Chapter 13.
Academic Scribblers and Defunct Economists

18th century physicians thought that an imbalance in the blood causes disease. To restore the balance, doctors used leaches to suck the blood of people already weakened by disease. This treatment apparently hastened the death of the ailing composer Mozart. Similarly, false theories of development weaken economies and sometimes kill people. As noted earlier, the worst example of death from bad economic theory was collectivizing agriculture, which contributed to starvation and disease that killed up to 40 million Russians and Chinese in the 20th century. Generalizing, bad economics causes poverty, which is bad for your health--life expectancy today is 82 years in Japan and 39 years in Zambia.

How much do economic ideas, bad or good, affect economic policies? Keynes, the great theorist of the 1930s depression, thought that little else matters:

The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed, the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist. Madmen in authority, who

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2 The Soviet Union apparently suffered approximately 10 million military deaths and 12 million civilian deaths in WWII. World War II killed approximately 4 million Chinese military and 6 million Chinese civilians. So the combined total of war deaths is around 30 million. Robert Conquest estimates famine deaths in the Soviet Union as 11 million from 1926 to 1937. China’s Great Leap Forward apparently resulted in around 30 million deaths. So the combined total of famine deaths is over 40 million. Estimates of deaths vary significantly by source. Collectivization of agriculture occurred in a context of other disastrous policies that contributed to the deaths, such as forcing farmers to neglect agriculture and work in village industries in China. For a website that compares estimates, see “Source List and Detailed Death Tolls for the Twentieth Century Hemoclysm”, http://users.erols.com/mwhite28/warstat1.htm. For a list of casualties by country in World War II, see “World War II Casualties,” Wikipedia, at http://en.wikipedia.org/wiki/List_of_World_War_II_casualties_by_country#Casualties_by_country.
hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back.\(^4\)

A brief history of development economics shows how the ideas of economists, both good and bad, affected economic growth in poor countries.

**Schematic Theories of Economic Development**

We will distill three broad theoretical approaches from the history of development economics and stylize their claims about the causes of growth. The first approach emphasizes state leadership in the economy. The state can lead through central planning as in communism, ownership of the key industries as in socialism, or through pervasive regulation and manipulation of prices of markets in capitalism. The theory of state-led growth dominated development economics from the 1930s until roughly 1980. According to this theory, free markets cause insufficient capital accumulation and slow growth in developing countries. Administrators and politicians in developing countries should choose promising industries and direct capital to them through state ownership of corporations, subsidies, and regulations.

To illustrate the logic of state-led growth, a construction site in Sri Lanka has 100 workers. 99 of them use hand shovels to excavate the same amount of dirt as 1 worker excavates by using a power shovel. If a second power shovel were available, production would rise by almost 50%. According to the theory of state-led growth, free markets under-invest in power shovels and the like, whereas state planners increase the rate of investment and allocate the funds across industries as best for society.

The second broad approach emphasizes market liberalization as growth's cause. Liberalization theory, which is associated with neo-classical economics, favors the allocation of capital by markets. To allocate resources efficiently, liberalization theory holds that developing countries must eliminate distortions that come from subsidies, regulations, and trade barriers. Developing countries

should privatize, deregulate, and adopt free trade – just the opposite prescription from state-led growth. Liberalization displaced state-led growth as the dominant theory of development in the 1980s, especially under the influence of the World Bank and the International Monetary Fund. The location of these two organizations gave liberalization theory its name – the “Washington Consensus.”

Liberalization theory makes optimistic predictions about capital markets. According to this approach, local, national, and global markets channel capital to where it earns the highest rate of return. The rate of return is higher where capital is scarce relative to labor as occurs in poor countries. So capital markets will cause poor countries to gain capital faster than rich countries, and living standards will converge in different nations. To illustrate by the preceding example, free capital markets will cause the construction firm in Sri Lanka to buy additional power shovels so long as their productivity exceeds their cost. Construction companies in Sri Lanka will continue buying additional power shovels and the like until the ratio of capital per worker resembles countries like France or Korea.

Instead of emphasizing state leadership or liberalization, the third approach focuses on “institutions”. This vague term usually refers to established, enduring practices that constrain policies. In the language of Douglas North, institutional constraints are the “rules of the game” for policy makers. Thus “institutions” include social and legal norms that sanction rule-breakers, as well as the organizations sustaining them. According to this approach, institutions determine the actual consequences of an economic policy. The same policy – say, an industrial subsidy or the regulation of a market -- can have different

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5 The marginal benefit of capital declines with the amount of it, so countries with the least capital benefit the most from getting more of it. Furthermore, the marginal benefit measures the amount that borrowers will pay for capital in a competitive market. Capital markets will lend where borrowers pay the most, which is in poor countries where the marginal benefit of capital is greatest.
consequences depending on the institutional setting. For instance, regulations that restrict logging can stop deforestation or merely provide forestry officials with a new source of bribes. Under-appreciation of institutional constraints apparently doomed central planning and impaired liberalization.

Completing the institutional critique requires identifying the central institution whose weakness inhibits growth. A causal theory is a license to focus on some variables and ignore the rest. Which institutions generally matter to economic growth and which ones can be ignored? We could look in many places for the institutions that matter -- government organizations such as ministries, civil service, courts, police, and political parties; economic organizations such as business organizations, trade associations, professional organizations, exchanges, guilds, labor unions, ethnic trading networks, and organized crime; religious institutions such as churches, mosques, temples, and charities; educational organizations such as schools, universities, and research organizations; and social organizations such as the family, marriage, communities.

