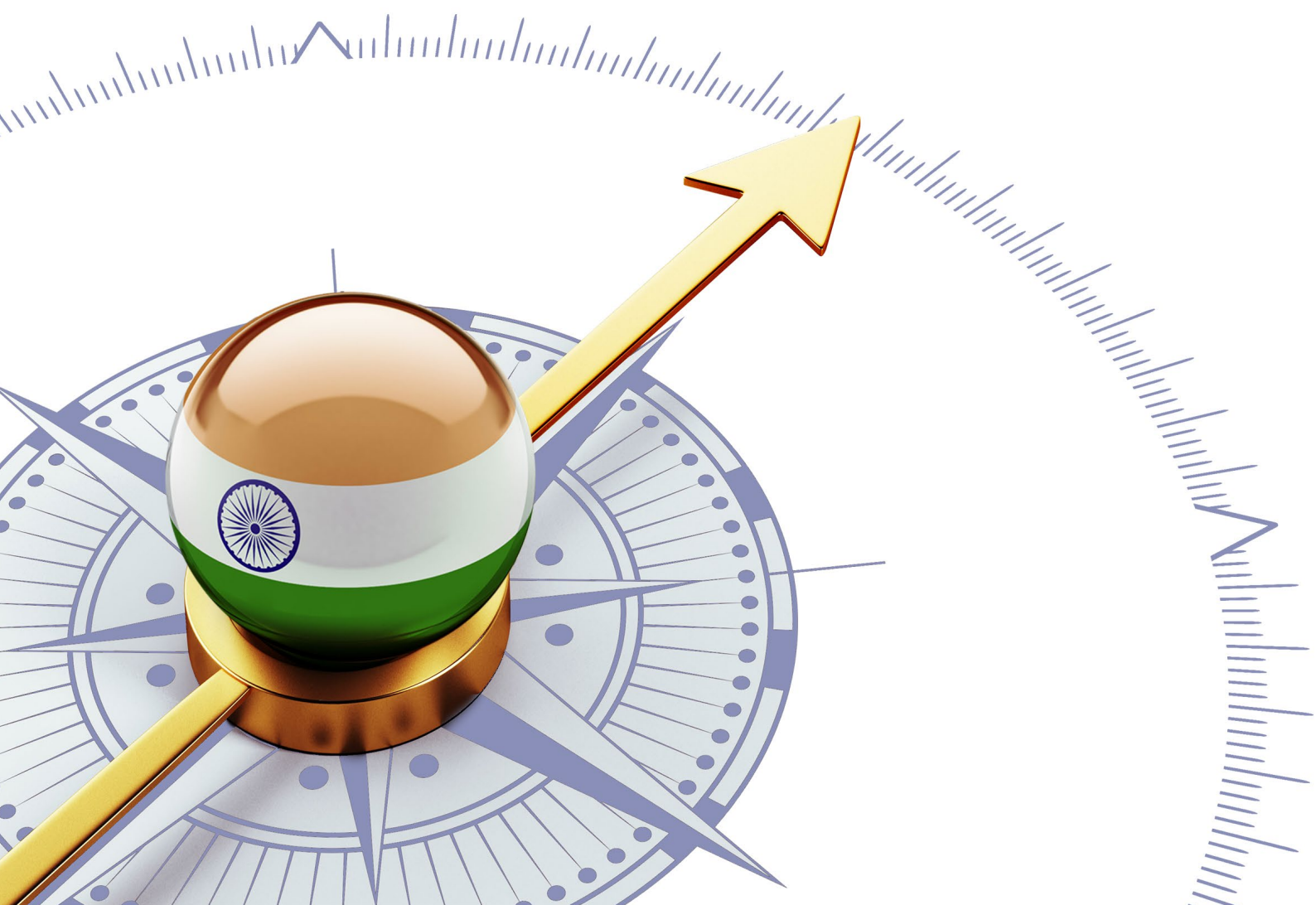


India's New Growth Recipe

Globally Competitive Large Firms



SHISHIR GUPTA AND RISHITA SACHDEVA

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Centre for Social and Economic Progress (CSEP)
CSEP Research Foundation
6, Dr Jose P. Rizal Marg, Chanakyapuri,
New Delhi - 110021, India

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India's New Growth Recipe

Globally Competitive Large Firms*

Shishir Gupta

Senior Fellow & COO

Centre for Social and Economic Progress

New Delhi, India

Rishita Sachdeva

Research Associate

Centre for Social and Economic Progress

New Delhi, India

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Table of Contents

Executive Summary	5
Introduction	7
Literature Review	10
Growth driven by changes in total factor productivity growth	10
Acceleration and deceleration in economic growth driven by exports and investment	10
Understanding India's Growth Story	11
Household savings and corporate investment have played an important role in India's growth process	12
No change in treatment of quasi-corporations for savings data	14
Household savings seem to have peaked	15
Exports, formalisation and business cycle are proximate indicators of growth	16
Economic reforms and the global economic environment are the fundamental growth drivers impacting proximate indicators through a transmission mechanism	19
How the transmission mechanism works	22
India's export performance is driven by reforms and the global economic environment (A)	22
Formalisation is led by economic reforms (B)	28
Corporate-investment to corporate-sales is driven by global economic environment and India's growth performance (C)	33
Scenarios for the future	36
Conclusion	39
References	40

List of Figures

Figure 1: India's per capita real GDP growth has gone through four distinct phases since 1994	9
Figure 2: Investment and exports have moved together with India's GDP growth, 1990-91 to 2019-20	12
Figure 3: Private corporate sector has been pivotal to driving overall savings and investment	13
Figure 4: Household savings are driven by per capita GDP and the Young working age population, 1981-2019 ..	16
Figure 5: India's GDP growth is driven by export, formalisation, and business cycle	17
Figure 6: Contribution of structural and business cycle indicators keep on changing across the growth phases ..	18
Figure 7: A Unifying framework for understanding economic growth	21
Figure 8: India's exports are strongly correlated with world exports	22
Figure 9: India's export-multiple increased post the reforms and then stabilised 2004 onwards	23
Figure 10: India's export to GDP ratio is below the average of other countries with per-GDP in PPP between 5,000 and 20,000	24
Figure 11: India's export to output ratio is significantly lower than Vietnam's	25
Figure 12: Corporate exports constitute 10-15% of overall corporate sales	26
Figure 13: India's exports are driven by world export growth rate and real effective exchange rate	27
Figure 14: India's exports are highly dependent on currency valuation	28
Figure 15: Formalisation is driven by entry and exit of large firms	29
Figure 16: Labour productivity is consistently higher in organised sector than in unorganised sector	31
Figure 17: Manufacturing is 60% formalised while services are only 25% formalised	32
Figure 18: Corporate-investment to corporate-sales ratio fluctuates around the trend	33
Figure 19: Corporate-investment to corporate-sales ratio is driven by firm profitability and the country's growth outlook	34
Figure 20: Continuous overestimation of India's GDP post 2017	35
Figure 21: Corporate profitability is driven by export growth and the energy price	36

List of Tables

Table 1: Estimates of the GCF to GDP ratio are higher in the 2011-12 series compared to the 2004-05 series primarily because of private GCF	14
Table 2: Contribution of structural and business cycle indicators to real per-capita GDP growth	18
Table 3: Possible growth scenarios	37

Executive Summary

There is near unanimity that India's GDP growth had been slowing down, even before the pandemic struck. Per capita growth averaged 5.3% per annum during 2012-20, but slid to 3.8% between 2018 and 2020. Opinion is, however, divided on whether this is a structural or a cyclical decline, and whether it has been caused by domestic or external drivers. As we come out of the two 'lost years' caused by COVID-19 (FY21 and FY22), accelerating growth assumes pivotal importance since it helps improve people's lives by creating gainful employment, alleviating poverty, and so on. Clarity is needed, therefore, on what drives India's economic growth. We analyse its growth performance over a period of 26 years (1994-2020) to answer these questions.

We break down growth in terms of three indicators – share of export in GDP, formalisation (share of large firms in national output), and ratio of corporate-investment to corporate-sales. While the first two indicators are driven by domestic competitiveness and global trade growth and hence are structural in nature, the third one is cyclical. Per capita growth accelerated by 3% between 1994-2004 and 2004-08: half of this was due to structural indicators and the rest due to an unprecedented business cycle upswing. Since the business cycle played a significant role, part of the acceleration had to be corrected sooner or later. Consequently, the decline in growth of 1.1% between 2004-08 and 2008-12 was largely due to a business cycle downturn, with marginal improvement in structural indicators. Finally, the slowing down of growth by 0.6% between 2008-12 and 2012-20 can be attributed equally to structural and cyclical indicators. In a nutshell, the structural indicators have worsened since 2012, and need to be addressed urgently and effectively to accelerate growth going forward.

The reforms of the 1990s ushered in a competitive economy, allowing large Indian firms to expand without requiring a license, enter industries hitherto reserved for MSMEs (micro, small and medium-sized enterprises), and opening Indian markets to competition from the external world. Since large firms are on average four to eight times more productive than smaller firms, this unshackling resulted in formalisation increasing from 35% in 1995 to 45% by 2012. Opening up the economy to external trade also led to India's exports in GDP to increase from around 7% in 1991 to 25% by 2012. Increase in competitiveness helped steadily increase India's share in global export from about 0.6% in 1991 to about 2.1% in 2012. The domestic reforms were coupled with unprecedented growth in global GDP of about 3.5% per annum during the first decade of the new millennium, against the long-term trend of 3%, giving further impetus to India's growth.

India's growth story has lost steam since 2012. Formalisation has been declining, falling to 37% by 2020, while India's share in global export has remained flat at 2.1%. The decline in formalisation has been caused by the unprecedented build-up of non-performing assets (NPAs) in the economy, precipitated by falling corporate profitability, among other reasons. Macro factors like the appreciating real effective exchange rate (REER) played a significant role in the stagnant share of our exports in global export. Lastly, the global economic environment itself has deteriorated sharply since the North Atlantic Financial Crisis (NAFC). Annual world trade growth was 15% during 2004-08, but fell to just 4% during 2008-12 and a to a paltry 1.2% during 2012-20.

It must be pointed out in no uncertain terms that large firms have already played a pivotal role in India's growth performance so far, since they are common to both the structural growth indicators: Formalisation and export to GDP ratio. Formalisation increase happens, definitionally, because of expansion of share of large firms. Large firms account for about 55%-60% of India's exports and hence are important to drive growth through the export route as well. Having said this, large Indian firms are yet to become global champions: Only about 15% of their revenue comes from exports, the rest from domestic sales.

Given the global headwinds and the fact that formalisation has a natural ceiling to it – the manufacturing sector is already 60% formalised and the services sector is at around 25% – we will have to work harder to even repeat our historical growth performance of 5.2% per capita annual growth over the last 26 years (1994-2020). India may get some help from the changing geopolitics, where international companies are looking to diversify their footprints beyond China as part of 'China +1' strategy and we could emerge as an alternative. However, it is important to realise that while geopolitical considerations play a role, final investment decisions are generally made keeping economics in mind. Thus, we cannot get complacent and not focus on reforming the economy.

'India's New Growth Recipe' should focus on improving the competitiveness of our large firms by making them global champions so that they can tap into the unlimited external markets far more than what they have managed to achieve so far. This will not only re-ignite the formalisation channel, but more importantly, help us compete in the vast global market.

We are at an inflection point in our economic journey. If India does not confront its challenges head on and improve its competitiveness, its annual per capita growth may slide-down further to around 4.5% over the medium term. However, if it manages to strategically focus on its priorities, it can sprint-ahead and grow at 6.5-7.0% per capita.

Introduction

India's real GDP growth rate has averaged 6.9% per year from 1994 till 2020,^{1,2} which is significantly higher than the 5.7% growth in the 1980s and 2.9% growth in the 1970s.³ The growth performance looks even more impressive in per capita terms: between 1994-2020 per capita real GDP grew by 5.2% annually compared to 3.7% in the 1980s and 0.6% in the 1970s.

We divide our analysis into four periods: 1994-2004, 2004-08, 2008-12 and 2012-20, which, we believe reflect four distinct growth phases of the Indian economy.

- **'Consolidation:' 1994-2004:** Per capita growth averaged 4.1% per annum during this period compared to the decadal growth of 3.7% per annum during the 1980s. India had initiated deep and broad-based economic reforms in the 1990s, such as delicensing, de-reservation, and opening up the economy to the rest of the world. These 'consolidated' the macroeconomic fundamentals and shifted the economy into a higher growth phase, after the initial two to three years. For example, gross fiscal deficit of the central government came down from 6.76% in 1993-1994 to 4.34% in 2003-2004. Also, REER reduced from 129 in 1990 to 98.28 in 2004 and average tariffs fell from 56.3% in 1990 to 22.96% in 2004.⁴ Consequently, per capita GDP grew by 4.3% during 1994-99. Growth, however, slipped to 3.9% during the subsequent five years (1999-2004) as a result of negative shocks, globally and domestically, such as the Asian financial crisis of 1997-99, the terrorist attack on the World Trade Center in 2001, and poor monsoons in India from 2000-01 and 2002-03. This resulted in global trade growing by a meagre 1.2% in 1997-98 and -3.2% in 2000-01.⁵ India's agriculture sector too experienced negative growth rates of -0.2% and -7.2% in 2000-01 and 2002-03, respectively.⁶ These negative shocks hampered the Indian economy from accelerating meaningfully during the decade following the 1991 reforms.
- **'Surge:' 2004-08:** India recorded annualised per capita GDP growth of 7.3% over these four years, which is one of the highest ever recorded in any four-year period in the country's post-independence history. There were a couple of distinct and mutually reinforcing reasons for this stellar performance. By this time, the reforms had become firmly entrenched in the system, despite the country's leadership deriving from varied political hues. Consequently, corporate investment,⁷ led by formal and significantly more productive large firms,⁸ as a share of GDP increased significantly. Overall saving and investment increased by about 8-10% of GDP between 2004 and 2008 and almost all of this increase could be attributed to a rise in corporate investment. Secondly, the global economy had recovered from the above-mentioned shocks, and rules-based global trade kicked off with the creation and entrenchment of the World Trade Organization (WTO). Consequently, world trade grew by 15% during 2004-08 compared to 7.7% during 1994-2004.⁹ With reforms firmly in place, India was integrated with the rest of the world and hence could take advantage of these tailwinds. The country was labelled 'The Bird

¹ Calculated at 2004-05 prices.

² In this paper, we analyse and understand the trajectory and drivers of per capita GDP growth between 1994 and 2020, abstracting away from the first couple of years after the 1991 reforms and the last couple of years due to COVID-19-induced disruptions.

³ GDP refers to real GDP unless stated otherwise.

⁴ REER and tariff data refers to calendar year. REER is based on 36 country bilateral weights, sourced from RBI at 1993 as base year. Tariff rate is for applied weighted means of products, sourced from World Bank.

⁵ Global export of goods and services at nominal USD.

⁶ Calculated at 1999-2000 constant prices; agriculture includes agriculture, forestry, and fishing.

⁷ This refers to private corporate investment from NAS. While it is made up of large, medium and small firms, we believe, it is led by the largest of this cohort.

