

The Bangladesh Tax Structure: A Middle-Income Vision

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□ Outline

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- 2. The Smithian Origin of the Principles of Taxation
- 3. The Idea of Taxable Capacity
- 4. The Lowness of Taxes
- 5. The Tax Structure Question
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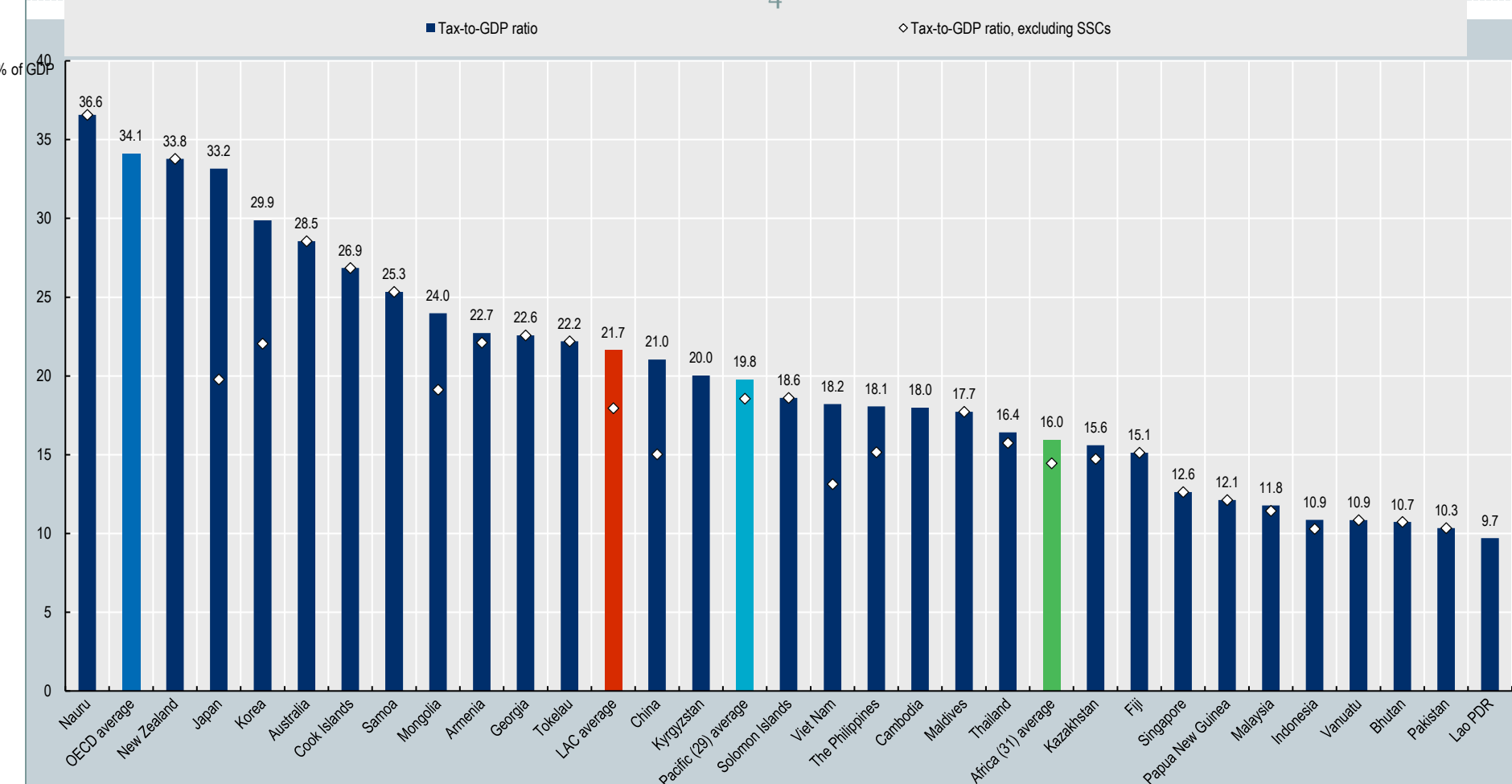
1. Why Taxation?

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- Beyond spending on health, education and infrastructure, in a developmental context it is necessary to accumulate public savings (T-G) over time to augment the stock of domestic capital.
- Provide for ODA counterpart funds
- Low level of tax-GDP in BDG, about 8%. Look at global data for 2021, mainly Asia-Pacific (Figs 1-2, BDG not included).
- Too low to meet demands for UHC; OPP s staggering 74% of THE.
- Education & Technology: Too little spending. Weak HCI rating and declining of late (2017-2021), far behind VNM. Widening the export basket would be hard without high HC.

