

subsidies, i.e., the standard World Bank recommendation for decades of ‘get the prices right’ is not enough. The *legal infrastructure* to enforce payment is far more crucial.¹¹

With regard to raising saving to finance development projects, the existence of bank accounts will facilitate risk-free savings, unlike say gold, which can be stolen. Banks will advance loans to those who can use their property as a collateral, i.e., those who have clear title. Identification tied to payment systems, such as America’s Social Security card, and e-governance initiatives, such as the Aadhar card in India, will facilitate more transactions and exchange, and thereby raise growth.

This Sotovian approach is vastly different from the conventional approach, in which raising the savings rate was seen as the *critical* condition for growth. In a classic paper from orthodox development economics, Arthur Lewis (1954) (who was later awarded the Nobel Prize for this assertion!) had stated,

“The central problem in the theory of economic development is to understand the process by which a community which was previously saving and investing 4 or 5% of its national income or less, converts itself into an economy where voluntary saving is running at about 12 to 15% of national income or more.”

In terms of the Harrod-Domar formula, the growth rate can be tripled by raising the savings rate from 5 to 15%. But there is no sound policy recommendation as to how this can happen. From a Sotovian perspective, when there is clear title to land, the higher savings needed to finance capital accumulation will somehow be forthcoming.¹² There is no need to offer special fiscal incentives to attract foreign capital. The higher savings will show up endogenously in the formula as the variable leading to higher growth.¹³

1.5 THE EASE OF DOING BUSINESS SURVEY

Following de Soto’s lead, the World Bank started measuring the EDB. Its 2004 publication, *Doing Business*, extended to 145 countries what it called de Soto’s ‘time and motion studies’ for Peru. That has evolved into a full-fledged, wide-ranging survey of different countries, now called the Ease of Doing Business Survey, or EDB Survey. The number of days and procedures for the following activities are separately recorded for: (i) starting a business, (ii) dealing with construction permits, (iii) getting electricity, (iv) registering a property, (v) paying taxes, and (vi) enforcing contracts. A reduction in the number of days and/or number of procedures obviously increases the EDB and pushes up the GDP growth.

¹¹ The book review of the *Mystery of Capital* (Moorthy, 2002) discusses how crucial postal addresses are for economic development. Even prior to the publication of *Mystery of Capital*, I had written, “merely attracting foreign capital will not ensure more infrastructure. Without the ability to enforce payment for say, electricity, there is no effective demand. The term transmission and distribution (T&D) losses in electricity has been jokingly referred to as “Theft and Dacoity” losses, see Moorthy (1998). In his book, *India’s Turn: Understanding the Economic Transformation*, Arvind Subramanian (2008, Pg. 116) provides data on T&D losses in the power sector for a few emerging economies, among which India has among the highest losses.

¹² For a discussion of impact of Sotovian policies versus tax concessions on savings, and the associated policy recommendation of cash bonuses for opening bank accounts for the poor, see Moorthy (2001). The *Jan Dhan* scheme is a huge push to open bank accounts in India in 2015.

¹³ This entire Section 1.4 draws heavily upon Appendix II, “Law and Order versus Savings as Determinants of Growth” from Moorthy (2001).

12 Applied Macroeconomics: Employment, Growth and Inflation

With regard to the choice of capital versus labour intensive techniques in manufacturing, the EDB approach implies that liberal hiring and firing rules for businesses will encourage labour intensive manufacturing. Such rules are likely to matter far more than the precise ratio of wage to rental price of capital, as in the Solow model.

Apart from its survey estimates of number of days and procedures for various activities, the World Bank's annual EDB Survey reports a rank of the strength of investor protection and an overall EDB rank. This overall rank is nowadays watched very closely and discussed by economists and politicians. All these data are reported in Table 1.B for 2013 for four countries: three large emerging economies, Brazil, China and India, and USA – the largest developed economy, and the benchmark for comparisons.

