

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1. BASELINE INDEX

Why GEKS is used as the baseline index? Is GEKS “ideal”?

No, but it is (one of) the best indexes we can get. And it is the official ICP index.

In fact, we could use any other binary superlative index with the EKS procedure:

Thus, along with EKS (Fischer) or, the standard GEKS, we could use EKS (Törnqvist) or EKS (Walsh) indexes, assembled from the corresponding binary indexes. Or maybe the geomean of the three.

EKS (Törnqvist) is the simplest of the three, can be presented as a star-system (it is usually referred to as the CCD index, after Diewert and others).

However, they all produce very similar results.

What happens when we assemble an EKS index from superlative binaries? Is it still superlative? Math is intractable there. But we believe it is close enough.

2. CHOICE OF ADDITIVE INDEXES

Why use GK and IDB? Why not Rao index? Or Gerardi?

Rao (CPD variant) is not additive. And I wanted to use additive indexes actually used in the ICP.

GK is the classic index, which became synonymous with the Gerschenkron effect [GE]. IDB is a GK but with scale neutrality (like GEKS). [Equal to GK when all countries are of the same size].

Gerardi is interesting, though. But maybe too simplistic? [Gerardi international prices are unweighted geomean of individual country prices].

Yes, if I did a survey of various additive indexes, I would include other indexes such as Gerardi, Van Yzeren, MPCP.

3. SIMILARITY OF PRICE STRUCTURES

Similarity of price structures is an interesting concept, but prices per se don't say how results are constructed. It's a means to an end. The end is the minimization of the Gerschenkron effect as defined in my paper as deviation from GEKS results [or, similarity of the results]. And not in terms of price similarities (i.e., inputs).

Saying that there is no similarity of int. prices with US and China is not really relevant. Those two countries contribute over 1/3 of all inputs into international price structure (GK formula tells us that contribution is proportional to size).

NB. 1. Similarity also depends on metrics used. 2. We may not necessarily want similarity with countries exhibiting high variances due to errors. Thus, the index stability is important.

4. GEKS AND ADDITIVITY

Sergei is talking about World average prices. This was actually implemented in ICP 2005 Global Report.

Two problems:

1. Non-additivity was still there (though smaller)
2. World prices was not easily understood. There was some confusion. In particular, why that World prices Dollar is not equal to US Dollar.

Actual non-additivity for Asia region (official ICP 2017 results), GFCF:

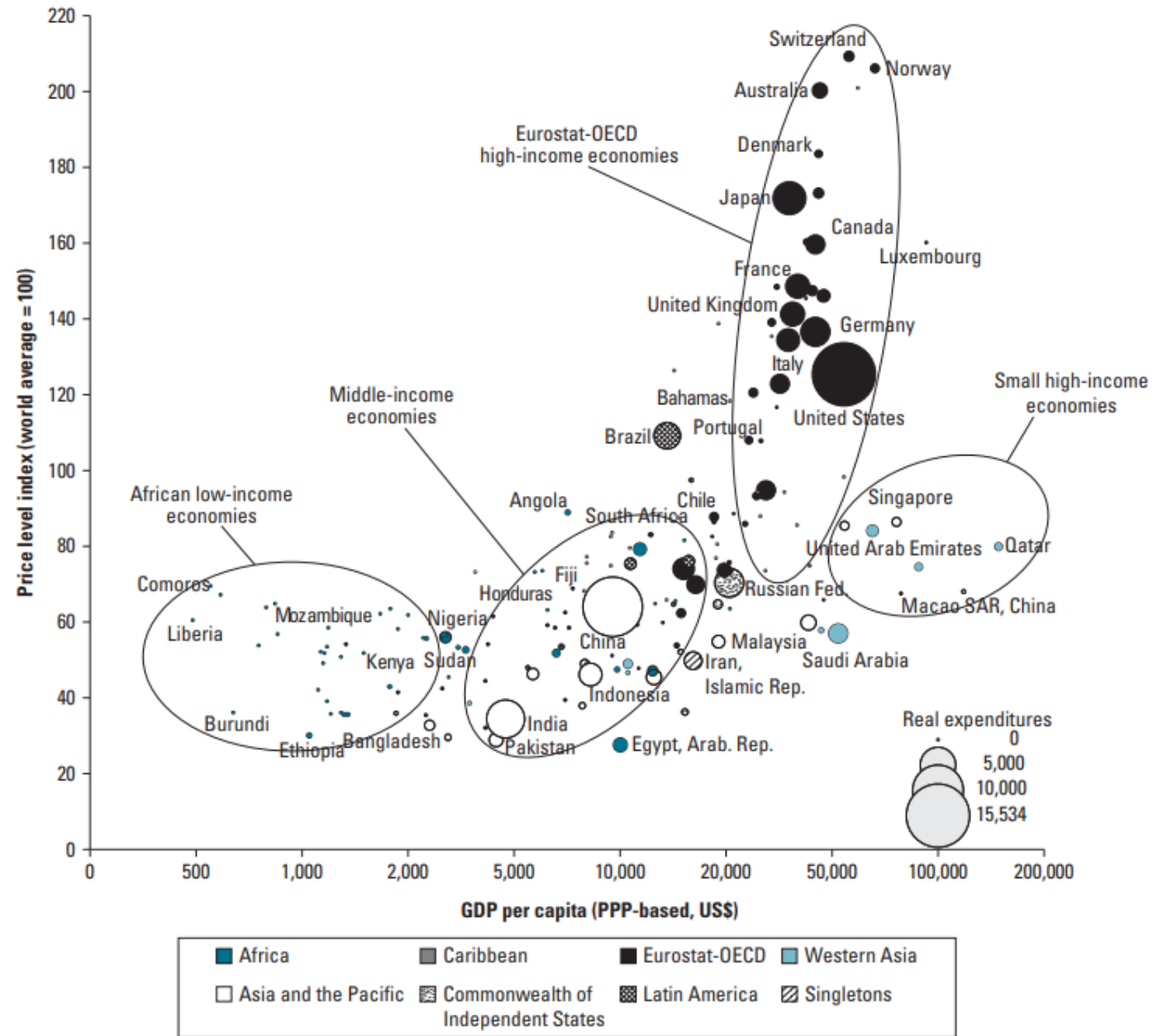
	BGD	BRN	BTN	CHN	FJI	HKG	IDN	IND	KHM	LAO	LKA	MDV	MMR	MNG	MYS	NPL	PAK	PHL	SGP	THA	TWN	VNM
GROSS FIXED CAPITAL FORMATION	172.1	9.1	3.0	7626	1.9	92.6	846.3	1966	5.7	13.4	52.6	4.0	60.0	6.6	190.7	18.7	112.2	165.3	136.7	241.2	197.0	127.8
MACHINERY AND EQUIPMENT	16.5	1.2	0.3	695	0.5	17.4	46.7	229	0.9	1.3	10.2	0.6	8.9	0.9	21.8	1.6	14.9	24.1	18.8	52.6	35.1	11.2
CONSTRUCTION	313.0	12.6	5.3	10619	1.3	88.5	1616.8	2357	7.7	15.5	55.4	5.6	75.1	6.8	256.5	25.1	115.0	184.0	98.0	199.2	134.4	215.7
OTHER PRODUCTS	0.4	0.3	0.0	585	0.1	7.6	31.3	189	0.0	1.7	1.3	0.1	2.6	0.7	12.5	1.9	12.6	12.6	27.9	9.7	30.0	3.5

5. PRODUCTIVITY ADJUSTMENT

Absence of productivity adjustment in OECD-Eurostat-CIS [CIS is merged with OECD-Eurostat via Russia] region is really a problem for comparability with other regions. (It may be a lesser issue for that region on its own).

Even though it is somewhat mitigated by PA in inter-regional linking factors; it still has a drastic effect on comparability (see next slide). And on the Gerschenkron Effect. Can't agree more!

Figure 2.5 GDP Price Level Index versus GDP Per Capita (and Size of GDP Expenditures), ICP 2011



Source: ICP, <http://icp.worldbank.org/>.