After 2000 development scholars increasingly focused on the legal institutions that support markets. The contemporary turn to law began when economists looked carefully at the role of law in finance and compared the performance of different countries econometrically. The recent turn towards legal institutions stresses property, contracts, and business law. When effective, these laws protect property rights, enforce promises, and assure the integrity of

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7 The leading figure in this movement is Andrei Shleifer, and his co-authors Glaeser, La Porta, Lopez-de-Silanes, and Vishny. They use cross-country econometrics to conclude that common law tends to evolve towards greater efficiency than civil law, but this claim has not withstood econometric scrutiny. See Daniel Klerman et al., "Legal Origin and Economic Growth," Working Paper 03-07, Georgia State University School of Policy Analysis (2009). However, their can be mined for evidence on growth-increasing differences in the legal basis for financial markets. We draw on their work here, but, compared to them, we emphasize innovation and de-emphasize the common law or civil law origins of different legal systems. Note that an earlier law and development movement in the 1960s flourished briefly and then fizzled out. See D. M. Trubek, ‘Toward a Social Theory of Law: An Essay on the Study of Law and Development’ (1972) 82 Yale L.J.1; D.M. Trubek & M. Galanter, ‘Scholars in Self-estrangement: Some Reflections on the Crisis in Law and Development Studies in the United States’ [1974] (4) Wis. L. Rev. 1062. In contrast, the contemporary economic analysis of law rose like a solid building -- excavated tentatively in 1960s (Coase, 1960), foundations laid in the 1970s (Calabresi,1970; Posner 1972), and rising dramatically in the 1980s.
business organizations. Unlike institutionalism, state-led growth and liberalization theory mostly neglected law or focused on the wrong law. State-led growth favors policy over law, and it rejects private law in favor of public law. Liberalization emphasizes repealing public laws that impede markets, but neoclassical economics make no explicit reference to law. Thus the historical turn towards private law recalls the Psalm: “The stone the builders rejected has become the capstone.”

This book focuses on legal institutions that support innovation. Developing countries mostly innovate by discovering new markets and adapting organizations, not by inventing new technologies. Innovation in markets and organizations, like any innovation, is risky. A risky venture that unites capital and new ideas poses a problem of trust. The best solutions to this double trust problem emerge from a framework of private law (property and contracts) and business law (corporations, finance, bankruptcy).

Figure 12.1 summarizes our schematic history of development economics. Next we provide some details about the constituent theories.

**Figure 12.1: Schematic History of Development Economics**

<table>
<thead>
<tr>
<th>Name</th>
<th>Dates</th>
<th>Failure</th>
<th>Fix</th>
</tr>
</thead>
<tbody>
<tr>
<td>State-led growth</td>
<td>1930-1975</td>
<td>insufficient capital</td>
<td>directed investment</td>
</tr>
<tr>
<td>Washington Consensus</td>
<td>1975-1990</td>
<td>wrong prices</td>
<td>liberalization</td>
</tr>
<tr>
<td>Institutionalism</td>
<td>1990-2000</td>
<td>bad institutions</td>
<td>market-supporting institutions</td>
</tr>
<tr>
<td>Legal</td>
<td>2000-present</td>
<td>bad law</td>
<td>laws supporting markets and organizations</td>
</tr>
</tbody>
</table>

**State-led Growth?**

Why did state-led growth originally dominate development economics? Two historical developments prompted admiration for state leadership among developing countries and their elites. First, almost a century of economic growth

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8 Psalm 118:22.
ended in the great depression of the 1930s, which crippled the world’s capitalist economies and prompted skepticism about free markets and free trade. Second, as capitalism sputtered, many people thought they saw vibrant economic growth in communist Russia under Stalin and Nazi Germany under Hitler. The Soviet Union achieved high growth with state enforced industrialization and with little international trade. After World War II ended, communism triumphed in China, and other countries tried their own version of soviet socialism. The newly independent countries of Africa and Asia implemented socialism to various degrees, as illustrated by Nehru’s India and Nkrumah’s Ghana. In South America, Juan Peron restructured Argentina’s economy through government planning, and Francisco Franco pursued a similar policy in Spain.

In this political environment, development economics emerged as an academic discipline. In the 1940’s and 50’s, many of its prominent scholars taught that developing countries need state leadership of the economy. In 1957 Nobel Price winner Gunnar Myrdal succinctly summarized the wisdom of the age:

“The most important change in state policies in underdeveloped countries is the common understanding that they should each and all have a national economic development policy…Indeed it is also universally urged that each of them should have an overall, integrated national plan. All underdeveloped countries are now attempting to provide themselves with such a plan, except a few that have not yet been reached by the Great Awakening.”

Was state-led growth the great awakening? To answer this question, we will briefly review and critique its major schools of thought. Any introductory textbook on microeconomics explains the fundamental idea behind state-led growth. Students first learn the model of perfect competition, which textbooks describe as a self-regulating system. Next students learn about departures from perfect competition that cause markets to fail, beginning with monopoly. Monopoly occurs naturally when increasing returns to the scale of production

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cause the largest firm to have the lowest production costs. With natural monopoly, only one firm can survive in free competition. Similarly, oligopoly occurs naturally when the minimum efficient scale of production is large relative to the market. With natural oligopoly, only a few large firms can survive in free competition. Unlike self-regulating competition, natural monopoly and oligopoly may require regulation or other forms of state control, although economists disagree about how much they require.