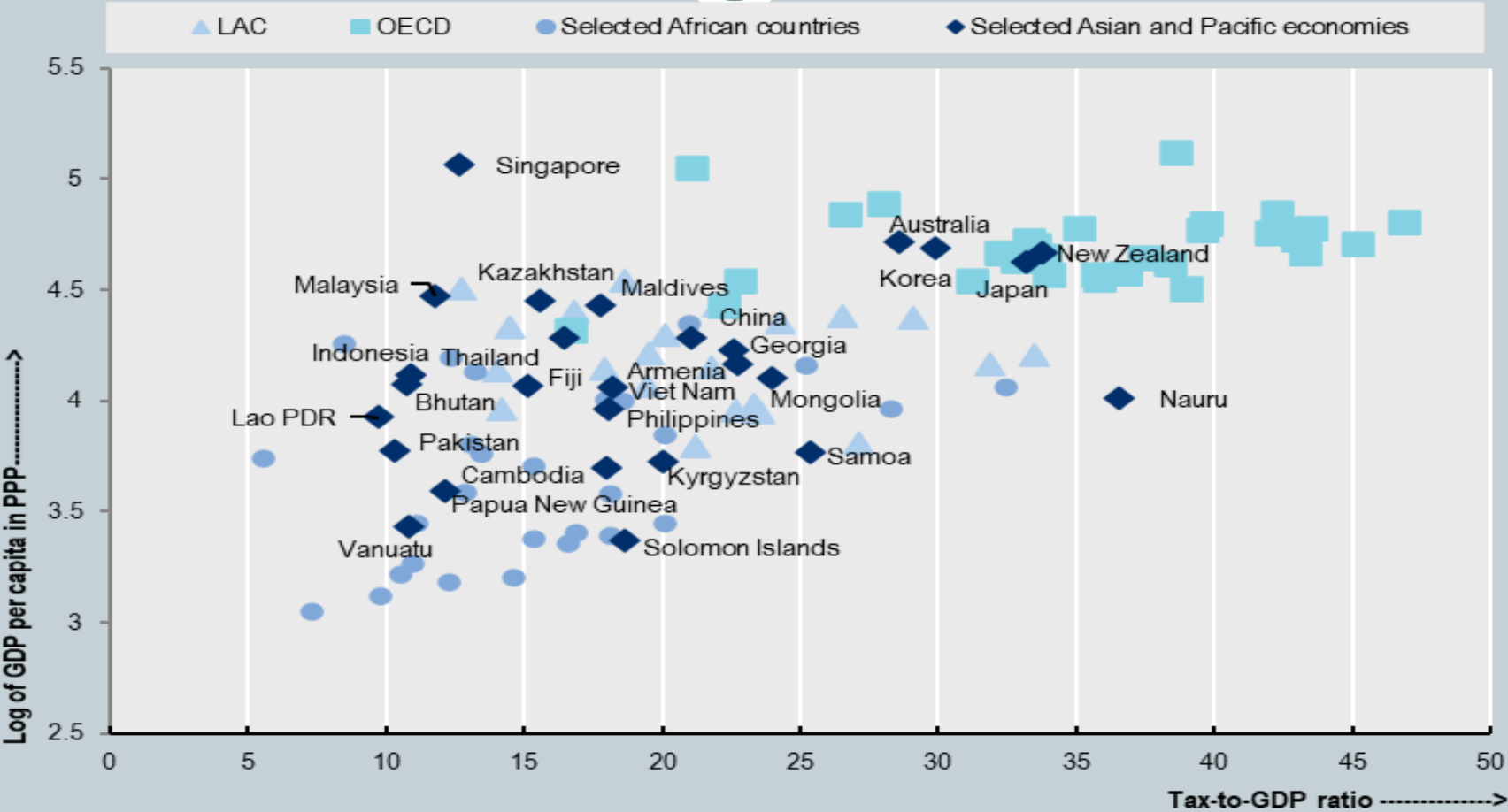
Figure 1: Tax-GDP Ratios in Asia-Pacific & Comparator Groups

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Source: OECD (2023), Revenue Statistics in Asia and the Pacific 2023: Strengthening Property Taxation in Asia, OECD Publishing, Paris, <https://doi.org/10.1787/e7ea496f-en>. Hereafter OECD (2023)

Figure 2: Tax-GDP Ratio, A Global View



Source: OECD 2023

... Why Taxation?

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- **Funding the State: Borrowing /Debt vs Taxation.** In a low-debt environment, borrowing would be easy so long as the underlying debt charges (now & later) assume significance.
- **Middle-Income Vision:** It is the tax level & the tax structure that would benefit a modern upper-middle income country (UMIC): as of 2021 USD 4,096 to 12,695 (GNI, Atlas).
- Both the tax level & its composition (tax structure) are to be analysed below.

2. The Smithian Origin of the Principles of Taxation

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- Most discussion under the topic notes several criteria of taxation.
- Today I highlight three ideas:
- (a) Equity (Smith, Ricardo, Mill): Though most were leaning on proportional taxation, further analysis of Mill's idea goes toward progressivity.
- Later clarification of equity into Horizontal & Vertical notions, which directly calls for progressivity of the system.
- (b) 'Least-Costly' (efficient) means of raising revenue: Taxes distort and dampen economic activities away from the pre-tax equilibrium. Relevant when supply/demand are elastic ...
- The concept of Excess Burden or Dead-weight Loss (DWL): loss over and above the tax paid. Frank Ramsey (1927).

... Principles of Taxation

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- (c) Benefit Principle of Taxation: Tax according to the willingness to fund a public good (e.g., highways, national defence, clean air/water) ...
- Early work of Erik Lindahl (1919) & later Samuelson, Musgrave & later writers.
- Preference revelation literature.
- However the principle leads essentially to an earmarked rule of taxation (e.g., bridge tolls dedicated to its maintenance only).
- Unlike the early views, this is actually an efficiency rule where applicable; there is nothing about equity here.

3. The Idea of Taxable Capacity

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- Definitions: Tax Instruments/handles, tax base, tax-effort, tax share, tax structure, MTR, effective tax rate,
- Direct, Indirect & Lump-sum Taxes
- Data Issues: General difficulty with actual tax yields of recent dates, sometimes more generally: (BD vs Indian budget docs).
- Federal Countries: Central and sub-central entities ...
- Taxable Capacity: Conceptual idea: Capacity of a nation to raise tax revenue is dependent upon the fundamental elements of the economy and its evolving structure.
- What are these fundamental elements?
- GDP and Per-capita Income, Surplus Income, Debt Profile, Excess Burden, Inequality & Fairness (e.g., Rawlsian ideas).

... The Taxable Capacity

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- Measurement of Taxable Capacity: Several leads
- (a) Early **empirical work** to explaining the tax-GDP ratio mostly with cross country data in terms of GDP components or major tax bases (e.g., Martin and Lewis (1956), Oshima (1957), and Hinrichs (1965,1966).
- Hinrichs predicted that “rough rule of thumb that the government revenue share is equal to 5% plus one-half the openness ratio” (1965, p.551).
- By this metric in 2022, BD tax ratio should have been 15.5%, about double of the actual.
- Similar anomalies appear for richer countries: at a much higher income, something approaching 9K in current USD) would be ‘sufficient’ to meet/exceed tax effort above 18%. Has not happed.

... The Taxable Capacity

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- (b) *Optimal Tax Literature* (PIT): à la Mirrlees (1971). The numerical illustration reaches a maximum of 34%, while the average tax rate was below 20%, as opposed to much higher actual rates in high income countries at the time.
- Hard to emulate this work for LMIC context due to the lack of robust parameter estimates of demand and supply of labour supply & goods.
- (c) IMF & PPP as an explanatory variable: Similar to Hinrichs type analysis with a 2011-19 longitudinal dataset. Best so far.
- Bhalla (2022) reports that the above predicted India's mean tax-GDP ratio over this period in 2019 to have been 15.6% than the actual 16.7, i.e., an excess tax effort of 1.1 percentage points. He went on to claim that India may be taxing too much!