Table 1.B Components of the Ease of Doing Business Survey

	Brazil	China	India	USA
Starting A Business				
Number of Procedures	13	13	12	6
Number of Days	119	33	27	5
Dealing with Construction Permits				
Number of Days	430	276	168	91
Getting Electricity				
Number of Days	58	145	67	60
Registering Property				
Number of Procedures	14	4	5	4
Number of Days	30.5	29	44	12
Paying Taxes				
Number of Hours per Year	2600	338	243	175
Total Tax Rate (% profit)	68.5	63.7	62.8	46.4
Enforcing Contracts				
Number of Procedures	44	37	46	32
Number of Days	731	406	1420	370
Resolving Insolvency				
Number of Years	4	1.7	4.3	1.5
Strength of investor protection index (0-10)	5.3	5	6.3	8.3
GDP Per Capita (In US \$)	11,359	6,071	1,501	51,704
GDP Growth	0.9	7.7	3.2	2.8
Average Growth (2004-2013)	3.5	10.2	7.4	1.8
(Overall) Ease of Doing Business Rank 2013	118	99	131	4

Source: The following data for 2013 were taken from the World Bank's 2014 Doing Business Survey

To begin with, the first thing to note about this rank is that it measures the *relative*, and not the absolute EDB. The latter would be captured by the actual number of procedures and number of days for the various activities that go into running a business. Also, note that a numerically *lower* number implies a *greater* or *higher* EDB rank. In 2013, when USA was ranked four, Singapore was ranked one.

Consider the first item. For 2013, the number of days to start a business is reported as 33 for China and 27 for India. When the survey was started in 2004, this was reported as 88 days for India and 49 for China. This stylized fact had been often cited to suggest why China grows faster than India. However, as Table 1.B indicates, there are other criteria on which India scores better than China, such as getting electricity (67 versus 145 days) and dealing with construction permits (168 versus 276 days).

Where India fares badly is in the *legal realm*. It took 1420 days on an average for India to enforce a contract versus 406 for China, and 4.3 years to resolve insolvency in India versus 1.7 for China. From this approach, improving the ‘legal infrastructure’ is a critical factor for growth. From a Sotonomics perspective, spending on legal infrastructure, increasing the number of judges, setting up of fast-track commercial courts and relying more on arbitration to settle disputes are policies that will be very beneficial, and will provide the maximum ‘bang for the buck.’¹⁴

India has been streamlining its procedures and, hence, the number of days has come down. From 2004 to 2013, India’s absolute EDB has improved greatly: the number of days to start a business has fallen from 88 to 27, while for China it has fallen from 49 to 33 days. However, China’s overall rank is 99 against 131 for India, i.e., India’s relative EDB has not improved.

1.5.1 Links between Output and Ease of Doing Business

We should note that in any given year, the growth rate of a country may be unrelated to its EDB conditions. It can be seen from Table 1.B above that Brazil has the lowest growth of the four in 2013 since it was in recession. Hence, we should be looking at growth over a longer period which is likely to broadly correspond to potential GDP growth. Let us look at the ten year period ending in 2013. For this ten year period in this table, USA with the *best EDB ranking* among the four has the *highest per capita income*, but it has also the *lowest average growth rate*.

To try and arrive at some definitive conclusions, we need to examine a much larger sample of countries. The full Table in the Appendix at the end of this section provides relevant data for all the 42 countries listed in the back data pages of *The Economist* magazine. These are all reasonably big and/or developed countries whose quality of data is usually

¹⁴ As of January 2015 there were 3 crore total cases pending in India which has a very low judge to population ratio (about 10 to 1 million versus 150 for Europe and 100 for the USA. There were 40 lakh bounced cheque cases as of April 2015. See Bhan (2015).

adequate to be worth examining.¹⁵ Based on the table, three scatter plots are presented below. What do these plots indicate?

First, per capita income is positively correlated with greater EDB (Figure 1.b).

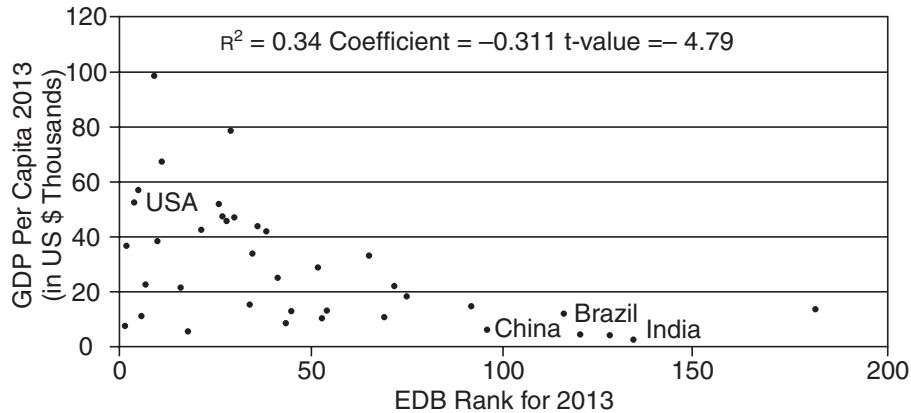


Figure 1.b Ease of Doing Business and Income Levels

Note: A lower rank implies a greater ease of doing business.