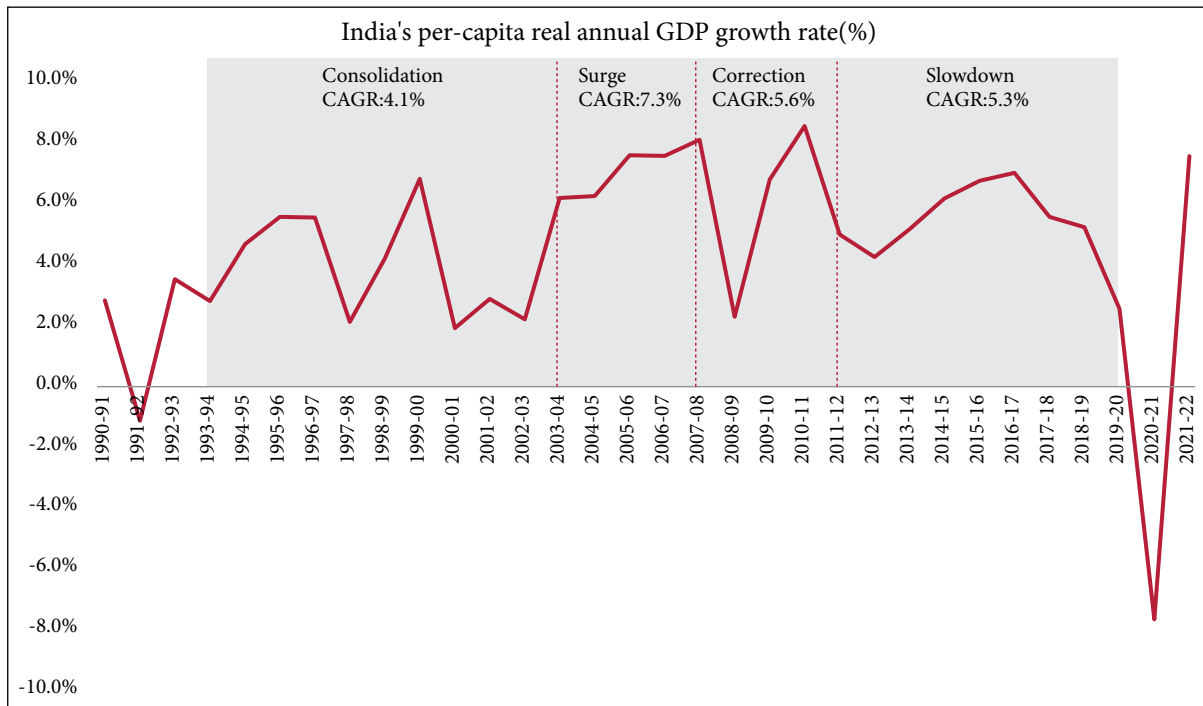
⁸ Throughout the paper formal firms and large firms are used interchangeably.

⁹ Calculated at current USD.

of Gold' invoking its golden past as a precursor to its bright long-term future (Mckinsey Global Institute, 2007)! These benign domestic and global drivers created a virtuous cycle, resulting in a growth 'surge'.

- **'Correction:' 2008-12:** The world economy was rudely shaken by the North Atlantic Financial Crisis in 2008-09, which halted the growth of global trade, a trend which is still continuing. Annual world trade growth reduced from 15% during 2004-08 to a mere 4% during 2008-12. Since India was now integrated with the global economy, its exports were also negatively impacted, and its export growth slowed down from 23% during 2004-08 to 15% in 2008-12. The Indian government responded to these global headwinds by increasing public spending, raising the fiscal deficit from around 4% of GDP in 2008 to 7.8% by 2012, causing government savings to decline by 2% of GDP, which in turn led to a corresponding decline in overall investment. However, it is the significant change in the investment composition during this period which contributed crucially to the Correction. The share of corporate investment declined sharply from 16% of GDP in 2008 to 11% by 2012, whereas household investment increased from 11% to 14%.¹⁰ As a consequence of the global headwinds and cut-back in corporate investment, India's growth trajectory got 'corrected' and per capita GDP grew by 5.6% per annum during these four years.
- **'Slowdown:' 2012-20:** This last phase is most critical from a policy perspective, since it continues to impact the country's growth performance going forward. The economy grew at 5.3% during this period, which denoted a further decline from the preceding period. It is noteworthy, however, that the last few years of this period registered an even more rapidly declining trend – per-capita growth which was 5.5% in 2012-16 fell to 5% during 2016-20. This slowing down may not be surprising when looked at from a global perspective since global trade grew by a paltry 1.2% during these eight years. Macro factors like the appreciating real effective exchange rate (REER) also played a significant role in flattening our export share in global export, which remained flat at 2.1%. Slowing growth and declining profitability resulted in a sharp build-up of non-performing assets (NPAs) in the economy – from around 3% in 2012 to 11% by 2018 – as a number of large firms went out of business. Though government finances improved marginally compared to the Correction phase, overall savings (and hence investment) continued to decline, from 34% in 2012 to about 31% by 2020. In other words, there were continued global and domestic headwinds throughout this period, which put pressure on the economy's growth performance.

¹⁰ Based on a two-year average.

Figure 1: India's per capita real GDP growth has gone through four distinct phases since 1994

Notes: The grey area depicts the period of analysis. GDP is at market prices, calculated at 2004-05 prices; the 2021-22 values are based on advanced estimates from the Government of India: Economic Survey (2022).

Source: National Accounts Statistics, Census of India.

Understanding the reasons for the 'slowdown' are thus critical to provide a recipe for India's ability to try and regain the glory of its 'surge' phase. Re-igniting growth assumes even more urgency now, given the last two years (2021 and 2022) have been a washout due to COVID, with per capita GDP almost stagnant at US\$2,000.¹¹ The key question becomes: is this 'slowdown' largely structural and hence will persist if not addressed through policy; or is it by and large cyclical, implying the economy will return to its surge phase performance over time?

Faster economic growth is important not just for improving the well-being of the average citizen, but also for achieving key societal objectives like poverty alleviation and employment creation. During the faster growth years, from 2005-06 to 2015-16, India's multidimensional poverty reduced significantly from 55% to 28%, which helped move 271 million people out of poverty (Oxford Poverty and Human Development Initiative, 2018).¹²

It is this imperative to grow faster that we come up with a unifying framework – one that connects the proximate growth indicators--variables that impact GDP growth directly, like investment and exports with the fundamental growth drivers—factors that create conditions for growth, like economic reforms, through a transmission mechanism, that is, interlinkages between the proximate indicators and the fundamental drivers, in an analytically robust and transparent manner. Since this framework provides end-to-end clarity on the growth process, we hope it helps in the policy discourse by creating an objective reality on where does Indian economy stand currently and what are the challenges to accelerating growth.

¹¹ Average of 2019 and 2020 (World Bank databank).

¹² The official poverty level as estimated by the NSSO went down from 37% to 22% between 2004-05 and 2011-12, which is the last year of the survey.

The next section gives an overview of the major strands that literature has taken in explaining India's growth performance. In the following section we understand India's growth story and develop the unifying framework in terms of the proximate indicators, the fundamental drivers and the transmission mechanism. Post this we move on to explain the transmission mechanism in detail. Finally, we create potential growth scenarios using our framework that may pan out in the future and then end the paper with a set of key conclusions.

Literature Review

A lot has already been said in the literature about India's growth performance since independence. One strand of literature focuses on explaining its growth phases through changes in total factor productivity and the impact of the global environment on the domestic economy. The second strand focusses on the expenditure side and postulates that growth during the golden period, 2003 to 2008, was led by a jump in exports and large inflow of investment into the country; and that the slowdown post-2008 was due to the negative growth in global trade and fall in investment rates in the country. As we will see below, neither of these provide an adequate explanation for the underlying reasons for the different growth phases.

Growth driven by changes in total factor productivity growth

Bosworth, Collins, and Virmani (2007) studied the 1960-80 and 1980-2004 periods of the Indian economy and concluded that high growth in the latter period (5.8% versus 3.4%), emanated from the increase in total factor productivity (TFP) in the economy post the 1980-81 reforms. These reforms had initiated the process of liberalisation in the economy, and resulted in the manufacturing and service sectors experiencing high growth during 1980-2004. But growth in TFP slowed down post-1993, and most of the growth in GDP was a result of an expansion of the services sector, especially high-tech services. In a similar vein, Krishna, Erumban et al (2017) estimate that 50-80% of aggregate productivity growth emanates from industrial productivity growth, mainly in the services sector, and the remaining from structural change. Gupta, Ahmad, Blum, and Jain (2018) arrive at a similar conclusion: according to them, labour, capital, and TFP contributed equally to GDP growth in the early 1990s; in 1990-2011 improvements in TFP accounted for an average of 60% of growth, and since 2013 it has emerged as the main driver.

Acceleration and deceleration in economic growth driven by exports and investment

This literature refers to 2004-08 as a short phase of unusual high growth in the Indian economy, channeled through an increase in exports and investment. During this period, there was a cyclical boom in the Indian economy, coinciding with an exceptional phase in the world economy. First, the boom was initiated by the availability of affordable credit to the private corporate sector, along with the large-scale influx of foreign capital into the economy resulting in an increase in the gap between the investment and savings-to-GDP ratio from less than one percentage point of GDP to 2.3% by 2008 (Nagaraj, 2013). Ample credit at low interest rates led to higher profitability and increased investment by corporates. Bank credit to the commercial sector¹³ as a share of GDP increased from 35% to 50% (*Ibid*). Second, given India's close links with global exports after its reforms, it benefited from the period of 'hyper-globalisation' (Chinoy & Jain, 2018). The export-to-GDP ratio increased by 9 percentage points during this period. Exports of merchandise and software and telecom services grew at 25% per annum on average during the boom period. Most of the output came from the automotive industry, telecoms, and business services (Nagaraj, 2013). During this period, there was also a shift in the manufacturing export basket from labour-intensive to capital-intensive products: traditional, labour-intensive products, such as textiles, leather, and jewellery, which had

¹³ Commercial sector credit does not include food credit, priority sector lending and personal loans.

accounted for 60% of merchandise exports in 2003, fell to 40% in 2015. Engineering goods (auto parts and capital goods), which had been growing at 20% annually for 13 years, increased their share in exports from 20% to 35%.

After the NAFC, India's export growth collapsed to -5% in 2009, from 23% between 2004-08.¹⁴ While globally export growth had fallen, domestic factors also added to the burden. According to Chinoy and Jain (2018), the slowdown in India's exports was a result of two factors apart from the slowdown in global growth: an almost 20% appreciation in the REER between 2014 and 2017; and the supply shocks to the economy from demonetisation and the imposition of the Goods and Services Tax (GST) in 2016 and 2017, respectively. India's exports faced two further detrimental effects: the global exports slow down; and the decline in oil and commodity prices between 2014-16, when global prices of oil, metals and agricultural products declined by 73%, 37% and 23%, respectively (Gupta, Ahmad, Blum, & Jain, 2018), though the decline in oil prices helped the Indian economy which is an oil import-dependent country.

Since 1998 India's investment rate had increased compared to other lower-middle-income countries. The gap in gross fixed capital formation (GFCF)-to-GDP between India and lower-middle-income countries widened by 4-5% between 2004 to 2011, but has been declining since then (World Bank).¹⁵ This decline is attributed to a fall in India's credit growth because of the increase in NPAs in the 2010s, which stemmed from a contraction in global commodity prices (Kumar, Mohan, & Srinivasan, 2022). The investment slowdown in export-oriented firms was more severe, due to their higher exposure to the shrinking global markets (Subramanian & Felman, 2019). This was accompanied by an increase in the NPAs of public sector banks (PSBs) and their declining profitability. According to Mohan (2019) the economic slowdown, which was transmitted through slower growth of the investment rate, was a result of the overshooting of the monetary and fiscal stimulus, which then had to be corrected over time, contributing to the ongoing slowdown. As the accommodative monetary policy was reversed, interest rates began to rise. The high interest rates negatively impacted profits, and interest payments as a share of gross profits (or sales) have been significantly higher since 2012. This trend was exacerbated by the global trade slowdown and deceleration of industrial growth post 2011. During this time, domestic investment projects began to become unprofitable. Interest rates were higher and the Indian rupee depreciated (from INR 40/dollar to INR 60/dollar), which adversely affected firms' financial projections. This led to a decline in corporate profits and problems with repaying debt incurred during the expansionary period. Firms that were not in a position to repay the debt accounted for 40% of the total corporate debt, which raised the level of NPAs in the economy. The twin balance sheet problem, both a structural and global one, led to a deceleration of Indian investment and exports, which highlighted the need for financial reforms in the economy (Subramanian & Felman, 2019).

While individually these are logical explanations, they lack a unifying framework required for an appropriate policy response and action. We attempt to create one such framework, to help provide clarity on the various inter-relationships and the significance of each factor.

Understanding India's Growth Story

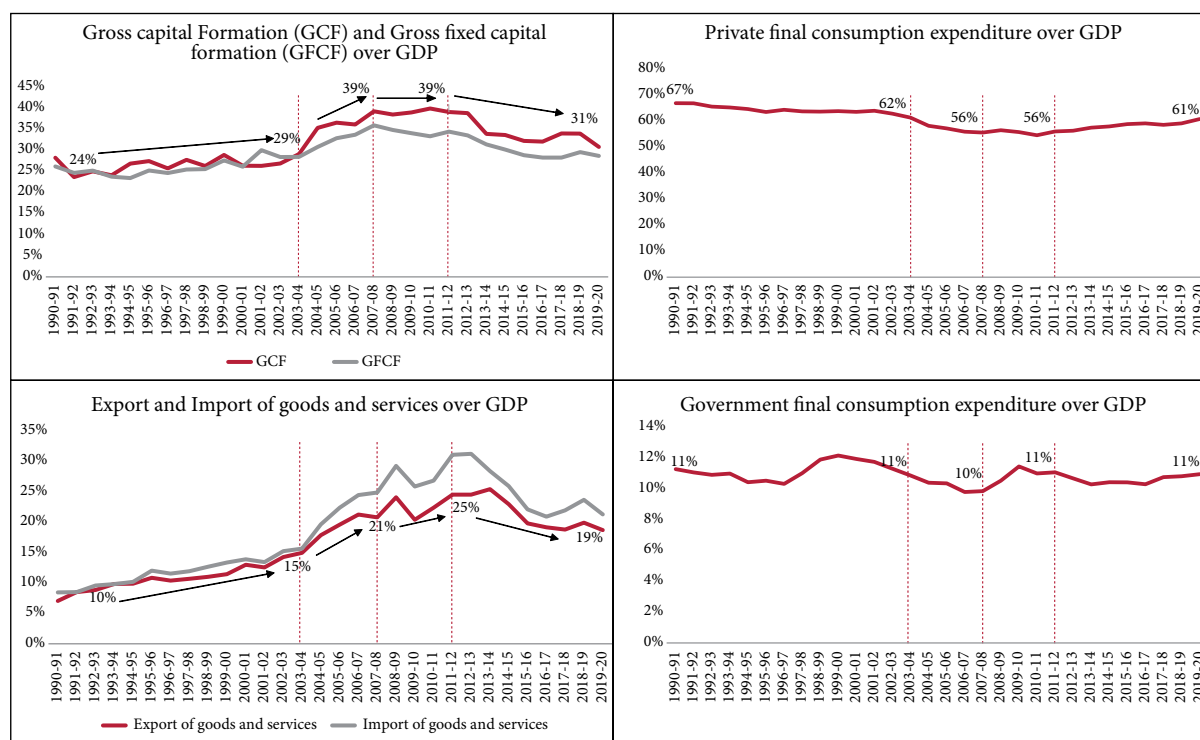
As stated above, India's per capita GDP growth rate surged from 4.1% in 1994-2004 to 7.3% during 2004-08, fell to 5.6% between 2008-12, and has been declining since then. We analyse the expenditure side of GDP to try and understand the behaviour of the various components during the accelerating and decelerating phases, to make sense of the proximate growth indicators. Figure 2 makes it evident that export and investment as a share of GDP rose during the accelerating phase and declined during the slowdown. Investment or gross capital formation (GCF) increased from

¹⁴ Calculated at current USD. Source: World Bank.