If natural monopoly and oligopoly occur equally in developed and developing countries, then managing them requires similar amounts of government control of the economy. However, if natural monopoly and oligopoly pervade developing countries more than developed countries, then developing countries require more government control of the economy than developed countries.

Pursuing different aspects of this idea produced several schools of thought in development economics that all favor state economic leadership, as we will explain. The school of “unbalanced growth,” which is associated with Rosenstein-Rodan, held that firms have increasing returns to scale. To be viable, each firm in the modern sector must reach a minimum size. Private firms in developed countries already exceed the minimum efficient scale, according to this theory, whereas firms in developing countries remain below it. Unprofitable companies in developing countries would allegedly turn profitable if they got bigger. Private capital markets in developing countries will not finance the growth of firms sufficiently to make them big and profitable. The state, consequently, should subsidize domestic companies and protect them from foreign competition until they reach the minimum efficient scale to compete internationally, at which point subsidies and protection can be removed, or so the theory goes.

An influential idea that complemented “imbalanced growth” is the “big push.” A cluster of interdependent firms must reach the minimum efficient scale all at once to make an industry viable. For example, an automobile manufacturer
and its supplier of tires many need to reach minimum efficient scale at the same time in order for either of them to compete in the world market for cars. Linkages among firms require all of them to get big at once, so development requires a “big push.” The required amount of capital is too large for capital markets. Instead, the state should create an investment board or a state monopoly to direct capital to promising industries.11

Like the big bang in physics, the big push in development reverberates to this day. The contemporary United Nations Millennium Project presumes that African nations south of the Sahara need to stand on massive foreign investments in order to reach the first rung on the growth ladder and begin their ascent. The Project calls for doubling or tripling foreign development assistance to Africa and foresees eventually wiping out poverty.12 This rationale contradicts statistical studies finding little or no effect of development assistance on economic growth.13 Also, instead of being trapped, some very poor countries in Africa and elsewhere have enjoyed periods of fast and sustained growth.14

Like the “big push,” the school of “balanced growth” associated with A.O. Hirschman and G. Myrdal starts by observing that economies of scale in developing countries produce spillovers up and down the chain of supply, so each firm that buys inputs or sell outputs conveys benefits to other firms. The market prices at which the firms trade with each other undervalue these “forward

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11 See P.N. Rosenstein-Rodan, ‘Problems of Industrialization of Eastern and Southeastern Europe’, (1943) 53(210/211) Economic Journal 202-211. Leibenstein took a similar view, when he asserted that before self-sustained industrial growth first requires state assistance to assure “critical minimum effort.” Harvey Leibenstein, Economic Backwardness and Economic Growth, (New York: John Wiley & Sons, Inc., 1957). Note that big push theory resembles Marx’s concept of “primitive accumulation,” which played an important role in debate over industrialization in the Soviet Union. The modern industrial sector, according to Marx, Capital: A Critique of Political Economy (1867), must achieve a minimum size before it can exist on its own. Capitalists financed the original accumulation of machines, buildings, railroads, etc., by stealing wealth from the guilds, peasants, and others in the traditional sector, not by retaining profits from their own production. To achieve “primitive accumulation,” the Soviet state extracted resources from the agricultural sector to finance the industrial sector.


13 William Easterly, The White Man's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good (New York: Penguin Press, 2006).

and backward linkages.”\textsuperscript{15} The private benefits of production in linked industries falls short of their social value, so industries in free markets will not expand enough. To solve the problem, the state should choose promising industries and favor them with subsidies and regulations that shield them from competition. State leadership is necessary to balance growth, but not a big push.

Having discussed economies of scale and scope in developing nations, we apply these ideas to international trade. Given scale economies, the largest firm or firms in international trade enjoy natural monopoly because they can produce at lower costs than their competitors. This natural advantage comes from the historical accident of getting big first, not from the inherent strength of these firms. The largest firms in international trade in the 1930s and 1940s were ones in the rich countries that industrialized first. This accident of history has given these firms monopoly power in international trade.

With free trade, the large firms in developed countries will drive out the small firms in developing countries. If developing countries allow free trade, their domestic firms will never become big enough to compete internationally. To catch up, according to this argument, developing countries should reject free trade and protect their “infant industries” while their firms grow up big and strong. Thus many authors writing on international trade and development advised poor countries to use tariffs to block imports.\textsuperscript{16} As domestic industries grow behind the tariff wall, consumers will substitute domestic goods for imported goods. Import substitution makes domestic firms get bigger, which causes their costs of production to fall. This process should proceed until domestic industries reach an efficient scale where they can compete internationally, at which point the state can remove international trade protection.\textsuperscript{17}


Singer and Prebisch also thought that poor countries that primarily export raw materials would stay poor. Exporting raw materials is a trap because the prices of raw materials will always fall relative to manufactured goods. As these prices fall with time, the poor countries that mostly export raw materials will get poorer. (This prediction contradicts the modern belief among contemporary ecologists that prices of raw materials will rise sharply through resource exhaustion.)