... The Taxable Capacity

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- If we extrapolate these estimates for FY22 for which we have actual data, the Indian tax ratio should have been about 17-18%; actual figure for FY 22 was 17.9% (Table A2 in the appendix).
- (d) Inference for BDG: On a linear intrapolation, the above arithmetic suggests that BDGs tax ratio in FY22 should have been about 17%, as against of the actual yield of 7.73% (Table A2 below).
- If we had more time, we could engage in some meticulous arithmetic of the incremental revenue required to deliver UHC, education, human capital and technology, and infrastructural investments consistent with the targeted faster growth of the economy.
- We restate that discussion by claiming that the desirable tax/GDP ratio for BDG to be in the range 15-20% as of FY22.

Fig 3: Too Steep to Climb?

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Source: Blog by Raul F. Junquera-Varela and Bernard Haven, (18 Dec 2018), Photo: Tony Webster/Flickr. Graphic: Nicholas Nam/World Bank [<https://www.blogs.worldbank.org/>]

4. The Lowness of Taxes

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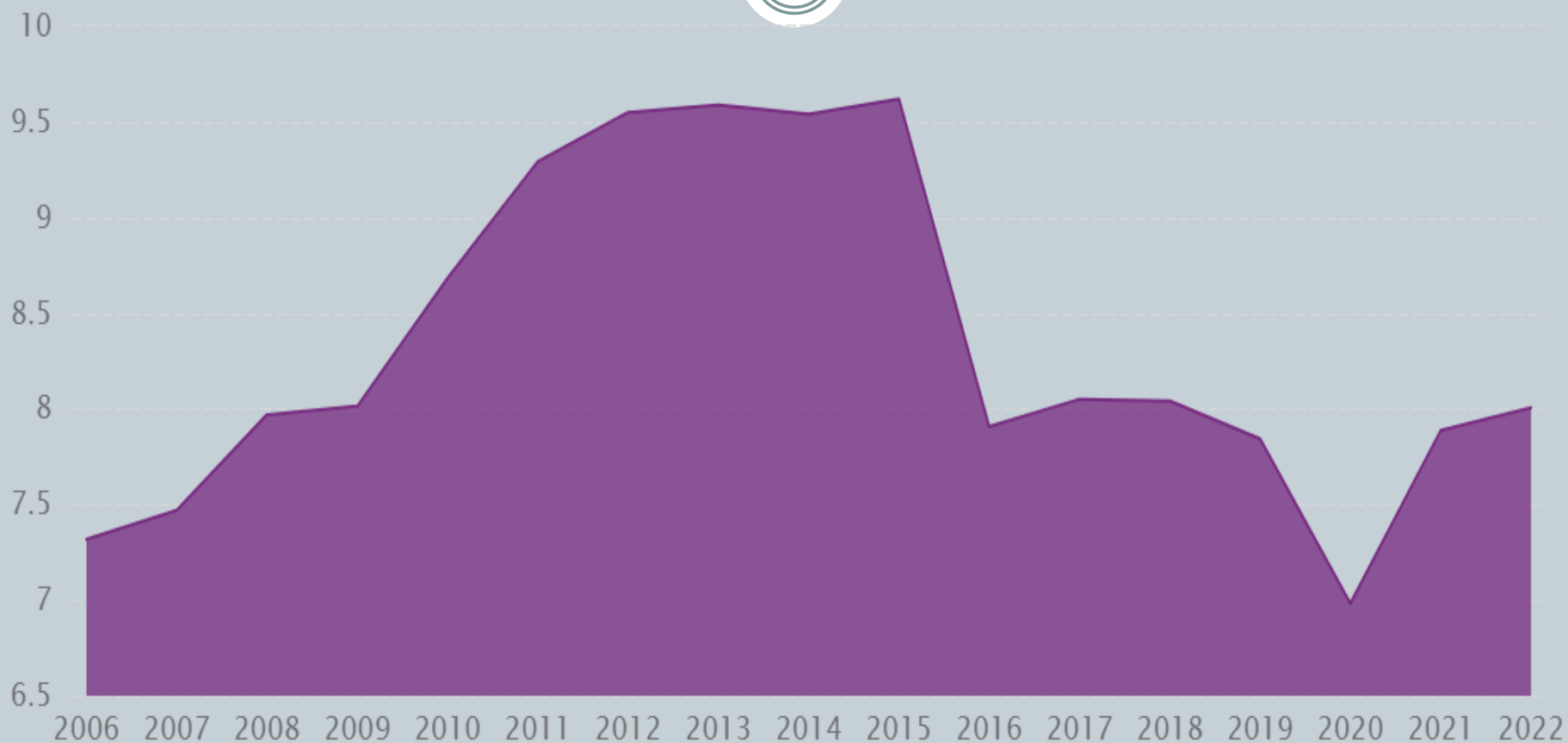
- South Asian Tax-GDP ratio in (2021): OECD (2023a) does not report 2021 data for BDG or India, due to delays & FY conversion to annual data.
- We construct the realised tax effort for 2021 *calendar* year for BGD (7.63) and IND (17.3).
- Table 1 illustrates that Africa (31-country in OECCD data) reaching a tax ratio of about 16% on a rather low income vis-à-vis the SA-5.
- A 64\$ Question: Why are BDG taxes so low, and that over such a long period?
- See Fig 4 too for a historical snap shot.

Table 1: Tax Effort and Per-capita Income (2021 average)

Indicators Group	Tax Effort (% GDP)	Per-capita GNI (Current USD)	Per-capita GDP (2017 Constant PPP)	Income Status (GNI Atlas)
Africa (31)^(a)	15.6	≈ ^(b) 1,600	≈ 2,600	LMI (low)
Asia-Pacific (31)	19.8	≈ 10,000	≈ 15,000	UMI (high)
LAC (27)	21.7	≈ 8,131	≈ 15,000	UMI (mid-range)
So-Asia (5)^(c)	10.8	2,038	8,226	LMI (mid-range)
Bangladesh	7.63	2,570	6,221	LMI (mid-range)

Fig 4: BGD Tax revenue (% of Nominal GDP)

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■ Tax Revenue: % of Nominal GDP: Annual: Bangladesh

Source: Ceicdata.com [downloaded on 11 Nov, 2023]