¹⁵ Lower-income countries is the income group as prescribed by the World Bank.

24% in 1993-94 to 39% in 2011-12, and the share of exports in GDP increased from 10% to 25% over the same period. During the slowdown, GCF fell from 39% in 2012 to 31% by 2020 and exports declined from 25% to 19% of GDP. Private final consumption expenditure (PFCE), the largest component of GDP, has been declining steadily, from 67% in 1991 to 56% in 2012, after which it rose to about 60% by 2020. Government final consumption expenditure (GFCE) has more or less remained constant at an average 11% of GDP during the entire time period. Since GFCE has remained constant throughout, it could not have driven growth in a meaningful manner. Likewise, PFCE is principally determined by income, and hence could not be an independent determinant of growth. This leaves us with GCF and exports as the proximate indicators of GDP growth.

Figure 2: Investment and exports have moved together with India's GDP growth, 1990-91 to 2019-20



Note: Based on current prices.

Source: National Accounts Statistics

The above pattern of movement of GCF and exports with GDP growth is consistent with their behaviour in other economies as well. Conventional theory recommends that to stimulate growth a country should raise its exports and investment as a percentage of GDP. The role of higher exports is understood and widely acknowledged. However, since investment is a composite indicator – made up of multiple, distinct elements – it is important to understand the behaviour of each distinct element to then be able to say which one is critical for driving growth and how to make it happen.

Household savings and corporate investment have played an important role in India's growth process

Savings and investment comprise of three distinct elements – household, public¹⁶ and private – each of which behaved differently during the country's different growth phases for varying reasons, and require explanation.

¹⁶ Public is sum of savings of general government, public financial and non-financial corporations.

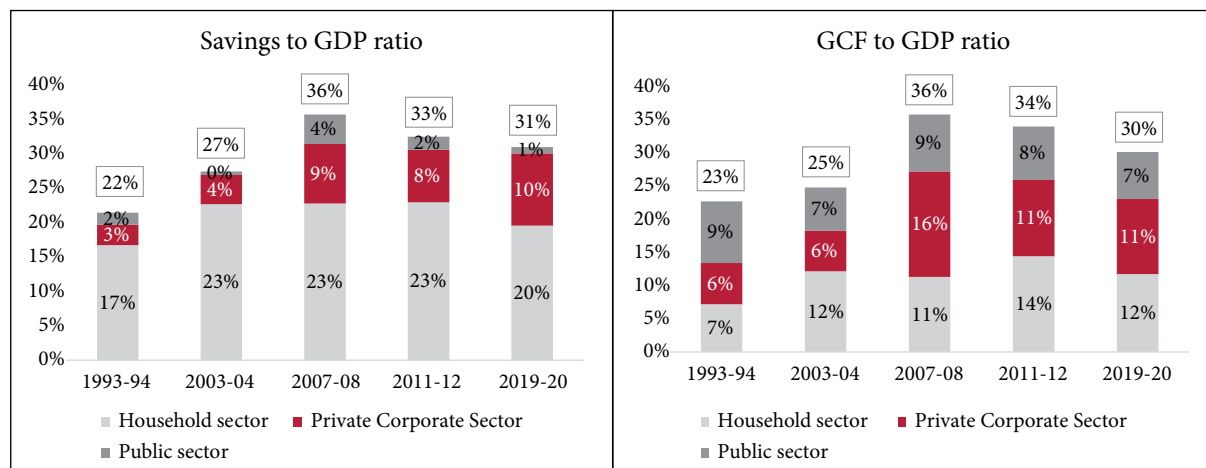
Households have provided higher savings for corporates to invest, pushing economic growth

At a broad level, both savings and investment first increased from about 21-23% of GDP in 1993-94 to about 36% by 2007-08, before falling to around 31% by 2019-20. However, the rise and fall is precipitated by different reasons during the period of analysis.

- Almost the entire increase in savings and, more importantly in investment, between 1993-94 and 2003-04 occurred because of the enhanced role of the household sector. At one level this is surprising, since one would have expected the corporate sector to play a more meaningful role, especially on the investment side, after the 1991 reforms. However, more importantly, it indicates that the availability of savings is a necessary but not a sufficient condition for corporates to invest.
- The corporate sector sprang into action in the following period, between 2003-04 and 2007-08, when it became the prime driver of the increase in savings and investment. Coupled with a significant improvement in government balances, this resulted in higher government savings as well. One can say that the real impact of unshackling the corporate sector was felt almost a decade after the reforms had been initiated.
- Aggregate savings declined by 2% between 2007-08 and 2011-12 due to decline in public sector savings owing to a higher fiscal deficit. However, on the investment side something unexpected happened: the share of corporate investment declined sharply from 16% to 11%. This slack in corporate investment was picked up by the household sector, as a residual, whose investment increased from 11% to 14%.
- Elevated levels of the fiscal deficit have continued to put pressure on both savings and investment in the last period.¹⁷ Household savings changed their rising trend and declined during this phase, from 23% 2012 to 20% in 2020, putting downward pressure on overall investment.

The availability of savings is a necessary but not a sufficient condition for corporates to invest.

Figure 3: Private corporate sector has been pivotal to driving overall savings and investment



Note: Calculations are at current prices. The values in the boxes are aggregate ratios. Due to rounding-off of values there could be slight discrepancy in the sum total. A three-year moving average (t-2, t-1, and t) is applied to smoothen out the series. Data on public sector enterprises is based on government budget documents and the annual reports of enterprises. Estimates of private corporate savings are based on the annual accounts of sample companies adjusted for full coverage, on the basis of data on the paid-up capital of all companies. Private corporate capital formation estimates are based on the results of sample companies published by the RBI. For household savings, financial flow data is either a residual of the other two categories, and/or based on firm-level transactions with households. For the household sector GCF, the sources of data are the AIDIS and enterprise surveys conducted from time to time.

Source: RBI, National Account Statistics

¹⁷ The 2018-20 data is based on the 2011-12 price series, while the rest is based on the 2004-05 price series. The two series are not strictly comparable as there are methodological changes between the two Series explained later.

Box 1: Observations on methodological changes in estimating savings and investment between the 2004-05 and 2011-12 series

Methodological changes were made to the computation of savings and investment between the 2004-05 and 2011-12 series. Our analysis has unearthed two important points to note when looking at the numbers.

Investment estimates in the 2011-12 series are 3-4% higher than in the 2004-05 series: There are significant differences across the two series in the total GCF-to-GDP ratio for the common years 2011-12 and 2012-13. In the 2011-12 series, the ratio at 2004-05 base prices is 33.6% versus 36.7% at 2011-12 base prices; similarly for the 2012-13 series, the ratio is 32.1% at 2004-05 prices versus 35.6% at 2011-12 prices. This indicates a significant difference of 3-4% of GDP due to methodology changes.

The higher GCF to GDP ratio in 2011-12 price series can entirely be prescribed to increase in private GCF. This could be because of two potential reasons: First, inclusion of 'quasi-corporations', which were earlier considered part of the household sector for the estimation of GCF have now been included in the private corporate sector. Second, the shift in data source for estimation of private corporate GCF from RBI sample study of companies to MCA21 database provided by Ministry of Corporate Affairs.

It is interesting to note that while private GCF has increased as result of this switch from around 9-10% to about 13%, there is no decline in the household GCF component, which remains steady at 15-16% in 2011-12.

Table 1: Estimates of the GCF to GDP ratio are higher in the 2011-12 series compared to the 2004-05 series primarily because of private GCF

Year	GDP series	Household GCF to GDP ratio	Public GCF to GDP ratio	Private GCF to GDP ratio	Overall GCF to GDP ratio
2011-12	2004-05	15.8%	7.7%	10.1%	33.6%
	2011-12	15.9%	7.5%	13.3%	36.7%
	Difference between 2011-12 and 2004-05 series	0.1%	-0.2%	3.1%	3.0%
2012-13	2004-05	14.8%	8.1%	9.2%	32.1%
	2011-12	14.7%	7.2%	13.6%	35.6%
	Difference between 2011-12 and 2004-05 series	-0.1%	-0.9%	4.5%	3.5%

Note: 'Calculated' refers to the sum of household, private and public GCF. Source: RBI

No change in treatment of quasi-corporations for savings data

The shift in quasi corporations from household to private corporate is not applied while calculating household savings. "Estimates of financial savings of households are compiled by RBI. Separate information on financial savings of quasi-corporations is not available. Therefore, household savings in the form of financial assets continue to include financial savings of quasi-corporations" (Ministry of Statistics & Programme Implementation, 2015).

Household savings seem to have peaked

It is evident from the above discussion that the household sector provides the bulk of savings in India. Secondly, while it was constantly going up till about 2010, it has gone down over the last five to seven years. Given the criticality of household savings as a source of funds for the corporates who then invest and push growth, it is important to understand if the recent dip is due to some short-term reason or a more systemic decline.

If we broaden the time frame, household savings have increased steadily from about 13% in 1980 to peak at 25% in 2010. Since then, it declined sharply to about 18% in 2016 and 2017, and more recently appear to be moving up gradually. Our analysis highlights the role of two factors – the level of per capita income and the share of the Young in the working age – as the key drivers of household savings.¹⁸

On average, the richer an individual becomes, the higher is the propensity to save, since consumption does not rise commensurately with rise in income. This is evident from the significant positive coefficient of income on savings. Following the life-cycle income hypothesis, individuals smoothen consumption during their lifetime, borrowing in their early years, then saving heavily during the middle years, and finally dissaving during the latter years.

The literature has traditionally designated the entire working age population as the ‘saving class.’ Thus, higher the share of the working age population in an economy, *ceteris paribus*, higher the household savings.

India is one of the most youthful countries in the world, with 65% of its population in the working age group. However, since the share of the working age population has been constantly rising, how do we explain declining household savings post 2010? The answer lies in the declining share of the Young in the working age population. We divide the overall working age population into two cohorts: those between 15-44 years and those between 45-64 years. The share of the Young in the working age population increased between 1981 and 2001, from 75% to 77% of the total working age population, but has started declining subsequently to reach 73% in 2021 (Census 1981, 1991, 2001, and 2011, UN population projections for 2021).

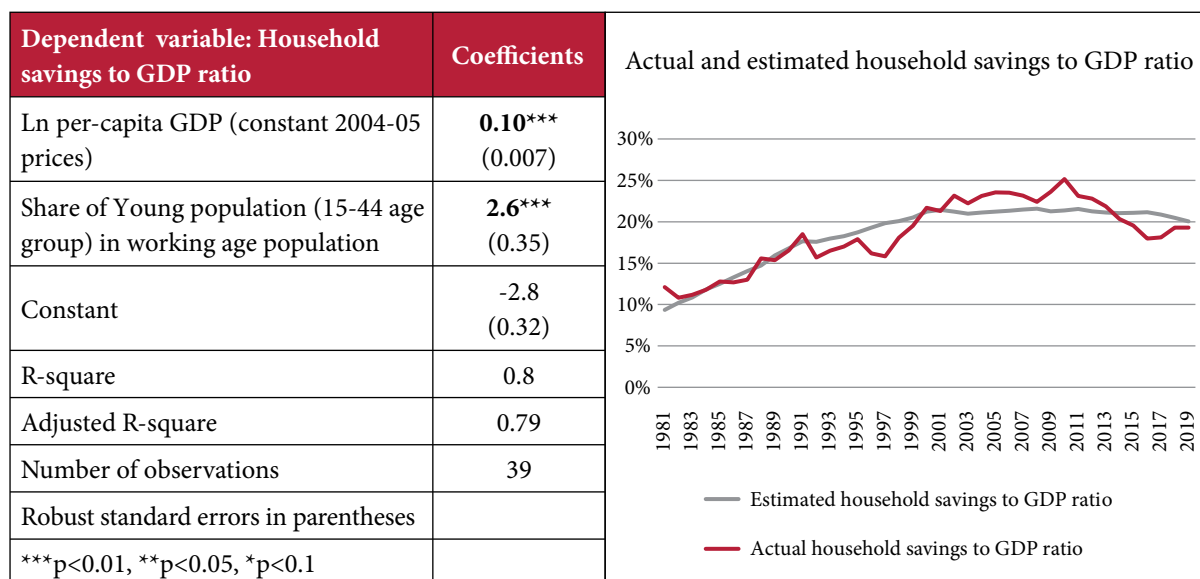
We argue that the decline in household savings post 2010 could be attributed to this declining share of the Young in the working age population. In a country where the average age of marriage is 19-23 years (Census, 2011), and where people spend a lot on marriage and children's higher education, it is not surprising to see saving patterns change once people cross mid-40s.

The decline in household savings post 2010 could be attributed to this declining share of the Younger group in the working age population.

Simulating the values of these demographic variables and with reasonable assumptions on income growth, the model predicts that household savings will be around 20-24% of GDP by 2030. This is both good and bad news. This level of household savings is very high by global standards and comparable to China's in the late-2000s, when households on average saved about 20% of GDP (Zhang, Ding, He, & Mano, 2019) and the working age population averaged 70% (World Bank). On the flip side, it implies that going forward, households will not be able to provide further impetus to growth by pushing up savings and investment.

¹⁸ 'Young' are defined as the population between 15 and 44 years; working age population is defined as the population in the age bracket between 15 and 65 years.

Figure 4: Household savings are driven by per capita GDP and the Young working age population, 1981-2019



Note: Based on authors' analysis.

Source: National Account Statistics, Various Census issues and UN population projections

Exports, formalisation and business cycle are proximate indicators of growth

The previous discussion has highlighted the key role exports and corporate investment have played in determining the GDP growth trajectory of the Indian economy between 1994 and 2020. Corporate investment can be further broken down into two neat components – investment that is determined by the share of the corporate sector's output in the overall economy, *formalisation*; and investment that corporates make to run their operations, corporate-investment to corporate-sales. Since these investments are inherently lumpy in nature, they create *business cycles*.

$$\frac{\text{Corporate investment}}{\text{National GDP}} = \frac{\text{Corporate investment}}{\text{Corporate sales}} \times \frac{\text{Corporate sales}}{\text{National GDP}}$$

Business cycle

Formalisation

This decomposition reveals that not all of corporate investment is driven by business cycles, as is generally understood. Part of it is also structural in nature owing to formalisation. Exports, formalisation and business cycles thus play a big role in driving GDP growth performance and since they impact growth directly, they are referred to as proximate¹⁹ indicators of growth. We designate exports and formalisation as structural since they are driven by domestic competitiveness and global trade growth and business cycles as cyclical.