While Prebisch favored temporary tariff protection against international competition, radical trade skeptics favored permanent protection. Radical skeptics held that poor countries with small industries could never compete in international trade. By trying to do so, they will become the poor “periphery” far from the rich “center.” Even worse, if poor countries allow direct foreign investment, international firms will exploit them. Exploitation of poor countries by rich countries was central to Lenin’s theory of imperialism. To avoid exploitation by imperialists, some contemporary critics of globalization believe that poor countries should curtail participation in the international economy.

Besides spillovers and trade skepticism, another reason for developing countries to subsidize domestic firms comes from a different strand of thought in development economics. According to Lewis’s “dual economy” theory, developing economies have two distinct sectors – modern and traditional. Each worker in the traditional sector produces little because he has so little to work with, like digging with a hand shovel. In contrast, each worker in the modern sector produces a lot because he has much to work with, like digging

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18 Specifically, demand for raw materials is inelastic, according to Prebisch, so an increase in their supply from developing countries would cause a decline in their world prices. Thus the terms of international trade always turn against exporters of raw materials. So don’t focus your economy on exporting raw materials. In addition, random shocks in supply combined with price inelasticity causes large price fluctuations, which disrupt economies. So create a government board to smooth out world price fluctuations. Supra note 18. H.W. Singer, ‘The Distribution of Gains Between Investing and Borrowing Countries’ (1950) 40 American Economic Review: Papers and Proceedings, 473.
19 Lenin, the leader of Russia’s communist revolution that began in 1917, argued that the rich and poor countries stand in the same relationship to each other as the capitalists and the workers in Marx’s theory -- the former exploit the latter.
with a power shovel. According to this view, when workers move from the traditional to the modern sector, production falls a little in the traditional sector and increases a lot in the modern sector.

To illustrate concretely, a farmer employs his son to work the family’s small plot of land. There are so many workers and so little land that the son’s labor does not produce much. The father pays his son a subsistence wage that exceeds his son’s production, so the son receives a subsidy in the form of a gift from his father. In these circumstances, if the son leaves the farm, moves to the city, gets a factory job, and supports himself, the son’s income will increase and so will the father’s income. (This claim can be formulated more precisely in the technical language of economics.)

We will mention the most important policy implication of dual market theory. According to this theory, society benefits when employment shrinks in the traditional sector and increases in the modern sector. Free markets will not capture this benefit, so the traditional sector tends to be too large and the modern sector tends to be too small. To correct this distortion, the state should tax the traditional sector and subsidize the modern sector. This argument justifies policies that transfer resources from poor workers in agriculture to relatively rich workers in industry. In the 1980s, developing countries everywhere (except East Asia) discriminated against agriculture by using regulatory price...
ceilings, export restrictions, and multiple exchange rates. As a result, farmers in developing countries received less than the world price for their crops.\textsuperscript{24} This is a recent episode in the ancient history of towns taxing farmers.\textsuperscript{25} (In rich democracies today, the situation usually reverses itself: Towns subsidize farmers.\textsuperscript{26})

Figure 12.2: Some Theories of State-Led Growth

<table>
<thead>
<tr>
<th>Name</th>
<th>Proponent</th>
<th>Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big push</td>
<td>Rosenstein-Rodan</td>
<td>State mobilizes capital &amp; labor</td>
</tr>
<tr>
<td>Balanced growth</td>
<td>A.O. Hirschman &amp; G. Myrdal</td>
<td>State subsidizes promising industries</td>
</tr>
<tr>
<td>Import substitution</td>
<td>Prebisch</td>
<td>Tariffs against imports</td>
</tr>
<tr>
<td>Imperialism</td>
<td>Lenin</td>
<td>Withdraw from world trade</td>
</tr>
<tr>
<td>Dual economy theory</td>
<td>W.A. Lewis</td>
<td>Subsidize industry &amp; tax farms</td>
</tr>
</tbody>
</table>

Figure 12.2 summarizes the theories that we have discussed.

Responding to these theories, the state led the economy in many developing countries through licenses, subsidies, tariffs, loans, manipulated exchange rates, and official prices. State-led growth produced impressive results in the 1950s, but its failure became obvious in some countries in the 1970s.\textsuperscript{27} Lack of competition raised prices and lowered the quality of goods, overregulation stifled innovation and promoted corruption, and state domination of the economy channeled effort into gaining political influence rather than creating wealth. To illustrate, when Juan Peron achieved power in 1946 in Argentina, he taxed

\textsuperscript{24} For a table showing the depression of prices paid to farmers relative to world prices for the main staples in 50 developing countries, see Daphne S. Taylor, Truman P. Phillips, ‘Food-Pricing Policy in Developing Countries: Further Evidence on Cereal Producer Prices’, (1991) 73(4) American Journal of Agricultural Economics 1036.

\textsuperscript{25} In 1756 in the famous Diderot Encyclopedia, Francois Quesnay criticized this feature of mercantilist France as follows: “Wrong promises have drawn people from the countryside into the cities, where the necessity to offer cheap labor led to political pressure on the price for wheat. … (This has) has knocked down agriculture into a miserable state of subsistence (F. Quesnay, Grains, 1757, Encyclopedie de Diderot et d’Alambert) (Own translation from French).

\textsuperscript{26} A possible explanation is that farm subsidies in rich countries, where farmers are few, benefit relatively few people, so they can overcome free-riding and devote resources to influencing politicians. Conversely, farm taxes in poor countries, where farmer are numerous, impose small costs on many people, so they cannot overcome free-riding and devote resources to influencing politicians.