SOURCE: WWW.CEICDATA.COM | CEIC Data

Some hypotheses on low tax-effort

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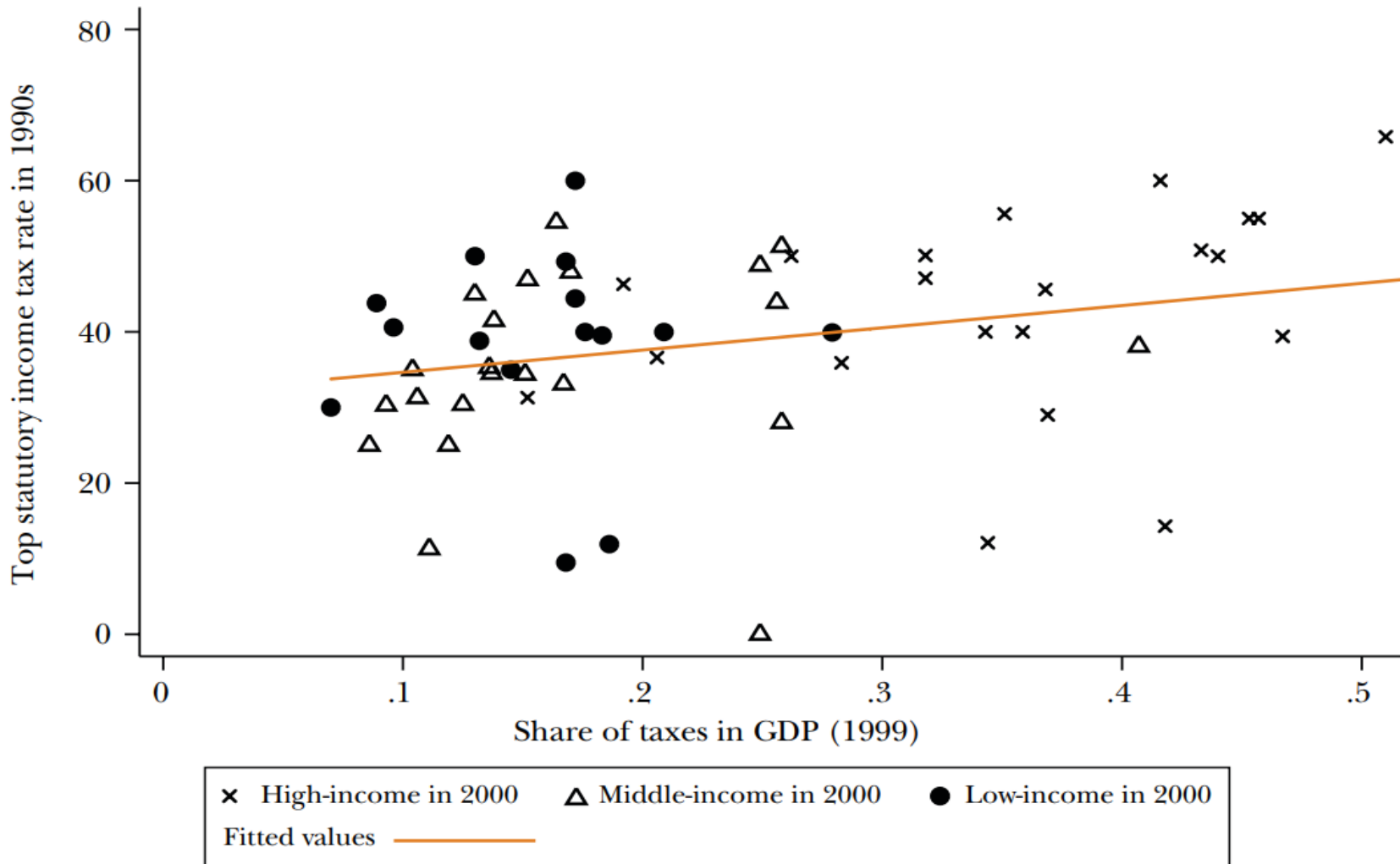
- H1: Low because LMICS are poor, low per-capita GDP
- H2: Low because LMICS because the tax rates were too low
- H3: Low because LMICS have a larger share of the economy under the informal sector.
- H4: Low because LMICS do not have all the right ‘tax handles’, namely the tax structure is out of step with the evolving economy.
- H5: Low because LMICS have weak and corrupt tax administration

... The Lowness of Taxes

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- H1 *Lowness of Income*: The preceding discussion (esp data in Table 1) debunks the hypothesis as being mostly false.
- BD income has risen several-fold over the past 35 years but with no change in the ratio.
- H2 *Low Tax rates vs Low Base*: Gordon & Li (2008) observe that only the PIT rates are different (43 vs 35). Other taxes, they are similar, CIT (30 vs 27) & VAT/GST (15 vs 16).
- Besley & Persson (2014) cite recent empirical evidence to suggest that the low tax yield is primarily due to the narrow tax base, and not the tax rate. See Fig 5.
- Many countries with different tax rates appear to exhibit similar revenue-GDP share.

Fig 5: Tax Rates and Tax Effort (Besley & Persson, 2014)