Our proximate indicators provide a reasonably good explanation of the growth process

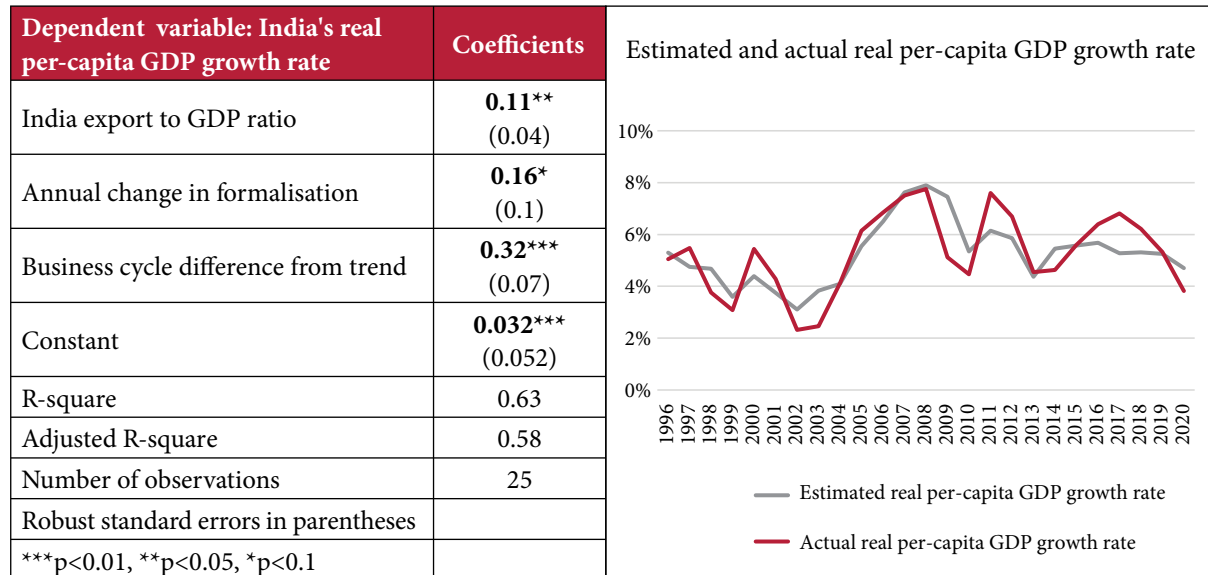
Our proximate indicators do a decent job in explaining India's growth performance when tested econometrically.²⁰ We regress per capita GDP growth on the annual change in the level

¹⁹ Not counting household saving as a proximate indicator since it is largely driven by demographics, whose dynamics is completely exogenous and also not likely to change over the next 10-15 years.

²⁰ Given the simultaneity in the framework as shown in the schema, these estimates are not unbiased, however, they help us understand the underlying growth dynamics.

of formalisation,²¹ difference of corporate-investment to corporate-sales ratio from the trend to capture business cycle swings, and the share of India's export to GDP.²² The estimated equation is able to explain 58% of per capita GDP growth between 1995 and 2020.²³

Figure 5: India's GDP growth is driven by export, formalisation, and business cycle



Note: Per capita GDP growth rate and business cycle are taken as a two-year moving average to smoothen the trend. Formal output is the sum of industry output from the Annual Survey of Industries and service sector sales from the CMIE Prowess database. The annual change in formalisation is the annual difference between the ratios. Business cycle refers to the corporate-investment to corporate-sales ratio, both from CMIE Prowess.

Source: Per capita GDP data is at 2004-05 prices from the National Accounts Statistics at market prices; corporate sales and investment data is from the Prowess database; national output data is from RBI KLEMS (except for 2019-20 which is from NAS; KLEMS and NAS, post 2011-12 report exactly the same output).

We decompose growth performance between 1996-2020 to estimate the role each proximate indicator has played, by taking growth between 1996-2004 as the base and then decomposing growth across the proximate indicators in the subsequent phases. What stands out unequivocally is that the growth phases are driven by a combination of structural and business cycle indicators. However, it is the variation in the weight of each variable over time that drives the change in the GDP growth trajectory.

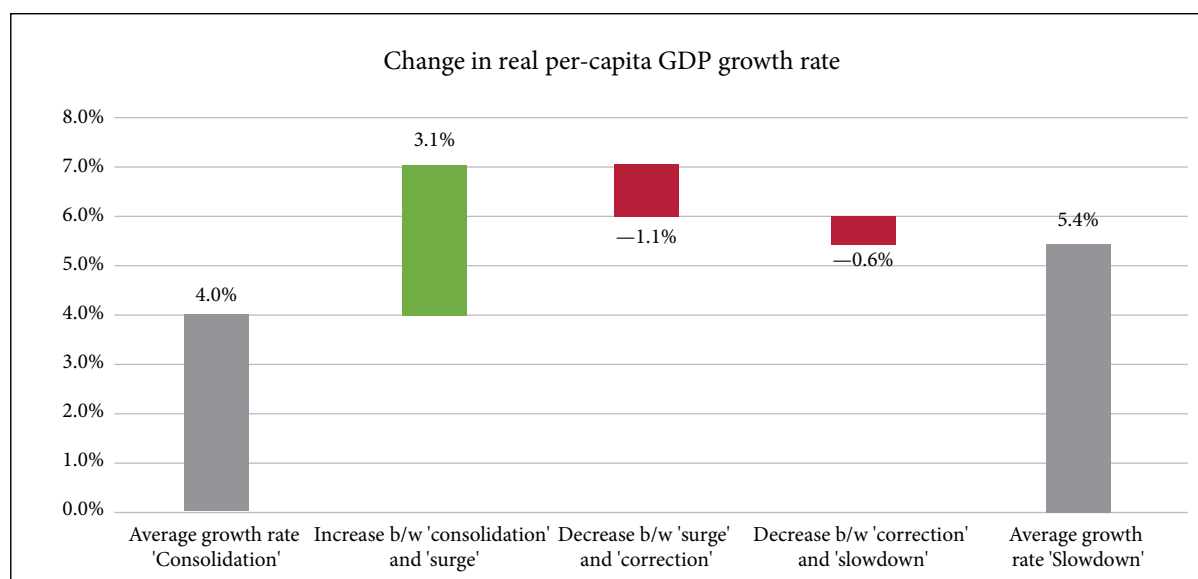
Growth phases are driven by a combination of structural and business cycle (cyclical) indicators. However, it is the variation in the weight of each variable over time that drives the change in the GDP growth trajectory.

- Per capita GDP growth accelerated by 3% between 1994-2004 and 2004-2008; half of this was due to structural indicators, i.e., formalisation and export, and the rest to an unprecedented business cycle upswing. Since the entire increase was not due to a structural increase, by definition, part of acceleration had to be corrected sooner or later.
- The decline in GDP growth of 1.1% during the correction phase was largely due to a business cycle downturn, with structural indicators improving marginally.
- The further decline in growth by 0.6% is caused almost equally between structural and cyclical components.

²¹ We take the changes at the log level to account for the base effect.

²² An increase in trade increases productivity through a more efficient allocation of resources, optimising economies of scale, creating competition in the domestic and international markets, and fostering technological progress (Busse & Koniger, 2012).

²³ Since corporate sales data is from the CMIE Prowess database which starts from 1995 and we take a two-year moving average for the business cycle, which results in the loss of one data point; our regression output is from 1996.

Figure 6: Contribution of structural and business cycle indicators keep on changing across the growth phases

Note: Based on the per capita real GDP growth rate regression result. Change is calculated as difference between period average. For example, for the change between consolidation and surge, first simple average of per-capita growth rates for each time period is taken, i.e. average of 1994-2004 and 2005-2008. Then difference between average growth of 2005-08 from 1994-2004 is taken.

Table 2: Contribution of structural and business cycle indicators to real per-capita GDP growth

Contribution to actual per capita GDP growth	Actual per capita GDP growth (A+B+C)	Export {A-Structural indicators}	Formalisation {B-Structural indicators}	Business cycle (C)	Residual (actual - estimated) ²⁴
Change between average of 1996-2004 and 2004-08	+3.1%	+0.9%	+0.4%	+1.5%	+0.3%
Change between average of 2004-08 and 2008-12	-1.1%	+0.3%	-0.2%	-0.8%	-0.4%
Change between average of 2008-12 and 2012-20	-0.6%	-0.2%	-0.3%	-0.5%	+0.4%

Note: The contributions of the variables are calculated using a decomposition based on the regression results. The decomposition is done by first calculating the share of each variable in the estimated per capita GDP growth rate, i.e. (coefficient*variable)/(per capita GDP growth estimated minus constant). This share is then multiplied by the actual per capita GDP growth rate. The residual is part of the per capita GDP which is unexplained by the model. A part of corporate sales includes corporate exports which would be affected by changes in the growth of global trade.

Source: Based on per capita GDP growth regression results.

²⁴ The model underestimates or overestimates growth across different time periods. For example, from 2014 on the actual growth rate is consistently higher than the estimated rate based on the model. This is also reflected in the increase of 0.4% in the CAGRs for 2008-12 and 2012-20.

It is clear from above that structural indicators like formalisation and exports play a significant role in driving growth, punctuated by business cycle fluctuations. This raises the next set of questions – what drives change in formalisation and exports? Developing this understanding is critical since that will guide policy makers to unlock the growth potential of formalisation and exports going forward.

Economic reforms and the global economic environment are the fundamental growth drivers impacting proximate indicators through a transmission mechanism

We argue that economic reforms and the global economic environment are the fundamental growth drivers for the Indian economy.²⁵ And these fundamental drivers impact proximate indicators of growth through a transmission mechanism.

We now briefly explain the logic of the transmission mechanism from the fundamental to the proximate indicators of growth. That is, how export performance is driven by reforms and the global economic environment (A); how formalisation is led by reforms (B); and how corporate-investment to corporate-sales ratio is driven by global economic environment and growth performance (C). It is worth clarifying here that all three proximate indicators are impacted by the same set of fundamental drivers, namely economic reforms and global economic environment. However, it is the difference in the nature of influence that one set of proximate indicators is structural and the other is cyclical.

India's export performance is driven by reforms and the global economic environment (A)

India's export to GDP ratio moves in tandem with GDP growth, rising during consolidation and surge and falling during a slowdown. Two distinct factors explain this pattern. First, a higher export-multiple – the pace at which our exports grow relative to world export growth – which has increased from 0.9x-1.2x in the pre-reform period (1970-94) to 1.9x-2.1x since 1994. It is no coincidence that this higher export-multiple is a result of reforms like reduction in export barriers and tariffs and a correction in the overvalued exchange rate, as these helped India integrate more closely with the rest of the world. Second, global trade grew at a significantly faster pace of 8.5% per annum during 1994-2012, compared to 6.3% over the preceding period of 1980-94, which benefitted most economies. Crucially, while our export-multiple has remained more or less the same even during the slowdown phase, global trade has come to a grinding halt between 2012-20, growing at a paltry 1.2% per annum, and is chiefly responsible for India's declining export to GDP ratio over the last few years.

Formalisation is led by economic reforms (B)

The reduced barriers and distortions as part of reforms, helped create a more competitive economy, incentivising existing efficient firms to expand and attracting new firms and entrepreneurs to enter the market. Since efficient firms are usually large, organised enterprises, this process results in increased formalisation; the size of the formal economy continued to grow over most of the period in question, from around 36% in 1995 to about 45% by 2012²⁶. This predominant trend of increasing formalisation was hampered by a section of large firms having to close down due to unfavourable and unexpected market conditions, like the steep and prolonged decline in global commodity prices, resulting in irreparable losses (Kumar, Mohan, & Srinivasan, 2022). Since 2012, formalisation fell from 45% to about 37% in 2020.

²⁵ Strictly speaking, demographics is the third fundamental growth driver, since it is completely exogenous. However, since it is not likely to change much over the next 10-15 years we do not include it in our analysis.

²⁶ Formal output is the sum of industry output from the Annual Survey of Industries; service sector sales are from the CMIE Prowess database. Formalisation is the share of formal output in the national output (from RBI KLEMS and NAS).

Box 2: A Snapshot of Economic Reforms in the 1990s

A brief summary of the economic reforms and evolution of the global trade environment would be helpful to understand how they influenced economic growth.

- The reforms had three tenets – delicensing, opening up the economy to the outside world, and de-reservation.
 - **De-licensing** of industries, removed barriers to the free entry of firms as well as the limits on their output capacity. Licensing requirements were gradually removed for 93% of industries by 1998; after 2005 only five industries come under compulsory licensing (Martin, Nataraj, & Harrison, 2017; India Briefing, 2011).
 - **Opening up the economy for global trade and investment.** This led to the elimination of import restrictions and a reduction in applied tariffs from an average of 60% in 1990 to almost 10% in 2019. Along with this was the depreciation of the Indian rupee by 22% between 1989 and 1992. Similarly, more than 30 industries received automatic approval from the RBI for foreign equity up to 51%, with the list of eligible industries gradually increasing over the years.
 - **De-reservation.** This was introduced in 1997 and it opened up the industries hitherto reserved for small-scale enterprises to large/formal firms also. While it was not part of the New Industrial Policy of 1991, it formed an important reform which contributed to India's growth. In 2015 the last few products were removed from the reservation list (Martin, Nataraj, & Harrison, 2017) and this led to a significant increase, of approximately 20%, in labour productivity for new entrants into a previously reserved product space (ibid).
- **On the global trade front,** for most of the second half of the last century, global trade had consistently grown faster than global GDP. As a result, world trade as a percentage of world GDP increased from around 25% in 1970s to 60% by 2011. The global trading order, however, has been going through a metamorphosis since 2012, with trade declining to 52% of global GDP by 2020.

Corporate-investment to corporate-sales is driven by global economic environment and India's growth performance (C)

Firms invest in capacity building to run their operations. Since capacity expansion is inherently lumpy in nature, these investment decisions create cycles of peaks and troughs, causing economic growth to move up and down around the trendline. Firms' decision to invest is driven by expectations of profitability and the growth outlook.²⁷ It is thus important to understand what drives profitability and the growth outlook, to complete our understanding of the transmission mechanism.

Profitability²⁸ is driven by firms' input costs (proxied by global energy prices), and the growth of exports (proxy for global demand).²⁹ Global energy prices and exports are determined by fundamental driver, viz. economic reforms and the global economic environment.