Second, the average growth rate is negatively correlated with per capita income (Figure 1.c). Third, the average GDP growth is negatively correlated with a greater EDB (Figure 1.d). It should be noted that countries with a better or higher or greater EDB have a numerically lower rank. So the correlation in the scatter plot between the EDB index and per capita income is negative, not positive.

These three scatter plots support the evidence in the table, comparing USA with the three big emerging economies combined as a group. America has a higher per capita income, lower growth rate and a much better EDB rank (fourth in the world), well above India (131), China (99) and Brazil (118). We shall try and provide some explanation for these correlations, keeping in mind that these are complex issues.

To begin with, why are rich countries (those with a high per capita income) rich? Consider the first correlation—between per capita income and EDB rank. This can be explained as follows. Countries with an improved rule of the law and greater EDB have prospered and developed over decades and even centuries, and this has resulted in a high per capita income. Their EDB is high, and their EDB rank is also high. The World Economic Forum publishes an index of competitiveness which also has a high correlation with per capita income.¹⁶

¹⁵ This table and some results are taken from the CCS project on the EDB rankings by Snehal Gajbhiye (2015), IIM Bangalore.

¹⁶ There is also a high correlation between an index measuring the degree of protection from expropriation and the log of GDP per capita, as shown by Acemoglu (2004).

Let us consider the second (negative) correlation between per capita income and average growth in subsequent years, shown below.

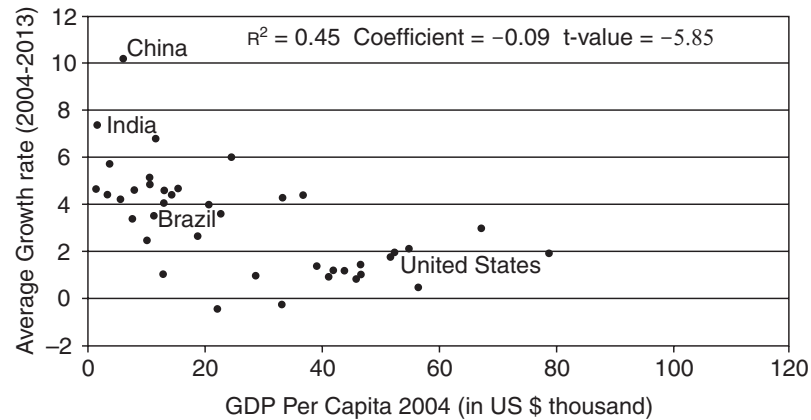


Figure 1.c Output Per Capita and Average Growth

Even before analysing this, we should note that at the individual company level, starting from a low base, growth of sales is high – which is an arithmetic effect. Once the level of sales is high, the growth then tends to slow down. The same logic applies to GDP per capita, which is the final sales of all the firms, adjusted for the population.¹⁷

For the economy as a whole, there are other factors at work beyond the ‘high base’ that will reduce growth when the level of income is high. When a country reaches a high income level, certain social changes take place. At high per capita income levels, the population growth tends to be *lower*. Without getting into demographic explanations, for various reasons, people tend to have fewer children. Hence population, labour force and labour supply growth all tend to be lower.¹⁸

It is worth noting that among rich countries, the ones that allow high immigration (USA, Canada and Australia) have higher population and labour supply growth and, thereby, a higher GDP growth than those with less immigration (the European countries and Japan). Both USA and Canada have higher growth rates compared to Japan and Germany, a big, representative European country. For the ten year period, both USA and Canada have a GDP growth about a percentage point higher than Germany and Japan. Their population growth is also about a percentage point higher, as can be seen in Table 1.C below.

¹⁷ For further discussion and details of these correlations, see Moorthy and Jason (2016).

¹⁸ These connections become much clearer using the labour supply chain numerical example in the next section.