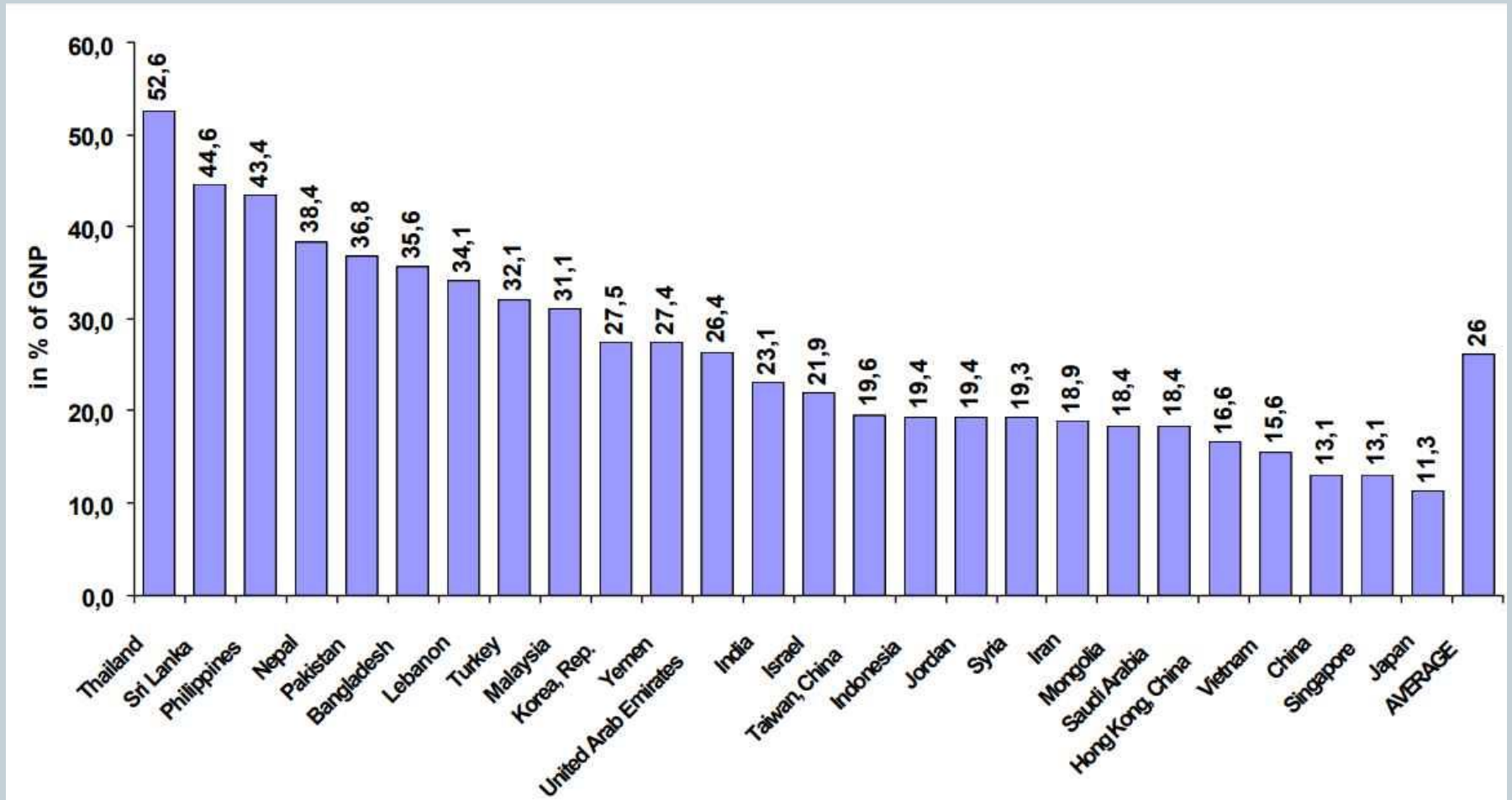


... Hypotheses on low tax-effort

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- H3 *Informal Sector*: Something here.
- Friedrich Schneider's work (2002): BDG at 35.6% (see Fig 6).
- In economies with large informal sectors we apparently see that the effective tax rates are much lower than the statutory rates.
- In the data set used by Gordon & Li (2008), it does seem that the extent of the differential UGE only explains a small part of the gap between the tax ratio of rich vs the poor.
- The gap reduces from something like 11 to 10 pps.
- But that was somewhat out of data. Scope of further work to estimate both UGE as well as the tax potential loss.

Figure 6: Asia, Shadow Economy in % of GNP 1999/2000
(Schneider, 2002, p9)



... Hypotheses on low tax-effort

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- H4 *Inadequacy of Tax Handles* (Tax Structure): This is discussed in the next section.
- H5 *Weak & Corrupt Administration*:
- Besley & Persson (2014) have analysed the issues empirically and find corruption, presumably via tax avoidance and tax evasion, is correlated with a low tax effort (p107). WB & similar data (CPI).
- I have not seen any estimation in the BDG context of the possible loss of revenue due to corruption. Most discussion is anecdotal in nature.
- Old BIDS study by Nuimuddin Chowdhury on the differential performance of PIT vs CIT in the mid-1980s.
- Thus we conclude that though the informal economy & corruption would expand some extent of the low ratio, but most of it is possibly due to the dormant tax structure.

5. The Tax Structure Question

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- *A priori*, it would seem that one ought to track the faster-rising sources of economic gains in society (e.g., property income and related transactions) as the economy progresses and design measure to tap these sources.
- It also implies that the tax reform agenda has to be a nimble one to be re-purposed as the necessity arises.
- Ideal tax structure: What does theory tell us?
- Gordon & Li review the literature conclude that there ought to be uniform taxation on consumption goods (i.e., efficiency in consumption) and in the production of goods (efficient production), but no tariffs, nor any tax on capital income.