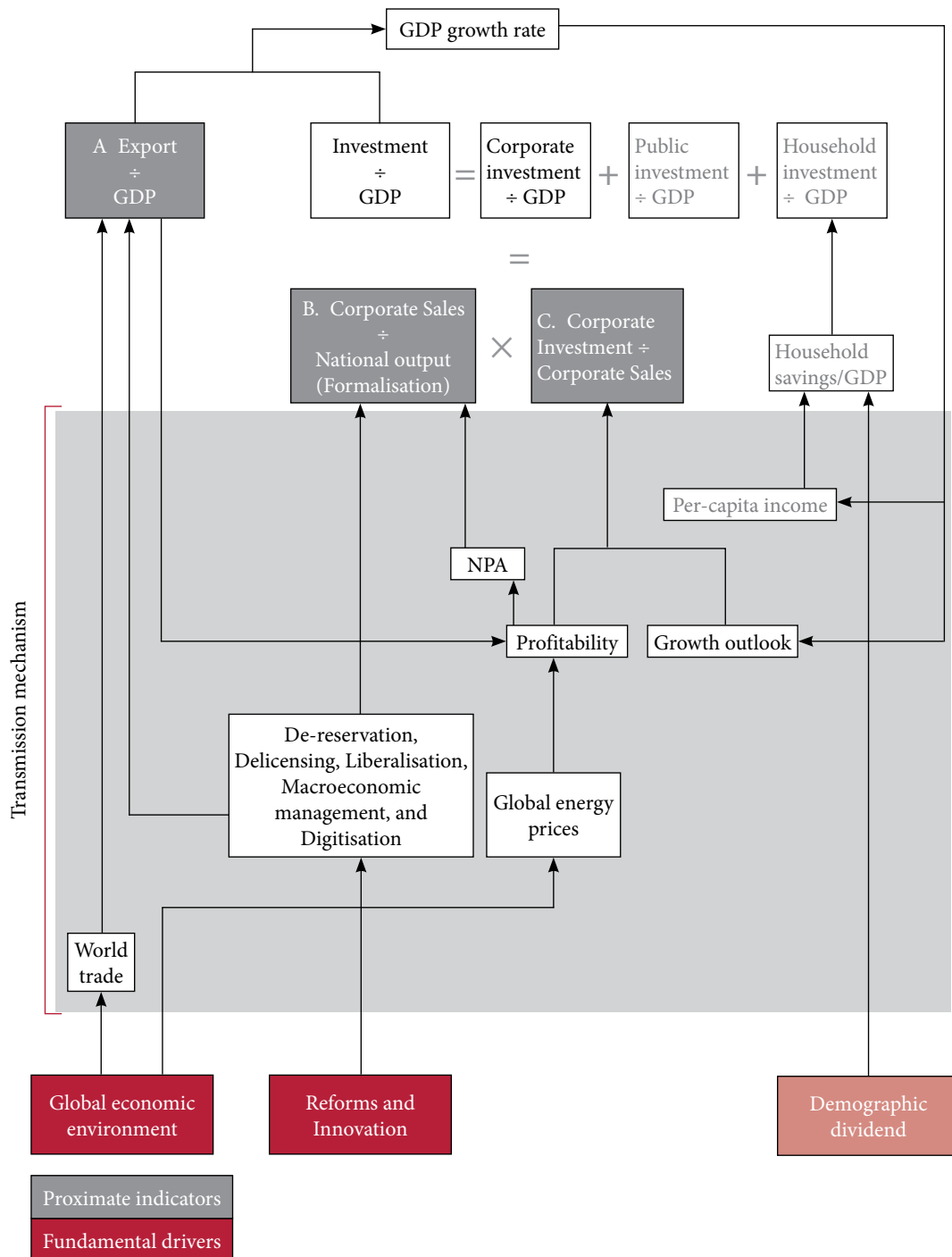
Lastly, the growth outlook is significantly determined by the trend in growth over time, which we now know is driven by the fundamental factors of reforms and global economic environment. This closes the final loop between the fundamental drivers and the proximate indicators.

²⁷ The growth outlook works as a proxy for the demand outlook.

²⁸ Profitability impacts the NPAs of the banking system inversely; that is, ceteris paribus, a decline in profitability leads to an increase in NPAs. Higher NPAs in large firms places a temporary brake in the process of formalisation, as alluded to above, affecting growth impetus negatively. Between 2016-18, NPAs were 8%-11% overall for MSMEs, while it doubled for large corporates from 7.9% to 16.9% (CIBIL & SIDBI, 2018).

²⁹ Since export earnings yield higher profits compared to domestic sales.

Figure 7: A Unifying framework for understanding economic growth



Note: The export to GDP ratio (A) and corporate sales to national output ratio (B) are structural indicator, while the corporate-investment to corporate-sales (C) is a cyclical indicator. GDP and national output follow the same trend growth. For ease of understanding and keeping the numerator and denominator in the same units, we take the ratio of corporate sales to national output in the denominator instead of the GDP. Since public and household investment have not contributed to the surge or slowdown phases, they are not included in the discussion; 55-60% of national exports come from the formal sector.

In a nutshell, reforms ushered in a process of creating a competitive economy, incentivising the efficient firms to expand and promoting entry of new firms, pushing growth. They also helped the economy reap the advantages of tailwinds in global trade by increasing the export-multiple post 1991. While these represent structural advancements, they are interspersed with business cycle ups and downs, causing growth to fluctuate overtime. We now turn to estimating and unpacking the transmission mechanism to see how sound it is numerically, and the role and strengths of each indicator, to better understand how the Indian economy works.

How the transmission mechanism works

In the last section, we have given an overview of how the fundamental drivers interact with proximate indicators through the transmission mechanism. We now turn to explaining in detail how the mechanism actually works and what needs to happen for accelerating growth.

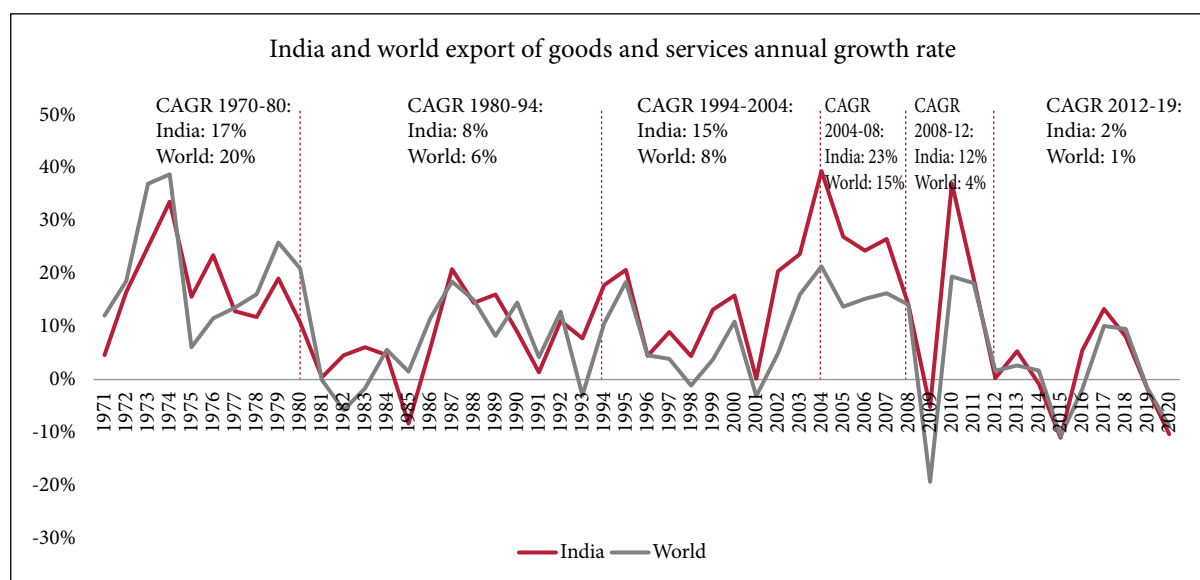
India's export performance is driven by reforms and the global economic environment (A)

One of the key learnings from the experience of the Asian Tigers and China is that growth miracles happen when countries tap into external demand. And we are no exception. At the time of the 1991 reforms, India was one of the most-regulated countries, and consequently, its export share in GDP was a meagre 6-7%. Exports responded immediately to the reforms and their share in GDP increased steadily to reach 25% by 2013, before declining to 21% by 2022. We show that this trend is driven by a combination of reforms and the global economic environment, with a pivotal role for large firms.

The pivotal role of global economic environment on India's exports

Two striking features of Indian and global export since the 1980s are discernible. First, the closeness with which India's export growth mirrors movements in global export: the correlation between the two is 81%,³⁰ one of the highest among peer countries. The correlations between world exports of goods and services and the annual growth rate in Bangladesh, Vietnam, China, and Brazil are 17%, 32%, 59%, and 68%, respectively. Second, significant increase and then a steep decline in the growth rate of global export over this period. Global export growth accelerated significantly from around 6% during 1980-94 to 15% during 2004-08. However, since the NAFC, it has been growing at a slower pace of 4% during 2008-12 and a meagre 1.2% since 2012.

Figure 8: India's exports are strongly correlated with world exports



Note: Calculated at current USD

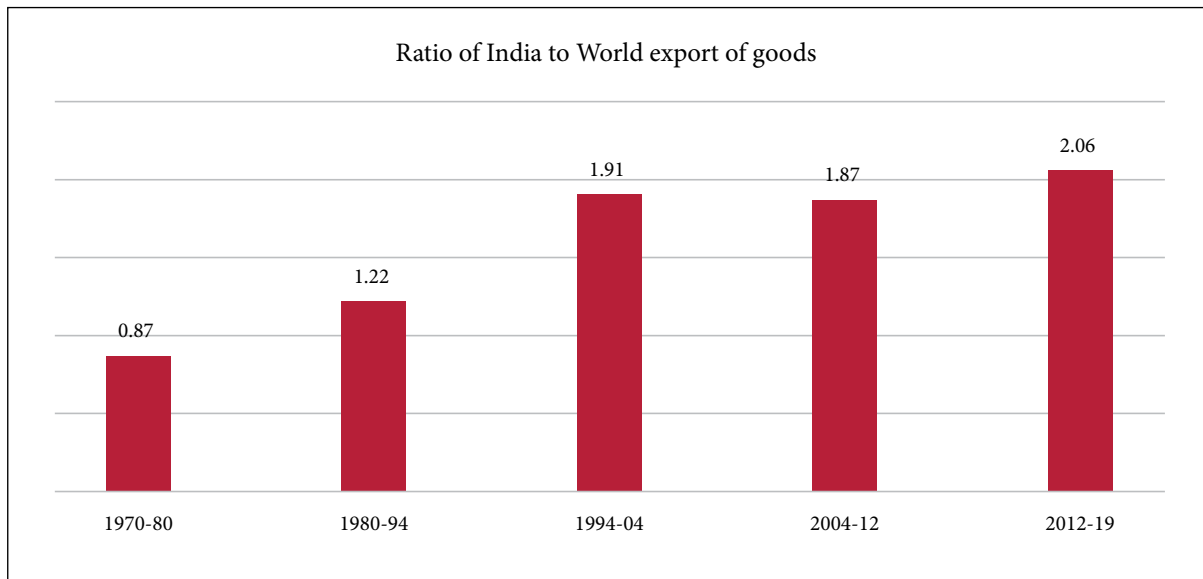
Source: World Bank

³⁰ This correlation for non-fuel exports was 0.77 between 1980 and 2020 in current US\$ (World Bank).

Reforms helped double India's export-multiple

India's exports grew at around the same rate as global export between the 1970s and 1980s, resulting in export-multiple of 0.87 and 1.22, respectively. However, post the 1991 reforms, this export-multiple significantly increased to almost 2x, signifying a greater integration of India with the rest of the world. This was due to opening up of the Indian economy to trade which led to elimination of import restrictions and a reduction in applied tariffs from an average of 60% in 1990 to almost 10% in 2019. Along with this was the depreciation of the Indian rupee by 22% between 1989 and 1992.

Figure 9: India's export-multiple increased post the reforms and then stabilised 2004 onwards



Note: Calculated at current USD

Source: World Bank

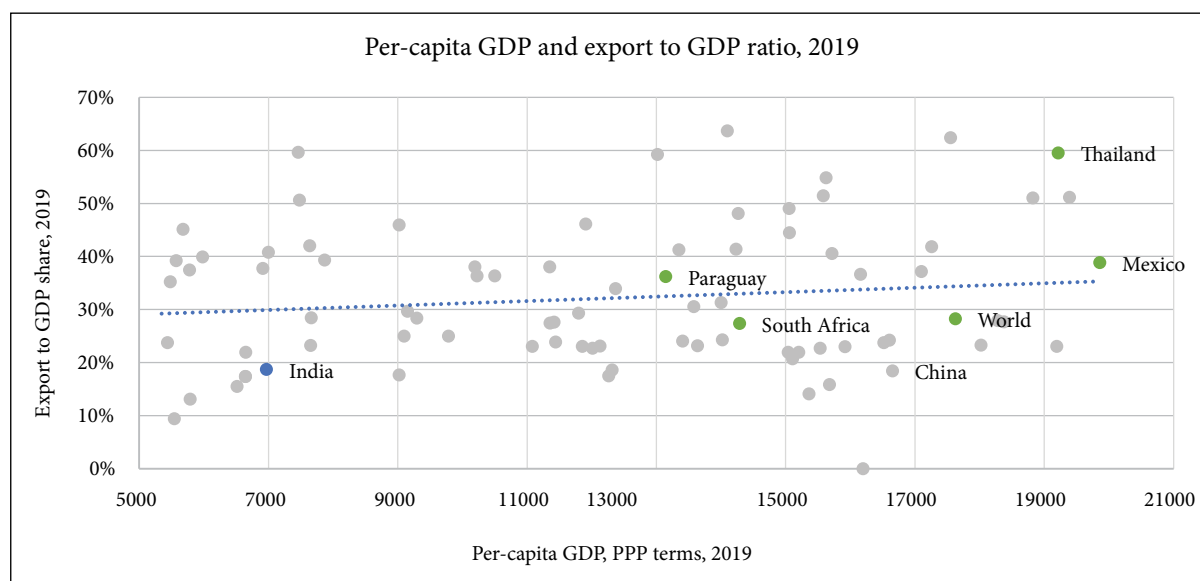
The doubling of India's export growth between 1980-94 and 1994-2012 from 7.7% to 15.7% was caused almost equally by these two factors, doubling of export-multiple and faster global export growth. The dynamics changed completely after 2012; 90-95% of the decline in India's export growth was due to the slower growth in global export, while export-multiple has broadly remained constant at around 2x.³¹

Despite the progress, there is a long way to go in fully leveraging the benefits from global trade

While India is far more integrated with the global economy now, a lot of work remains to be done. Figure 10 captures the export to GDP ratios for countries with per capita GDP (PPP) between US\$5,000 and 20,000. The dotted line indicates the average export to GDP at different per capita GDP levels. As can be seen, India's export to GDP ratio is significantly lower than other comparable countries. In 2020, India's export to GDP ratio was 19%, as against the trendline average of 25%. Consequently, participating more in the global market is one of the key growth drivers that needs to be exploited in the future.

³¹ Change due to reforms is calculated as the change in the ratio of Indian to world exports between the two periods. For the change due to global factors, we take the difference between the 'change in India's export growth during these periods' and the 'change due to reforms during the same periods'. This is done under the assumption that India's export growth is dependent on domestic reforms and the global economic climate.