\textsuperscript{27} An important book that demonstrates the failure and its causes was Jagdish Bhagwati,…Also see H.J. Bruton ’A Reconsideration of Import Substitution’ (1998), XXXVI JEL 903.
agriculture, subsidized industry, and erected tariff barriers against foreign goods. Consequently he weakened agriculture and created industries that could not compete in world markets. In Ghana during the reign of Kwame Nkrumah (1957-66), a similar policy redistributed wealth and power from cocoa farmers to urban elites. Tanzania under Julius Nyerere (1960-86) also pursued this strategy. Whereas import substitution failed, export-led growth succeeded dramatically in Japan, Korea, and Taiwan.

We have focused on economic organization and performance, but state-led growth also impacts class and ideology, as we describe briefly. In past centuries, aristocrats in Europe despised businessmen. For aristocrats, “bourgeois” was a pejorative term. Much the same was true among the higher castes in India. In the 20th century, this hostility to business transferred from aristocrats and high castes to intellectuals. Aristocratic snobbery towards bourgeois culture transmuted into intellectual anger towards capitalism.

Hostility of intellectuals towards business has a material foundation. Before the 20th century, many intellectuals lived off the largess of aristocrats and shared their conservative views. Building modern states in the 20th century, however, required developing a civil service that hires and promotes on relatively objective grounds, including education. Intellectuals perform well in school and on written exams that the civil service uses for hiring and promoting. By providing jobs, the civil service broke the dependence of intellectuals on aristocratic largess. For instance, the great 16th century Danish astronomer Tycho Brahe was the imperial astronomer for the Holy Roman Emperor Rudolph II, whereas the 20th century physicist Albert Einstein first developed his revolutionary ideas while working as an examiner in the Swiss patent office in Berne.

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28 Note that Peron’s policies in Argentina and their consequences resemble the mercantilist in France in the 18th century and which Adam Smith criticized.

After becoming entrenched in the civil service, intellectuals obviously gained from expanding it. Administration expanded dramatically through state control of the economy. Leading the economy created more jobs with higher pay for intellectuals. Intellectuals were naturally attracted to the belief that the state should lead economic growth. Shouldn’t the smartest people in school also be the richest and most powerful? As the civil service grew, left ideology made state officials confident that they could lead the economy. Thus ideas and material interests converged to promote state leadership of the economy.

**Why Liberalization?**

We have explained that state-led growth relied on planners to direct capital to the most promising industries and protect them from foreign competition. In the last half of the 20th century many developing countries pursued industrial policies that favored capital accumulation over consumption, manufacturing over agriculture, heavy industry over light industry, dirty industry over clean industry, fishing and cutting wood over sustainable production, and import substitution over exports. From Poland to India, state-led growth nurtured firms that were too clumsy to survive. Import-substitution in Africa and South America produced much worse results than export-led growth in East Asia. With subsidies and protection, helpless infant industries grew into flabby adolescents. Most economists now view these policies as mistakes that retarded economic growth.

The failure of the policies of state-led growth has three general causes. The first is motivation. Public officials cannot keep the wealth that their policies create for the nation, but they can keep the wealth that they receive in salaries and bribes. By leading development, officials increase their responsibilities, which increases their salaries and their opportunities for bribes. Industrial policy is rife with political favoritism, chicanery, cronyism, and corruption. Politicians and officials have strong incentives to invest the state’s money less productively than businessmen invest their own money.
The second cause of failure is information. Even if officials were motivated to make wealth for the nation, they do not have the information needed to guide industrial development. An economy produces everything from pins to powerhouses. State officials cannot centralize enough information to manage this complexity. People in firms distort or withhold information from officials for strategic reasons – to avoid taxes, attract subsidies, gain political influence, etc. Strategic resistance to officials makes their task of economic leadership intractable. (Note that the arguments against state-led growth based on information and motivation were made in the 1940s, but economists appreciated them more fully in the 1980s.)

The third cause of failure is the impotence of capital accumulation. On its face, capital accumulation may seem like the key to unlock the treasure chest of national wealth. On construction sites in Germany, machines resembling dental drills for dinosaurs bore the foundations of buildings, and other machines carry away the dirt without human hands touching it. With so much capital per worker, the productivity of German labor is high. In contrast, on construction sites in India, laborers with picks and shovels dig the foundations of some buildings and women remove the dirt in baskets balanced on their heads. With so little capital per worker, the productivity of Indian labor is low.

Why do Indian workers have less capital? In a market economy, households decide how much money to save and businesses decide how many machines to buy. People in poor countries voluntarily save a lot of money. Could a country like India grow faster and become rich like Germany by forcing people to save and invest more? Russia tried to speed development in the 1940s and 1950s by forcing people to save more and investing their savings in

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30 Two of the seminal works were published in 1944: Lerner, The Economics of Control (New York: The Macmillan Company, 1944), and Friedrich A. Hayek, The Road to Serfdom (Chicago: University of Chicago Press, 1944).

31 Recognition of this fact especially came through the Nobel prize award to three pioneers in the area in 2001, namely Michael Spence, George Akerlof, and Joseph Stiglitz.