... Tax Structure

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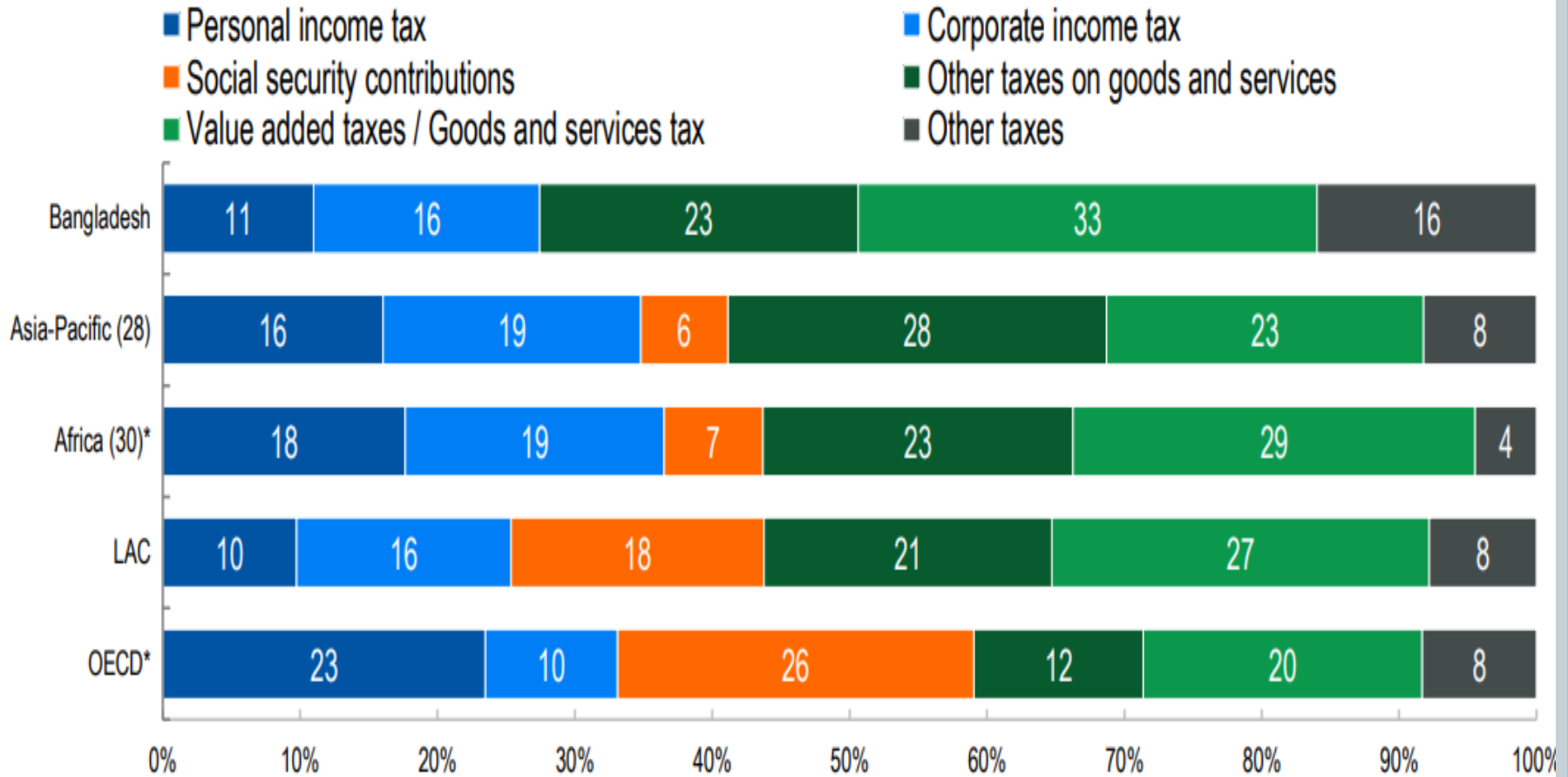
- *Inflation Tax*: In view of the deleterious effect of inflation on the poor (typically not enjoying much indexation benefits) and savers, economists generally decry the reliance of the Treasury on *seigniorage* (i.e., the spoils of the inflation tax).
- Indeed, Gordon & Li (2008) data reveals that *seigniorage* revenue accounts for between 22-25% of total government revenue of LLMICs.
- Little data in BD context (empirically). Role of cash in economy.
- Friedman recommended actual deflation to render the real rate of interest to be positive to be consistent with positive economic growth. The goal was to have ultra-low nominal rate of interest, say zero, (as in post-COVID pix in HICs). So real cost of liquidity!

... Tax Structure

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- While the optimal tax predictions seem NOT being evident in real life, HIC tax structure comes close (Gordon-Li).
- They exhibit very low tariffs and low net revenue from CIT.
- Though HICs have retained selective excise taxes, one can make an argument in its favour as internalising consumption externalities.
- BDG tax structure in 2020 displayed revenue shares of 27: 56: 16 among 3 broad group, direct indirect, & other (PIT/ CIT/SSC): VAT/GST/OTGS: Other. (see Fig 7)
- By contrast, LAC region: 44: 48: 8, while Asia-Pacific: 41:51: 8.
- Hence there is underutilisation of direct taxes (a margin of 15.5 percentage points) vis-a vis the two UMI groups.
- By contrast overindulgence on indirect taxation is relatively modest at 6.5 points.

Figure 7: The BGD Tax Structure in 2020, A Snapshot (source: OECD, 2023a)



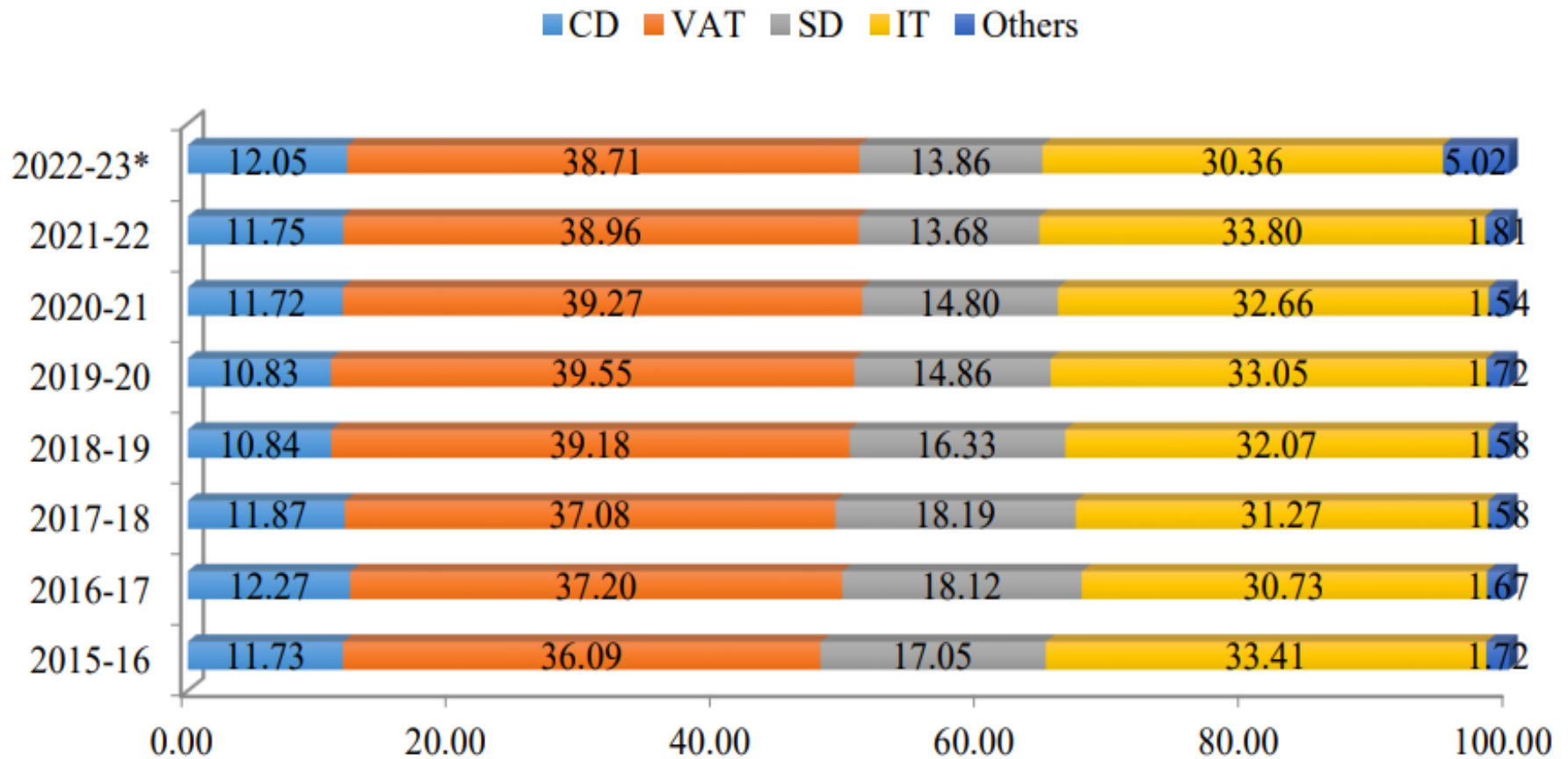
* Data for 2019 are used for the Africa (30) average. The 2019 OECD average is used as Australia and Japan 2020 data are not available.