Figure 10: India's export to GDP ratio is below the average of other countries with per-GDP in PPP between 5,000 and 20,000



Note: PPP refers to Purchasing Power Parity. Outliers like Vietnam, with export ratios over 100%, are not included.

Source: World Bank

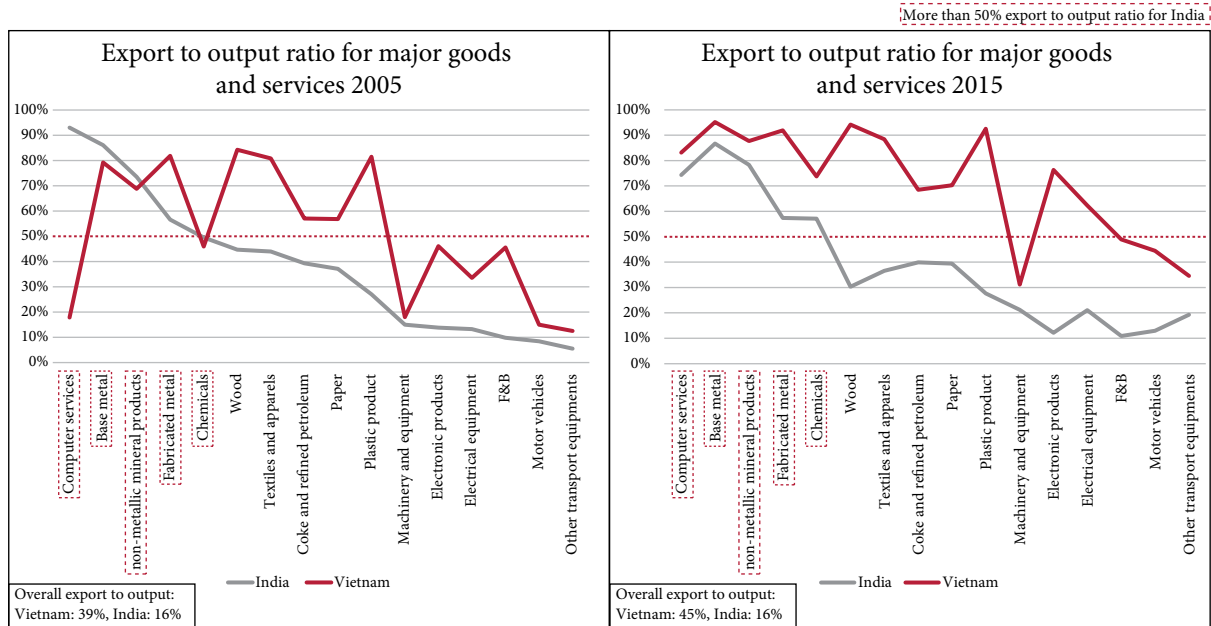
Greater participation in global export hinges on the competitiveness of the Indian economy. One intuitive way to gauge the extent of a country's competitiveness is to look at the share of total production that is exported. For a country like India, whose share in global export is around 2%, exports offer an unlimited market; hence one would expect that the more competitive we are, the higher the export share of total production.

Improving competitiveness is key to tapping into global markets

We compare the share of exports in total production for a few commodities and for IT services for India and Vietnam in 2005 and 2015. In 2005, the overall export-to-output ratio for Vietnam was significantly higher at 39% than India's 16%. The divergence between the two countries increased further by 2015, when Vietnam's share increased to 45% while India's remained at 16%.³²

³² Some may argue that this ratio is higher for smaller countries and hence it is not a valid comparison. However, even a large economy like China had an export-to-output ratio of 26% in 2005, significantly higher than India's.

Figure 11: India's export to output ratio is significantly lower than Vietnam's



Note: Major commodities refer to those with at least 2% share in India's total exports. The horizontal line indicates a 50% export-to-output ratio.

Source: OECD I-O tables, authors' analyses

What is instructive is that while India's average share of exports in output is around 16%, for computer services its export share is about 90% of total production! We are a world leader in computer services because of our pool of cheap, English-speaking skilled labour. Apart from computer services there are a few capita-intensive goods like base metal, non-metallic mineral products, fabricated metal and chemical products which have export to output ratio of more than 50%. Their average export to output ratio was 66% in 2005 which increased to 70% in 2015. However none of the labour-intensive products have export to output ratio of more than 50%. The high export to output ratio in capital-intensive products is an anomaly for a capital-scarce country like India.

There could be three explanations for this: First, there has been a faster increase in the domestic demand for capital-intensive products compared to labour-intensive products since they have higher income-elasticity. For example, capital-intensive products like transport, manufactured goods, furniture, furnishing, appliances, and services have an income-elasticity ranging between 1.19 and 1.27,³³ while clothing and footwear have a lower elasticity of 0.97. Second, this increase in domestic demand cannot be met through an increase in imports due to high Indian tariff rates (which were double those in China: in 2020, the applied mean weighted tariff rate was 6.19% in India versus 2.47% for China (World Tariff Profile, 2020)). Finally, capital-intensive products are on average more profitable than labour-intensive products. The average profit after tax-to-corporate sales ratio for major capital-intensive products³⁴ was 4% between 1995 and 2020 and for labour-intensive products³⁵ it was 2%.

³³ Elasticity = (increase in private final consumption expenditure of the commodity 1994-2019) / (increase in GDP 1994-2019) at constant INR prices (National Account Statistics, I-O tables).

³⁴ This includes chemicals, petroleum, transport equipment, and electrical products.

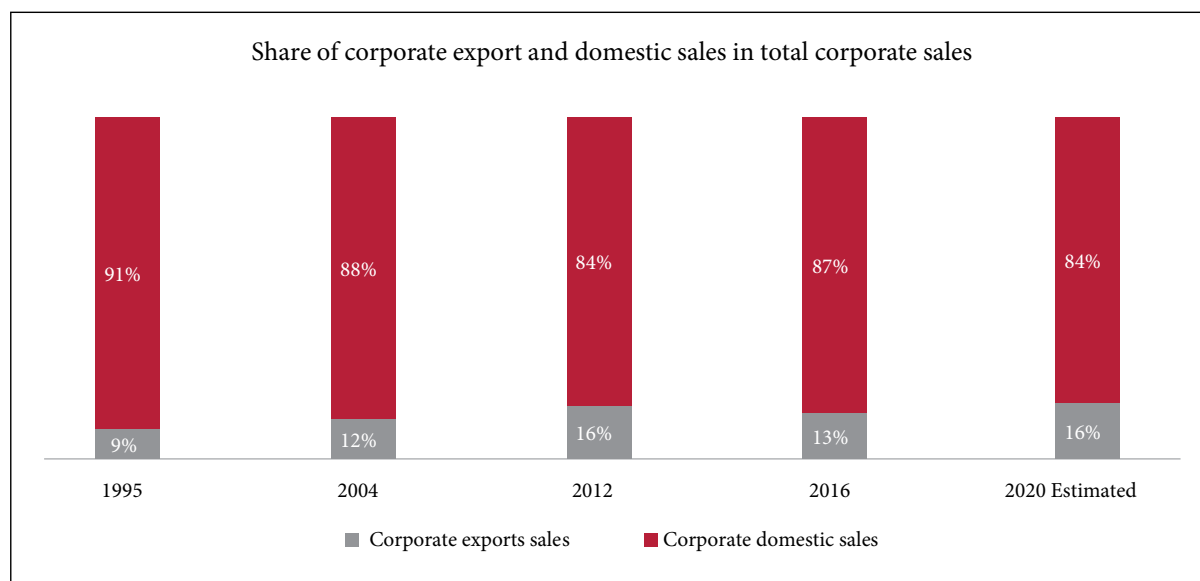
³⁵ This includes food and beverages, jewellery, rubber, and textiles.

Compared to other countries, service exports have so far played a bigger role than manufacturing in India's exports. Merchandise export share in total exports averaged 64% for India between 2000-10, compared to 97% for China, and 86% for South Korea (World Bank). Since a large portion of services like transport, education, health, etc., are not inherently tradable, India cannot escape from the need to make its manufactured exports more competitive. Service exports can come in handy and can definitely help, especially if digitisation turns some of the traditionally non-tradable services like education and health into tradable, but they cannot be relied on exclusively to do the heavy lifting in accelerating economic growth.

Since a large portion of services like transport, education, health, etc., are not inherently tradable, India cannot escape from the need to make its manufactured exports more competitive.

The need to push competitiveness in Indian industry becomes even more apparent when we examine where formal firms sell their output. Large firms are the primary vehicle through which countries export, and India is no exception: 55%-60% of India's overall exports happen through large firms. However, domestic sales still account for around 85% of large firms' overall revenue. Since the international market provides unlimited market for our large/formal firms, 85% of their revenue coming from the local market points to their lack of competitiveness in the global arena.

Figure 12: Corporate exports constitute 10-15% of overall corporate sales



Note: Since 2016, there has been a drastic decline in the number of firms reporting export earnings from 7,422 to 4,195 (Prowess database). This could be because firms have changed their accounting standards from GAAP to IndAS, which would involve a change in their annual statement reporting norms. The same trend is not evident for overall corporate sales. Therefore, corporate export numbers from 2017 are forecast based on their relationship with national exports. Domestic corporate sales values are the difference between overall corporate sales and exports.

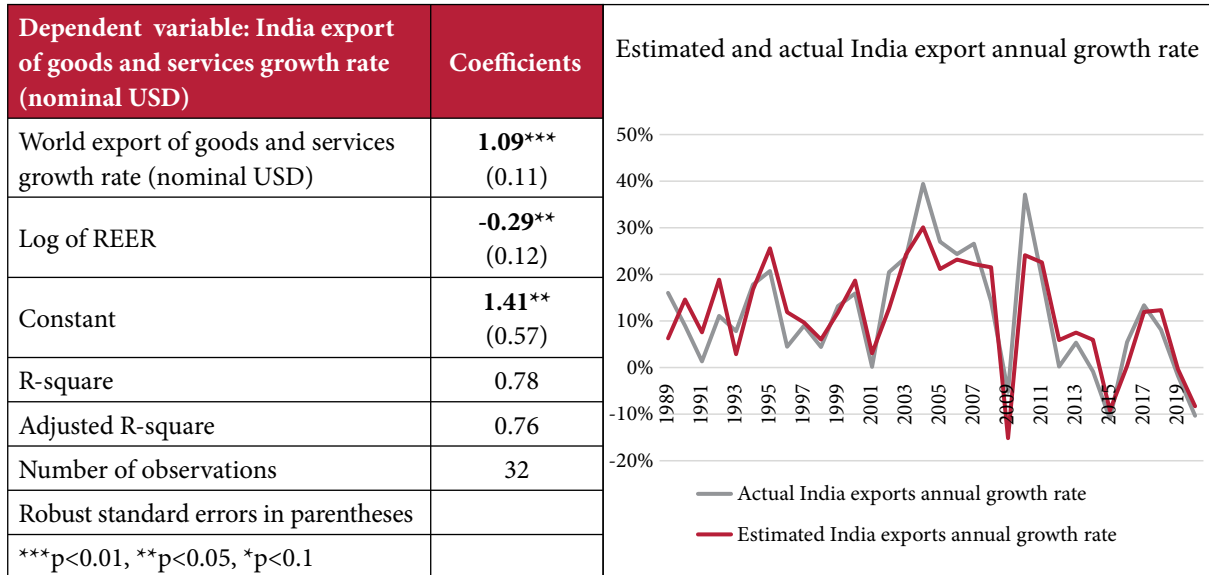
Source: Prowess, KLEM, NAS

Sound macroeconomic management is also important for export growth

One question that often arises is the impact of macro management on India's export growth. This has become even more important since the REER has been steadily appreciating since 2013. As it is arguably easier and quicker to alter the trajectory of the REER than to undertake fundamental reforms to make exports more competitive, it is worth exploring what impact an appreciating REER has had on exports so far.

We model export growth as a function of global export and the REER, and it fairly accurately tracks export growth performance (Figure 13). For 1% increase in world export growth, India's export growth increases by 1.09% and for every 1% increase in REER, export growth falls by 0.29%, ceteris paribus.

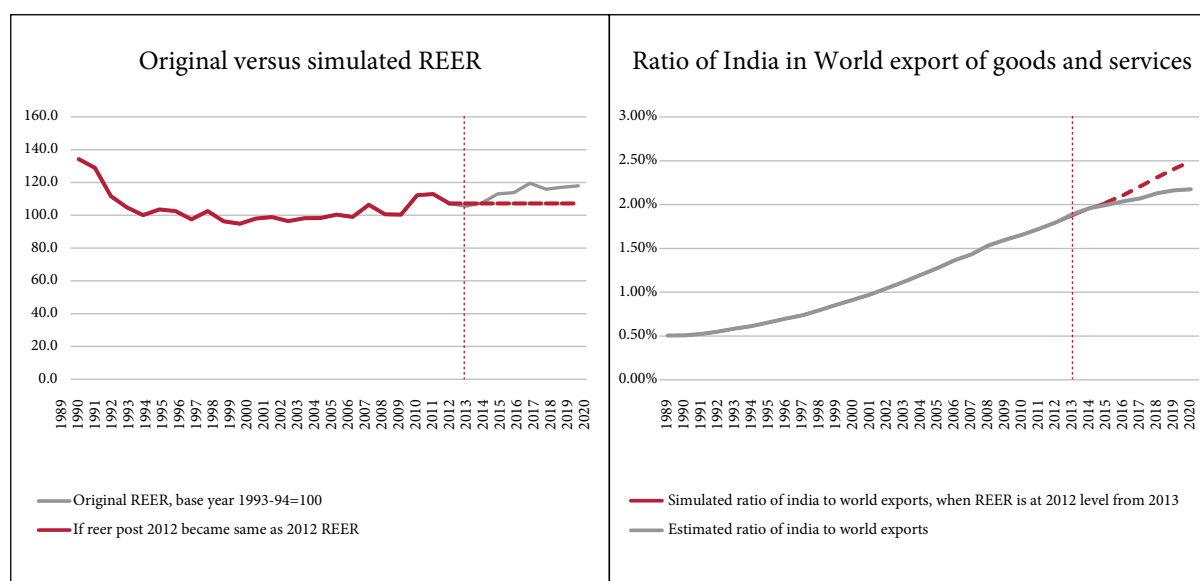
Figure 13: India's exports are driven by world export growth rate and real effective exchange rate



Note: The results hold true for non-fuel export regressions as well. Variables follow the calendar year. Source: export data is from World Bank. REER is from RBI based on 36-currency bilateral weights.

To check for the sensitivity of exports to changes in the REER, we do a simulation on our export regression shown above, by keeping the REER at the 2012³⁶ level between 2013 and 2020. The results are very interesting: had the Indian rupee not appreciated after 2012, India's exports as a share of world export would have grown to around 2.5% of world exports by 2020 instead of remaining stagnant at 2.1%. This would have resulted in the export share to GDP increasing to 21.6% in 2020 from 18.7% originally. This higher export to GDP would have increased annual per capita GDP growth by 0.3% in 2020, ceteris paribus.

³⁶ We choose 2012 as it marks the start of the slowdown phase in our analyses; also, the REER was about 100 that year.