32 In recent years, people in low-income countries voluntarily save a larger fraction of their income than people in high-income countries. In general, people save more when they have to pay for their own retirement and medical treatment, rather than the state providing social security and medical care. See World Development Indicators (2007).
machines and other capital goods. Growth rates were spectacular in the 1950s, but they proved unsustainable.\footnote{33} The facts about Russia are consistent with the law of diminishing marginal productivity, which predicts that total production increases at a decreasing rate as capital increases relative to other factors of production.\footnote{34} This law applies to a firm or nation.

In general, economists who examine the data find a weaker connection between growth and capital accumulation than theories of state-led growth assumed. To illustrate, in 1960 capital per capita in the relatively rich UK was three times higher than in relatively poor Algeria. Over the next 28 years, capital increased by roughly 240\% in the UK and real income per capita increased by more than 80\%, whereas capital per capita increased by roughly 300\% in Algeria and income per capita stagnated. Capital accumulation brought higher incomes to Britain and not Algeria.\footnote{35} Algeria is not the only example of capital accumulation without growth.\footnote{36}

In the UK, capital accumulated and the productivity of capital did not fall, thus defying the law of diminishing marginal productivity.\footnote{37} In UK firms, innovation apparently increased the productivity of capital enough to offset the decrease

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\footnote{34}{A well-run company first acquires machines that boost output the most, and later acquires machines that boost output less. So the gain in output from more machines declines as a company gets more of them. This proposition predicts that capital will be more productive on average in countries with less capital. Equivalent, poorer countries will have a higher ratio of output to capital than rich countries. In symbols, assume $Y = f(K, L)$ where $f_1>0$, $f_1<0$, and $0=f(0, L)$. As K increases, Y increases and $Y/K$ decreases.}


\footnote{36}{From 1980-1992, capital per capita increased by more than 1\% per year in Costa Rica, Ecuador, Peru, and Syria, and per capita GDP decreased. W. Easterly & R. Levine: It’s not Factor Accumulation: Stylised Facts and Growth Models, (2002) Working Papers Central Bank of Chile 164, Central Bank of Chile at 10. Between 1980 and 2004, average per capita growth rates in high income countries were 1.93 per cent per annum, compared to 1.97 per cent per annum in low and middle income countries. Note, however, that the experience of Tunisia in this period resembles Britain more than it resembled its neighbor, Algeria. In Tunisia the capital output ratio was slightly higher than in Algeria in 1960 and the capital stock per capita was then about half of what it was in Algeria. Between 1960 and 1988 the per capita capital stock in Tunisia increased by around 70 per cent. Tunisia experienced a real per capita growth of about 40 per cent over the period of 28 years. The capital output ratio decreased substantially during the same period. Supra note 36.}

\footnote{37}{The ratio of output to capital measures capital’s productivity. The capital-output ratio changed little in the UK as capital accumulated and income increased. See supra note 36.}
caused by having more of it. While capital accumulation proved less important to growth than many supposed, innovation proved more important.\(^{38}\) Conversely, bad organization and leadership of Algerian firms apparently caused them to waste increasing amounts of capital.\(^ {39}\) Developing countries cannot accelerate growth by importing modern machines and placing them in inefficient organizations. The state can make people accumulate easier than it can make them innovate.

Development economics turned away from state-led growth and towards liberalization when the “Washington Consensus” emerged in roughly 1980.\(^ {40}\) The retreat of state ownership suggests the influence of development economics on state policies. Figure 12.3 distinguishes four groups of countries by income level, from low to high. In each group of countries, the percentage of GDP supplied by state owned enterprises declined between 1980 and 1999, which indicates a world-wide trend towards privatization. However, the percentage declined the most in low-income countries. In 1980 low-income countries produced relatively more in state owned enterprises compared to high income countries, and in 1999 low income countries produced relatively less in state owned enterprises compared to high income countries.

\(^{38}\) In general, an increase in an economy’s output per worker can be decomposed into the amount caused by increases in capital per worker, more education of workers, and a residual that represents better organization and other unmeasured changes. Thus Easterly and Levine analyzed the growth of income per capita for 60 countries between 1960 and 1992. They found more capital and education explained roughly 40%, leaving 60% unexplained. In their study, immeasurable variables like better organization cause most growth. CITE

\(^{39}\) If better organizations accumulate more capital, then organizations with more capital per worker will use it more productively. This hypothesis predicts that capital will be less productive on average in countries with little capital than in countries with more capital. In other words, poor countries will have a lower ratio of output to capital than rich countries. This is the exact opposite prediction compared to the law of diminishing returns. In symbols, assume \(Y = f(K_e, L)\), where \(f_1>0, f_2<0\), and \(e'>0\). As the organization increases the efficiency \(e\) with which it uses capital, the output capital ratio increases: \(\partial Y / \partial K_e >0\).