... Tax Structure

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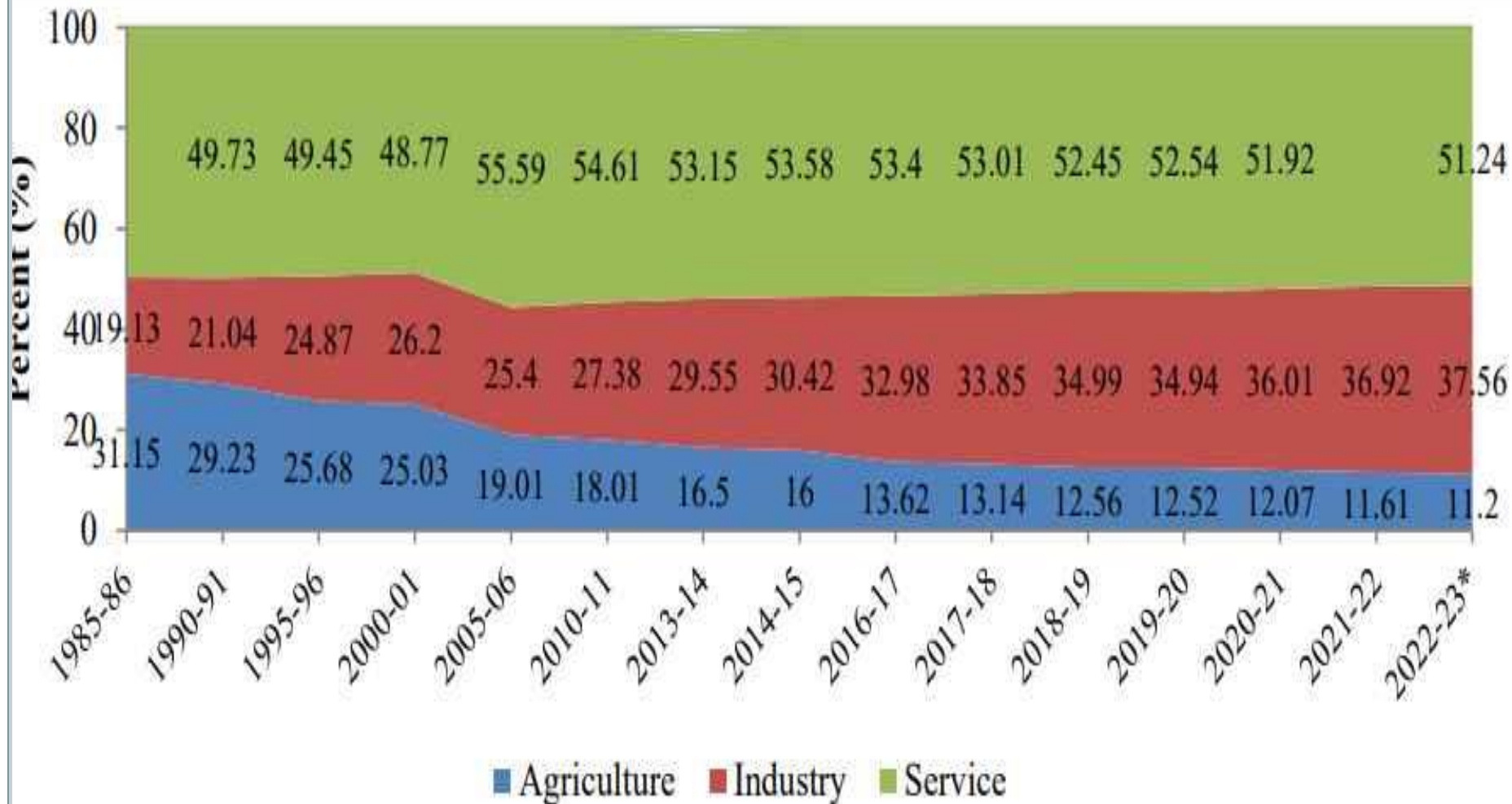
- Next, we stress the *Stagnancy of the BDG Tax Structure*: Ignoring the income data for FY23, Figure 8 presents the chief categories of taxes over the 7-year span, FY16-FY22.
- The only perceptible change is a feeble shift toward the VAT tax-share from about 37 % at the start to about 39% by the end of the period.
- What about the Structure of Output? See Fig 9
- Pattern, 37-yr period, FY1986 to FY2022: The economy evolved greatly.
- We notice a significant increase in the share of industry (+17 points) while a commensurate decline in (-19 points) in agriculture.

Fig 8: The Stagnancy of BGD Tax Structure: FY2016-23 (MoF, 2023, p35)



(* July- February, 2023)

Fig 9: Sectoral Share of BGD GDP (in Constant Prices): FY1986-2023 (Source: BER, 2023, p16)



... Tax Structure

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- *Structure of BDG GDP*: The gains in industry would ordinarily imply increased employment of both machinery and workers.
- Does the revenue picture capture these changes at all?
- None that we notice, certainly not in the most recent 7-yr phase (no change in combined PT/CIT).
- Right Tax share of CIT:
- The issue depends on how investment is financed at the margin. Mustafiz Rahman et al (2016) report 74% via bank finance.
- At 100%, the cost of capital is all written off immediately, & CIT becomes a pure profit tax. No distortion whatsoever.