Figure 14: India's exports are highly dependent on currency valuation

Note: Based on regression results.

Source: RBI, World Bank

The above section makes it abundantly clear that domestic reforms like reduced tariffs and correcting (overvalued) exchange rate, coupled with pace of growth of global trade have driven India's exports. Of late, while competitiveness as measures by export-multiple is static, global trade growth has come to a grinding halt, reducing our export to GDP ratio. Since we can't change the pace of growth of global trade, improving export to GDP ratio necessitates us focusing on the next set of reforms which will improve our competitiveness, thus pushing economic growth.

Formalisation is led by economic reforms (B)

We have defined formalisation as the share of the output of large/formal firms³⁷ in the national output. It is a good metric to gauge the impact of reforms on domestic economy, since large firms are significantly more productive than smaller firms, and hence an increase in formalisation as a result of unshackling of large firms due to reforms raises growth.

Formalisation in the Indian economy began to increase during 1995-96 in the immediate aftermath of the reforms, when it rose from about 36% in 1995 to 38-39% between 1996 and 1998. The trend was also reflected in the steep rise in listed firms from about 4,200 in 1995 to almost 6,000 by 1997. In the subsequent 5-7 years, the number of formal firms dipped to less than 5,000 by 2004, bringing down the share of formal output to about 30-32%. The decline in the number of formal/listed firms coinciding with their output share going down implies that they were going bankrupt, resulting in an increase in NPAs in the banking system.³⁸ While aggregate NPAs did not increase, NPAs in the private sector increased steeply from 2.6% in 1996-97 to 8.9% by 2001-02, before embarking on a steady decline.

³⁷ Formal sales are defined as the sales/output of large/listed firms. For our analysis, we aggregate the output of ASI firms (for industry) and service sector firms from CMIE Prowess database to arrive at total formal output/sales.

³⁸ There are broadly three reasons for the fall in the number of listed firms: mergers and acquisitions; public companies becoming private; and companies going bankrupt. It is important to note that in the first two instances, the decline in listed firms will not result in a decline in the share of formal output, which would be the case if firms went bankrupt.

Figure 15: Formalisation is driven by entry and exit of large firms



Note: The grey area depicts the common time period from 1997-2020. Formalisation data is the sum of Industry data from ASI and service data from the CMIE Prowess database. The number of domestic listed firms is from the World Bank, NPA data is from the RBI.

Between 2004 and 2012 formalisation increased from around 32% to about 45% and the number of listed firms also steadily increased from about 4,800 to about 6,000 in 2016. What is interesting is that, while the share of formal firms' output increased significantly during this period, the number of listed firms rose very gradually, compared to the previous period. Since these eight years were the Indian economy's highest growth years, corporate profitability was good, helping improve the balance sheets of banks by keeping NPAs at systematically low levels of around 2-5% of their advances.

The macro scenario changed after 2012, when NPAs began to increase sharply – from around 3% to 11% by 2018, as a number of large firms started going out of business. This resulted in the formal share of output steadily decreasing from around 45% in 2015 to about 37% by 2020, putting brakes on the economy's growth process as a result of the formalisation channel.

A few salient points can be discerned from figure 15 that deserve careful attention. First, reforms helped formalise the economy by creating a level playing field, allowing the entry and expansion of large firms without prior permission and in areas hitherto reserved for MSMEs. The process of formalisation kicked off soon after 1991, but it was disrupted by severe shocks such as the Asian financial crisis in 1997-99 and the terrorist attack on the World Trade Center in 2001, before resuming in the 2000s and continuing till about 2012. Second, it is evident that most of the expansion in formalisation occurred because of the entry of new large firms, as opposed to the expansion in existing large firms. The output share of the 1,539 large companies that are in our database throughout the study period hovers between 18-21%.³⁹ The jury is out on whether this churn indicates competition and hence is good from a long-term productivity and growth perspective, or if it points to systemic bottlenecks in the ability of existing large firms to scale further. Third, macro policies and the global environment are important drivers in determining NPAs (de-formalisation).

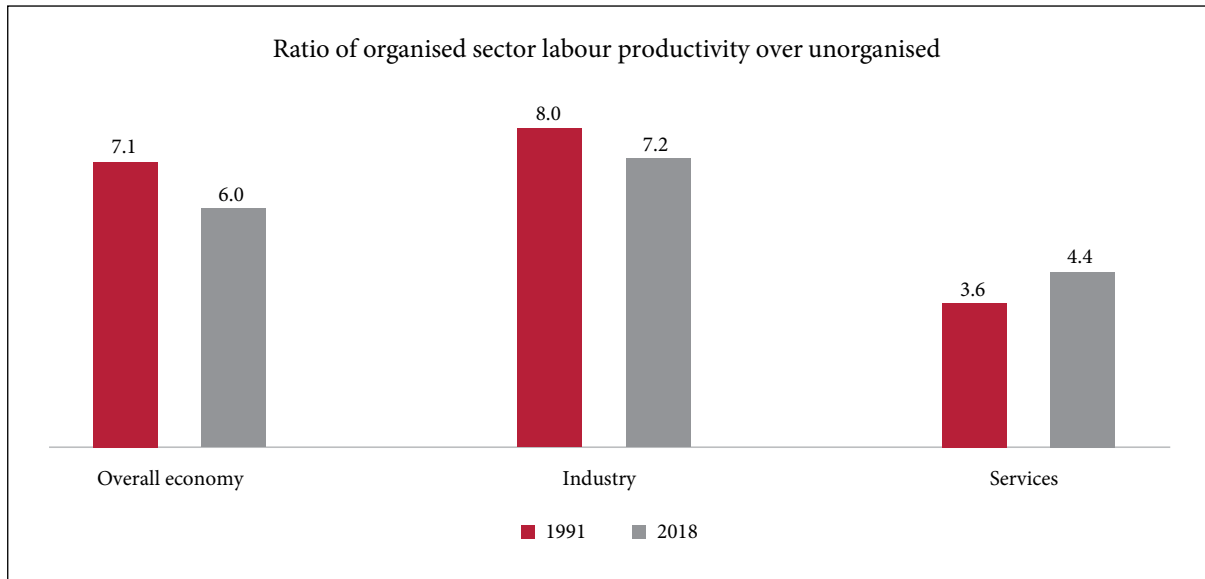
Formal firms drive growth as they are 4-8 times more productive than smaller firms

Formal firms are significantly more productive compared to smaller firms and hence a unit increase in their investment will give a larger boost to growth compared to the same investment by smaller firms. For the economy as a whole, labour productivity is six times higher in the formal sector than in the informal sector; eight times higher in industry and four times higher in services.⁴⁰ Not just labour productivity, large firms' capital productivity is 1.6 times higher than in unorganised firms (McKinsey Global Institute, 2020).

³⁹ Based on the CMIE Prowess database, which has continuous data for 1,539 firms from 1995 to 2020.

⁴⁰ These labour productivity numbers are an average from 1994, 2005, 2012, and 2018, and are calculated using the ratio of gross value added or net value added to the total number of workers (RBI, NAS, IMF, ASI, ILO).

Figure 16: Labour productivity is consistently higher in organised sector than in unorganised sector



Note: Labour productivity numbers are weighted averages. They are calculated using the ratio of GVA or NVA to the total number of workers.

Source: RBI, NAS, IMF, ASI, ILO

It is because of this large productivity difference between large domestic firms and smaller firms that the former have gained a larger share of the domestic economy, peaking at around 45% in 2012.

Large Indian firms are not yet globally competitive

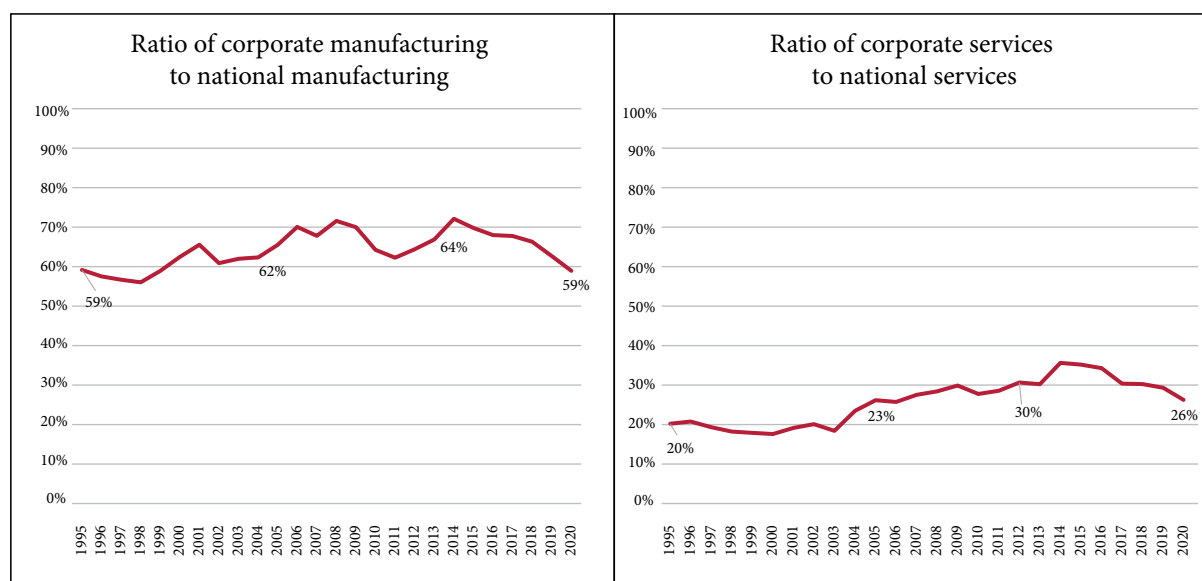
While large Indian firms are 4-8 times more productive than the smaller firms, they are not necessarily globally competitive. With the reforms these large firms were able to increase their share in total domestic output from around 36% in 1995 to about 45% by 2012. However, almost two-third of this increase came from an increase in their share of the domestic market, and only one-third was from increased exports. Similarly, during the de-formalisation phase, close to 80% of the decline came from their reduced sales in the domestic economy, and only 20% was from a fall in exports. Another way to look at it is that if large firms were truly globally competitive, it is possible that so many would not have gone out of business when faced with a tough business environment over the last 5-7 years, causing a steep rise in the NPAs. Lastly, the fact that large Indian firms contribute about 40% to total output while export earnings account for just about 15% of their revenue also points to large Indian firms not being globally competitive.

India's low level of formalisation is an outcome of its unorganised service sector

Since overall formalisation in India is only around 35-40%, there remains a significant headroom for economic growth to be boosted through this channel. We compare the formalisation process of the manufacturing sector and services sector separately to get a better picture of the situation. First, manufacturing is already 60% formalised,⁴¹ whereas services are mostly informal. Second, the manufacturing and service sectors have both followed similar trends in the process of formalisation – rising till about 2012 and declining since.

⁴¹ On average, ASI-listed industries are 70% formalised.

Figure 17: Manufacturing is 60% formalised while services are only 25% formalised



Source: Prowess database; national output data is from KLEM, except for 2019-20 which is from NAS (RBI KLEMS and NAS, post 2011-12 report the same output numbers).

Within manufacturing, an increase in formalisation took place in the major industries between 1994 and 2016. For example, formalisation of base metals increased from 76% to 100% between 1994 and 2016, and fabricated metal formalisation increased from 34% to 85%. Since almost 60% of industry is already formalised, the lower level of overall formalisation in the economy is inherently due to informality in services.

India having the highest density of “mom-and-pop” shops in the world is a stark manifestation of this informality (Sebastian & Gupta, 2018). This is evident across several sectors: in 2018, for example, in consumer goods and retail export, large firms contributed about 40% in revenue to the sector’s GVA; for construction, travel, transport, and logistics, it was between 10-20%; only 0-5% in logistics; and less than 5% in accommodation, food, and healthcare (McKinsey Global Institute, 2020). A significant portion of incremental formalisation can come from the services sector, if they continue to leverage the power of digitisation, a trend that is evident in services like online retail, digital health and education, etc.

In brief, reforms helped push growth by formalising the economy – shifting output towards relatively more productive large, formal firms. And there is significant headroom for growth through an expansion in this process, since most of the economy, especially in services, remains informal, and we expect this process to pick up pace, due to ongoing digitisation. However, reforms have not been able to create globally competitive large firms, which would give them the scope to expand and grow exponentially, which will in turn really accelerate economic growth. For sustained and accelerated growth, India needs globally competitive large firms.

Reforms have not been able to create globally competitive large firms.

Corporate-investment to corporate-sales is driven by global economic environment and India's growth performance (C)

Corporates' investments in capacity creation are inherently lumpy, which gives rise to business cycle fluctuations. The dotted line in the chart in Figure 18 represents average corporate-investment to corporate-sales ratio, which has broadly remained stable at around 15% of corporate sales. However, there are significant ups and downs around this trend line. For example, during the surge phase, corporates were investing 18% of their sales, far more than average of 15%. This went down to about 12% at the start of the slowdown phase.

Figure 18: Corporate-investment to corporate-sales ratio fluctuates around the trend



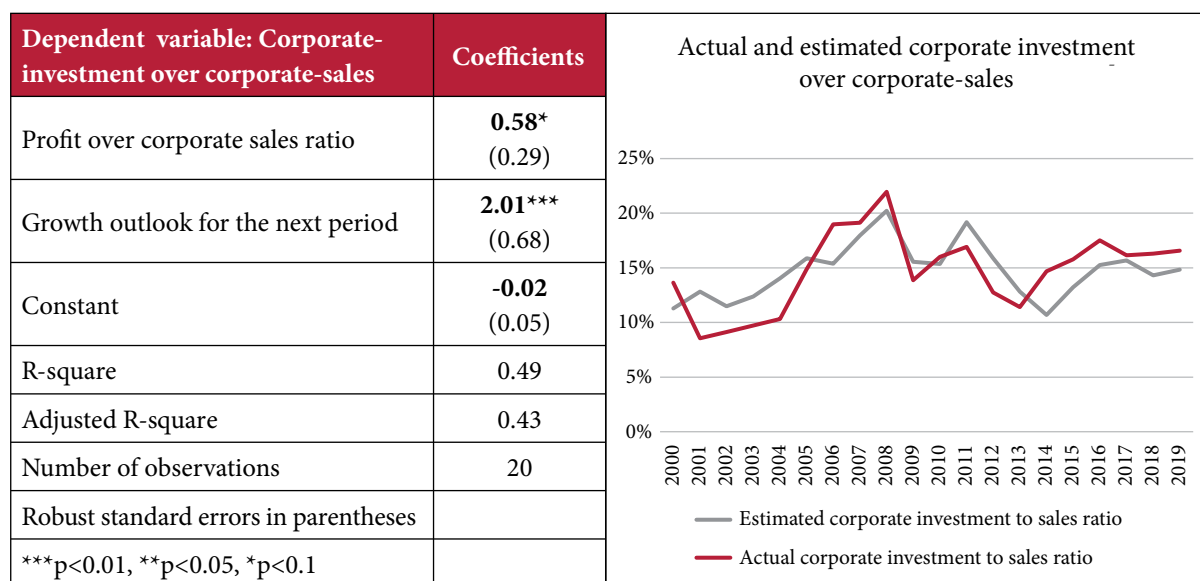
Note: The dotted line represents the trendline.