Figure 12.3: Share of State Owned Enterprises in Gross Domestic Product

<table>
<thead>
<tr>
<th>Countries (by income group)</th>
<th>1980</th>
<th>1999</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Income Countries</td>
<td>15%</td>
<td>2.5%</td>
<td>-12.5%</td>
</tr>
<tr>
<td>Lower Middle Income Countries</td>
<td>11%</td>
<td>4%</td>
<td>-7%</td>
</tr>
<tr>
<td>Upper Middle Income Countries</td>
<td>10.5%</td>
<td>4%</td>
<td>-6.5%</td>
</tr>
<tr>
<td>High Income Countries</td>
<td>6%</td>
<td>4%</td>
<td>-2%</td>
</tr>
</tbody>
</table>


Another indicator of state leadership’s decline and liberalization's ascent is the shift from government development assistance to private investment in developing countries. In 1950, private direct investment in developing countries (credits and equity) was much smaller than government development assistance (“foreign aid”). In 1970, they were approximately equal -- around $10 billion. Today, however, the former is much larger than the latter. Private international capital flows into developing countries increased seven fold between 1991 and 2007. In 2008, Official Development Aid was $20 billion U.S. dollars, and private international investment was $325 billion. Unfortunately, international investments in stocks still concentrate in a few countries, especially “portfolio investment” (shares purchases by corporate outsiders who do not participate in managing the company). Among developing countries, more than 80 percent of all net portfolio investment went to five of them: China, India, Turkey, Brazil and South Africa. In some of the poorest countries, uncertain property rights cause people to seek the best protector of their funds, so more capital flows out than in.

**Institutions and Law**

We can compare the history of liberalization to actual growth rates. Liberalization and growth correlated positively in some countries. Thus the pace of economic growth quickened with liberalization in East and South Asia in the 1980s, and in Central Europe in the 1990s. Liberalization and growth correlated

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41 OECD International Development Statistics 2009
42 Also, of all net private direct investments (equity capital investment of inside investors) into developing countries in 2005, 78 percent went to only 23 countries. World Bank, Global Development Finance (2006) Stat. Appendix.
43 For data on growth rates by region and country, see Supra note 1, Chapter 2.
negatively in other countries. Thus production plummeted after 1990 when liberal reforms demolished planning in Russia, Eastern Europe, and other countries of the former Soviet Union. In the 1980s, Latin America liberalized and stagnated, compared to modest growth in previous years of state activism.\footnote{Hugo A. Hopenhayn & Pablo A. Neumeyer, Latin America in the XXth Century: Stagnation, then Collapse. Department of Economics Working Papers No. 028 discussion paper 2004, 1-28.} Figure 12.4 summarizes this schema.

Figure 12.4: Liberalization Experience Schematized

<table>
<thead>
<tr>
<th>Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>• China</td>
</tr>
<tr>
<td>• India</td>
</tr>
<tr>
<td>• Central European countries that joined the E.U.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Africa</td>
</tr>
<tr>
<td>• Latin America (excluding Chile)</td>
</tr>
<tr>
<td>• Eastern European countries not joining the E.U. (Russia, etc.)</td>
</tr>
</tbody>
</table>

Why did the same policy of liberalization have different consequences from one country to another? The same policy gets different results when implemented with different institutions in the background, like proposing a toast with wine in Catholic Spain or Muslim Iran.\footnote{D. Rodrik, A. Subramanian & F Trebbi, ‘Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development’ (2004) 9 Journal of Economic Growth 131.} To succeed, liberalization requires background institutions that secure property for the makers of wealth, enforce promises in business, and distribute the profits of firms predictably. These institutions are what we mean by effective property, contract, and corporate law, as represented in Figure 12.5.\footnote{The ideal index for testing a legal theory of economic growth would measure effective law as distinguished into three components: property, contracts, and business law. For an attempt to measure the effective law of property and contracts, and to use the index in cross-country regressions, see Bernhard Heitger, “Property Rights and Their Impact on the Wealth of Nations -- A Cross-Country Study,” Kiel Working Paper No. 1163, Kiel Institute for World Economics (2003). His simultaneous regression model indicates that doubling the index of the quality of property rights leads to a more than doubling in per capita incomes.}
A country achieves effective property, contract, and corporate law through the interaction of social norms, courts, the civil service, and politics, with different countries combining them in different proportions. The form of protection varied from one country to another. Courts, state law, and constrained government provided protection in some countries in Central and Eastern Europe, such as Poland and the Baltic states after 1990. These countries dramatically improved their legal institutions in an effort to join the European Union. In other countries, the state bureaucracy, intermediate institutions, and authoritarian leaders provided protection of property, contracts, and business organizations, as in Taiwan, South Korea, China, and Vietnam. In the 1990s, India relaxed state planning and liberalized cautiously in phases. Growth accelerated as stagnant state industries made way for vibrant, new businesses like computer software and outsourced services. Indian state planners, who failed to foresee the success of these businesses, did little to inhibit or stimulate their development, rather like U.S. government officials did little to inhibit or stimulate Silicon Valley.

Conversely, liberalization succeeded less in countries without effective private and business law. Big-bang liberalization in Russia in the early 1990s

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47 Rodrik, supra note 16 at 979, summarized his research results with the following words: “The cross-national literature has been unable to establish a strong causal link between any particular design feature of institutions and economic growth. We know that growth happens when investors feel secure, but we have no idea what specific institutional blueprints will make them feel more secure in a given context. The literature gives us no hint as to what the right levers are. Institutional function does not uniquely determine institutional form.”

48 E.L. Glaeser, R. La Porta, F. Lopez-De-Silanes, & A. Shleifer, “Do Institutions Cause Growth?” (2004) 9 Journal of Ec. Growth 271. Democracy and constrained government cannot explain growth. But as growth occurs it generates better institutions according to their findings. They also find human capital to be a strong determinant of growth, contrary to findings by other authors like Hall et. al. and Easterly, who point to institutions and social capital.
caused gangster capitalism and economic decline. In sub-Saharan Africa, lawlessness devastated economies and caused negative growth. In Latin America, liberal reforms without institutional improvements caused economic stagnation.