CIT Reforms: Gig 10

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- The neutrality of CIT

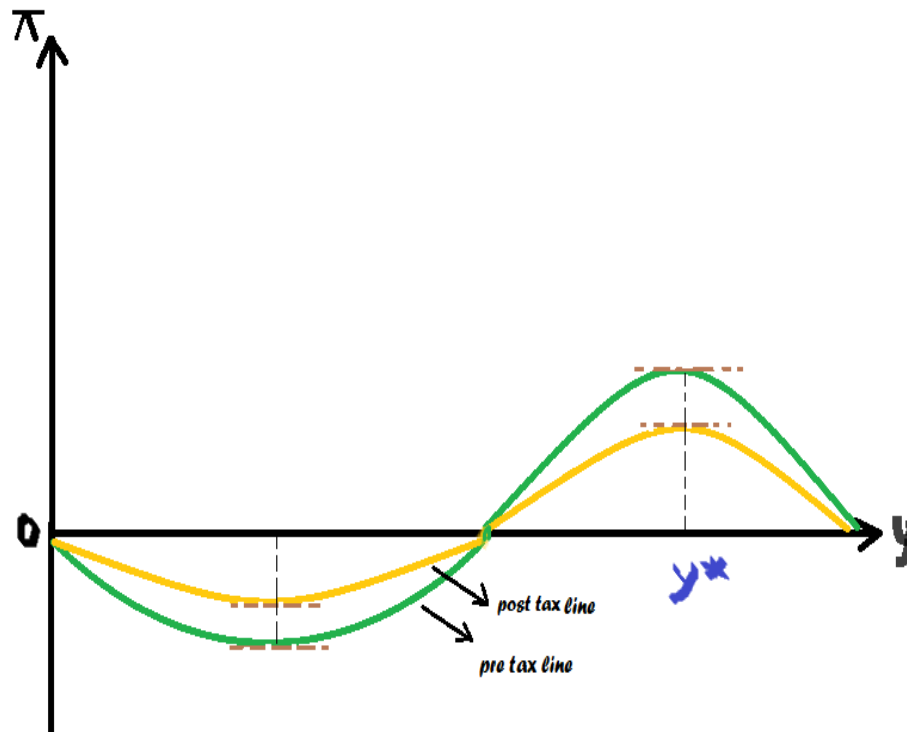


Table 2 : The Indian CIT Experiment (2019)

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Categories Year	CIT Revenue (actual), Cr	GDP (in Cr)	CIT/GDP ratio
FY17	4,84,924	15,362,386	0.0316
FY18	5,71,202	17,098,304	0.0334
FY19	6,63,572	18,886,957	0.0351
FY20	5,56,876	20,074,856	0.0277
FY21	4,57,719	19,800,914	0.0231
FY22	7,12,037	23,664,637	0.0301

Sources: Author's calculation based on actual revenue, Govt of India budget documents

... Tax Structure

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- Bhalla (2022); “... For the three months April-June 2022, corporate tax revenues, y-o-y, are up 30 per cent. Using fiscal 2019-20 as a base, corporate tax revenue has increased by 66 per cent, GDP by 33 per cent — an average tax buoyancy of 2.0 over three years. (p29)”
- Hindsight: (Whole Year) CIT actually rose by a compound rate of 13.1 over the two-year period FY20-22, while GDP, all data in current prices, rose by 8.6% annually, yielding the buoyancy figure of 1.52.
- However, *ipso facto*, the pre-reform data, say between FY17 to FY19 shows that in over these two years prior to the reform yields a buoyancy rate of 1.56 thus blunting Bhalla’s optimism to an extent.
- Jury is out on the fate of the CIT rate cut.

6. Broad Tax Reform Ideas

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- 6.1 Coming to Grips with the Informal Sector
- 6.2 PIT Reform (Base broadening, withholding taxes, capital gains taxation, technology, presumptive taxation).
- 6.3 CIT Reform
- 6.4 VAT/GST Reform: India's GST package ...
- 6.5 Land Tax: Any takers?
- 6.6 Tobin Tax: EU prospects
- 6.7 Consumption as Tax Base

7. Tax Administration, Compliance & Evasion

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8. Conclusion

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- The political economy literature suggests that significant improvement in tax effort can only come after the state commits in earnest to improve the relevant institutions than merely undertake tax reforms.
- A more balanced position, in light of the discussion presented above, would be that tax reform must be undertaken while at the same time initiating serious measures to repair the weaknesses of the state.
- Given that institution building/strengthening is a slow process, a match has to be found, perhaps by trial /error, so that one comes up with a tax system that can actually be implemented to yield the desired revenue share so that we move away from a bad equilibrium to a hybrid state, if not jump altogether to a good equilibrium.

Appendix: Background Data & Tables

Table A1: BGD Tax Revenue FY21 & FY22

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Year Categories	FY 22 (in BDT, Cr) [GDP %]	FY 21 (in BDT, Cr) [GDP %]	Annual 2021 (0.5 FY21+ 0.5 FY22), % GDP
(1) Tax Rev_NBR	300,179.08 [7.56]	259,881.8 [7.36]	7.46
(2) Rev non-NBR	6,704 [0.17]	5,916 [0.17]	0.17
Total Tax	306,883.08 [7.73]	265,797.8 [7.53]	7.63
(3) Non-Tax Rev	33,056 [0.83]	58,862 [1.67]	1.25
Total Rev	339,939.08 [8.56]	324,659.8 [9.20]	8.88
GDP (Current Price)	39,717,000	35,302,000	37,509

Source: Author's construction based on Table 4.2, BER, MoF (2022, 2023)

Table A2: Indian Revenue Pattern, FY20-FY22

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Year	FY 20	FY 21	FY22
Categories	(INR, Cr) [GDP %]	(INR, Cr) [GDP %]	(INR, Cr) [GDP %]
(i) Central Tax Rev^(a)	2,010,059 [10.01]	2,027,104 [10.24]	2,709,315 [11.45]
(ii) States' Own Rev^(b)	1,224,000	1,172,000	1,521,000 ^(c)
(iii) Tot Tax Rev (India)	3,234,059 [16.11]	3,199,104 [16.16]	4,230,315 [17.88]
(iv) Non-Tax Rev^(a)	588,701	432,406	625,498
(i) Total Rev (Central)	2,598,760	2,459,510	3,334,813
(v) GDP (Current Price)	20,074,856	19,800,914	23,664,637
(vi) Total Rev (all India)	3,822,760	3,631,510	4,855,813
(vi) Total Rev/GDP (%)	19.04	18.34	20.52