Source: Prowess database; National Account Statistics

Corporates' decision to invest is driven by the growth outlook and profitability

We argued in our transmission mechanism that corporates' decision to invest (or not) is driven by growth outlook and profitability. When we estimate the relationship, both variables come out significant, though the influence and significance of growth outlook is far greater than profitability. This creates a kind of self-fulfilling mechanism, where a better outlook elicits higher investment, pushing growth up and vice-versa.

Figure 19: Corporate-investment to corporate-sales ratio is driven by firm profitability and the country's growth outlook

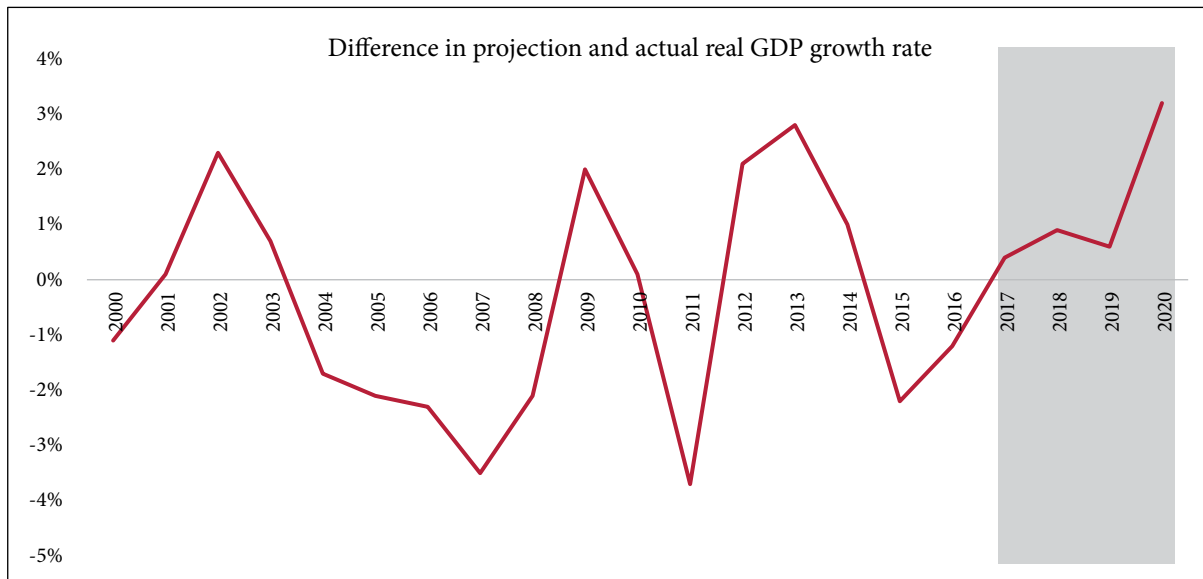


Source: The investment-sales ratio and profit-sales ratio are from the Prowess database; growth projections are from various issues of the World Economic Outlook.

We have seen that GDP growth is decelerating, as is corporate profitability which has declined steadily from 9% in 2008 to 3% by 2020. What then explains the slight upward trajectory of the corporate-investment to corporate-sales ratio, especially since 2014? The answer lies in the consistent over-estimation of economic growth relative to actual performance over the last few years. Since 2016, there has been a consistent overestimation of the growth outlook for India and the divergence⁴² has increased. It is this overestimation that has been boosting the business cycle component of corporate investment over the last few years. In a nutshell, the recent business cycle-driven investment upswing seems to be driven by a belief in a higher growth outlook in the near term, as opposed to the actual observed growth. To that extent, the foundation for the upswing seems shaky unless actual growth performance improves soon.

The recent business cycle-driven investment upswing seems to be driven by a belief in a higher growth outlook in the near term, as opposed to the actual observed growth.

⁴² Between growth outlook and actual growth by IMF.

Figure 20: Continuous overestimation of India's GDP post 2017

Note: The shaded grey area depicts the period where projections have been consistently higher than actual growth rates.

Source: IMF World Economic Outlook reports

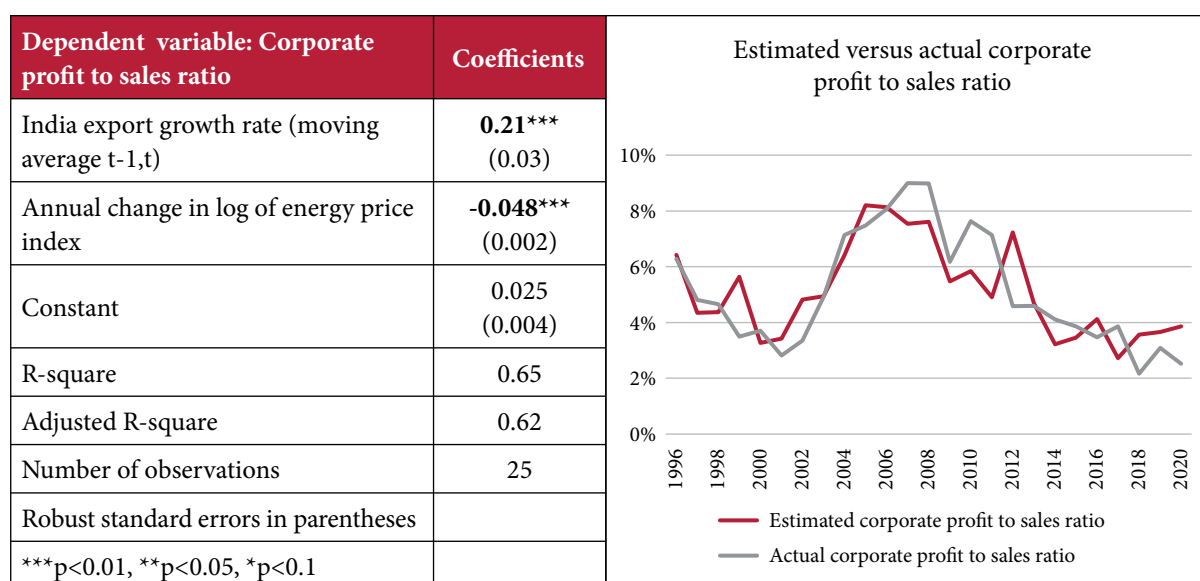
Profitability is determined by input costs and export earnings

We now come to the final point in our transmission mechanism, corporate profitability, which needs explanation.⁴³ Corporate profitability has been under constant pressure and declining steadily since 2008 (Figure 21), once the economy passed the surge phase. We model profitability as a function of: export growth (a proxy for global demand); and input costs, captured by the global energy price index (since the Indian economy is energy-dependent).

The decline in profitability has been due to a consistent decline in export growth which fell from an average of 28% between 2004-08 to 17% and 3% (in nominal terms) in 2008-12 and 2012-20, respectively. With the decline in the rate of export growth, formal firms' profitability would be significantly impacted since they account for 55-60% of India's exports. Further, the energy price index increased substantially from an average of 79 units to average of 107.4 units between 2004-08 and 2008-12, which increased the pressure on input costs and hence reduced profitability.

⁴³ Determinants of corporate profitability are either exogenous like global energy prices, or already explained, like exports.

Figure 21: Corporate profitability is driven by export growth and energy prices



Note: Profit refers to profit after tax. We tested the following independent variables to examine what explains profitability, but they were not significant: change in global commodity prices, credit growth rate, TFP growth, change in interest rates, and share of NPAs in gross assets.

Sources: RBI, World Bank, CMIE Prowess

Having understood the unifying framework, we now attempt to create three potential growth scenarios over the medium to long term which could play out.

Scenarios for the future

The past discussion has laid out clearly that structural indicators are weakening and need a reboot. We have to work harder even to match the country's growth performance over the last 26 years. There are indeed green shoots visible like strong corporate balance sheets indicating a possible recovery of investment in the near future. Profit after tax for both listed and unlisted firms has surged, while that of listed firms has risen by 1.3 times in FY21 and 0.7 times in FY22⁴⁴. This improved profitability has also helped improve the balance sheets for public and private sector banks: the proportion of banks with higher NPAs⁴⁵ has fallen from over 40% in the last five years to under 30% in 2021.

However, as discussed earlier, having strong corporate and bank balance sheets may not automatically translate into significantly higher investment by the corporates unless it is accompanied by economic reforms. This is because corporate investment is driven by two distinct elements: formalisation and corporate-investment to corporate-sales, and the former is driven by reforms.

Strong corporate and bank balance sheets may not automatically translate into significantly higher investment by the corporates unless it is accompanied by economic reforms.

Currently India is at an inflection point, facing significant uncertainty. With this in mind, we create three distinct growth scenarios for the medium term – the next five to seven years – with annual per capita growth rates ranging from 4.5% to 7.0% depending upon what we as a country are able to achieve.

⁴⁴ Refers to non-financial firms (CMIE Prowess database).

⁴⁵ Gross NPAs (as a % of gross advances) above 105 are considered to be high NPAs.

In the first scenario, India's growth keeps sliding-down. In the second case, the Indian economy manages to stand-up to headwinds from global economy. In the final case, the country sprints-ahead of other economies as it finally becomes globally competitive.

If India does not confront its challenges head on and improve its competitiveness, its annual per capita growth may slide-down further to around 4.5% over the medium term.

Table 3: Possible growth scenarios

Proximate indicators of growth	Situation in 2020	Sliding-down	Standing-up	Sprinting-ahead
Export to GDP	Export to GDP ratio is at 19%	Exports to GDP ratio falls to 14-15% by 2027. This assumes export to GDP ratio to follow the declining trend between 2012 to 2020.	Exports to GDP ratio is assumed to be around 20% level, close to the 2018-20 level.	Exports to GDP ratio grows at three-fourth of China's rate, between 2000-05, reaching 30.7% by 2027.
Formalisation	Formalisation is at 37%	Formalisation to be at 40% by 2027. This assumes increase in formalisation because of digitisation of services.	Formalisation reaches close to 45% with recovery in export performance coupled with on-going digitisation.	Formalisation reaches 50-55% level as India becomes globally competitive
Business cycle⁴⁶	0.4% below the trendline	Expected to be on the trendline	On average, a 1% higher corporate-investment to corporate-sales from the trend line	On average, a 2% higher corporate-investment to corporate-sales from the trend line
Annual per capita GDP growth CAGR, 2022-27		4.5-5.0%	5.5-6.0%	6.5-7.0%

In the sliding-down scenario, the export to GDP ratio is expected to decline to 13-14% by 2027 from 19% in 2020. Between 2012 and 2020, this ratio declined at an average rate of 0.75%, falling by a total of 6 percentage points. We assume this trend will continue over the next few years. Further, formalisation will also decline, as formal firms account for 55%-60% of national exports. But, with digitisation in the service industry picking up pace, formalisation of the service industry is expected to increase, along with a continued resolution of NPAs. These two forces will possibly outweigh the effect of a decline in formal exports and result in formalisation reaching about 40% by the terminal year. However, there is no indication of increasing competitiveness in this scenario.

⁴⁶ Corporate-investment to corporate-sales ratio.

In the standing-up scenario, we assume that the government's current policy actions will have positive impacts on the economy, especially due to improvements in the ease of doing business, and the emphasis on digitisation and infrastructure investment. India has been climbing the Ease of Doing Business global rankings, moving from 130th in 2016 to 63rd in 2020. Large-scale public infrastructure investments are being made and implemented more effectively, leveraging initiatives like the PM Gati Shakti and national infrastructure pipeline. This has led to the highest levels of capital expenditure by the central government in the last 19 years, at 19% of total expenditure. Given these trends, we envisage a relative improvement in India's competitiveness: India's exports will perform better than world exports, with the export-multiple increasing to 4.5x during this period. The export to GDP ratio will remain at around 20%, which is the average of the 2018-20 ratio. Formalisation reaches 45% in 2027 due to spill-over benefits from exports, along with the positive impacts of digitisation and resolution of the NPAs. Given the positive economic climate, the business cycle is assumed to be one percentage point above the trendline.

Finally, in the sprinting-ahead scenario, reforms are introduced to make Indian firms truly globally competitive. Under such a situation, India's export to GDP ratio is assumed to grow at a level similar to China's between 2000 and 2005, when its ratio grew at 10.1% per annum. Given a slower global growth currently compared to the early 2000s, we assume the growth in India's export to GDP ratio to be 75% of China's performance between 2000 and 2005. Consequently, India's export to GDP ratio will reach 30.7% by 2027 from an average of 20% over the last few years. Since globally competitive firms would be responsible for the increase in the export to GDP ratio, their overall output is expected to increase substantially, giving spur to formalisation. Overall formalisation will reach 50-55% of the economy. Due to all these positive trends, animal spirits will be unleashed, with business cycle investment staying 2% above the trendline growth.

Conclusion

India has gone through four distinct phases of economic growth between 1994-2020: consolidation (1994-2004), surge (2004-08), correction (2008-12), and slowdown (2012-20). While there is near unanimity that growth has been slowing down recently, opinion is divided on whether this is a structural or a cyclical decline, and whether it has been caused by domestic or external drivers. This is a key question, since the prescriptions for faster growth will differ greatly depending upon the causes of the slowdown. At one extreme end, if the entire slowdown was due to cyclical indicators, then the government needs to focus on providing succour to the needy, till the business cycle turns positive. On the other hand, if the bulk of the slowdown is structural, then that necessitates economic reforms.

There have already been several good attempts at answering these questions. However, in our view, none of these have been done in a holistic manner. This study attempts to fill this gap, with our unifying framework connecting the proximate growth indicators with the fundamental drivers through a transmission mechanism in an analytically robust and transparent manner.

The study concludes that large firms have played an important role in defining India's growth performance since the 1990s both by formalising the domestic economy and tapping into global markets. However, we have not been able to create globally competitive large firms, which would give them the scope to expand and grow exponentially, really accelerating economic growth. '*India's New Growth Recipe*' should thus focus on improving the competitiveness of large firms by making them global champions so that they can tap into the unlimited external markets far more than what they have managed to achieve so far. This will not only re-ignite the formalisation channel, but more importantly, help us compete in the vast global market.

How do policymakers find out if their 'reforms' are improving India's structural growth by making large Indian firms globally competitive? This is a critical question since cross-country evidence suggests that "most instances of economic reform do not produce growth accelerations" (Hausmann, Pritchett, & Rodrik, 2005,p.2). Our framework comes in handy here since it allows us to segregate growth performance into structural and business cycle components. The first set of structural indicators would be the share of exports in the revenue of large firms, export-multiple and share of export in India's GDP. *Ceteris paribus*, if India becomes more competitive, all these three indicators should improve. The second set of indicators capturing structural changes are formalisation, along with the number of listed firms.

India is at an inflection point in its economic journey. If it does not confront the challenges and improve its competitiveness, its growth may slide further, to an annual per capita growth of around 4.5% over the medium term. However, if it manages to get its act together, it can sprint ahead and grow at 6.5-7.0%. Since large firms are such a key pivot to India's growth journey going forward, it is imperative to answer the key question – what will it take to make large Indian firms globally competitive?

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