**Conclusion**

To unite ideas with capital and produce growth, business needs freedom through law.\(^\text{49}\) Recent history suggests that freeing markets caused growth in states with effective private and business law. This fact leads to our prescription for growth as depicted in Figure 12.6.

Figure 12.6: Institutional Prescription for Growth

According to this prescription, the state’s first role in economic development is to build the legal foundations for markets. With the legal foundations in place, liberalization will promote innovation. The state should take this indirect approach to promoting growth, not the direct approach of choosing firms and industries for subsidies and special privileges.

In making economic policy, the state should mostly rely on public information. When officials decide by using public information, they can explain and justify their policies to the citizens. Public discussion, debate, and criticism create a basis for accountability that dampens nepotism, favoritism, and corruption. Conversely, state officials can easily divert secret investments to their cronies. Politicians mostly direct public money to their supporters in order to

build loyalty, however much they may talk about economic growth.\textsuperscript{50} Citizens in most democracies are right to demand that officials base economic policies on public information.

When using public information, state officials cannot predict the surge of a particular firm or industry. People who invest in innovative ideas keep many secrets in order to earn extra-ordinary profits. Like football teams, firms constantly surprise outsiders, including economists and government officials. To illustrate, economists did not predict the invention of the “personal computer” by IBM in 1981, the explosive growth of this industry subsequently, and IBM’s exit from personal computers in 2005 by selling this business to the Chinese firm Lenovo. Similarly, Japanese planners did not predict the surge of automobile manufacturers after 1960, and Indian planners did not predict the surge of computer firms in Bangalore after 1990. Most state officials cannot accelerate growth by investing public funds in particular firms except by chance, just as most private investors cannot profit by trading on public information except by chance.\textsuperscript{51} Industrial policies that allegedly redirect capital to growth industries mostly waste resources without increasing growth rates.\textsuperscript{52}

\textsuperscript{50} To illustrate, inflation-adjusted oil prices increased sharply from the mid 1970s until 1980, and then fell back to the previous low levels where they remained until turning up again in 2002. Whereas public officials predicted a sharp rise in oil prices, they remained stable for twenty years. U.S. politicians, however, used the prediction of rising oil prices to justify subsidies for private companies to construct and operate plants to extract oil from shale. The plants were uneconomic at current prices, but politicians and state officials predicted that prices would rise enough to justify the investment. In fact, these plants never became economic and they closed down after the subsidies expired. U.S. taxpayers lost a massive amount of money, and some very large energy companies profited handsomely.

\textsuperscript{51} The technical name for this proposition is the “efficient market hypothesis.” According to the efficient market hypothesis, market prices incorporate all public information, so no one investor can do better than chance when relying on public information. This is the “semi-strong” form of the efficient market hypothesis. You don’t have to accept the semi-strong form of the efficient market hypothesis in order to accept that much business innovation is unpredictable from public information. Consequently, if private investors cannot profit by trading on public information except by chance, then public officials are unlikely to do better.

\textsuperscript{52} To illustrate, inflation-adjusted oil prices increased sharply from the mid 1970s until 1980, and then fell back to the previous low levels where they remained until turning up again in 2002. Whereas public officials mistakenly predicted a sharp rise in oil prices, they remained stable for twenty years. U.S. politicians, however, used the prediction of rising oil prices to justify subsidies for private companies to construct and operate plants to extract oil from shale. The plants were uneconomic at current prices, but politicians and state officials predicted that prices would rise enough to justify the investment. In fact, these plants never became economic and they closed down after the subsidies expired. U.S. taxpayers lost a massive amount of money, and some very large energy companies profited handsomely.
We have stressed the state’s role in developing a legal framework for competition and innovation. This is not the state’s only role. In addition, the state must stabilize money and banking, supply public goods (defense, education, public health, social security, poverty relief, environmental protection, and so forth), and build infrastructure (roads, water, electricity, telephone lines, airports, harbors, industrial parks, and so forth). By building infrastructure, the state channels and coordinates the expansion of business, without picking which firms or industries will succeed or fail. Instead of leading, the state has successfully coordinated economic growth in some countries, notably in East Asia.

Since the state has so many roles, the reader may wonder, “Why do you emphasize the institutions of private and business law instead of monetary policy, public goods, or infrastructure? Runaway inflation, endemic illiteracy, epidemics, and unusable roads obstruct development just as much as ineffective private and business law. Why put them in the background and legal institutions in the foreground?

An economic innovation is the development of a new idea. Combining capital and new ideas requires solving the double trust dilemma. The best

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53 Infrastructure projects often face obstacles that only the state can overcome. To illustrate, developing infrastructure often requires assembling large tracts of land from fragmented private owners. Thus a proposed road may cross land owned by many different people. Voluntary purchase of land to construct the road encounters a fatal problem: Owners who holdout by refusing to sell their land can command a higher price. To avoid holdouts, most legal systems allow the state to compel owners of land to sell it. Also, some forms of infrastructure are natural monopolies. For example, most towns do best with a single grid of electricity wires connecting homes and businesses, a single super-highway system to connect towns, and a few cable systems for Internet and television. Natural monopoly, especially for infrastructure, often requires state participation as owner or, if not as owner, then as regulator of the private owner.

solutions involve legal institutions, especially private and business law. Like a camera, we cannot focus on everything that is in the picture. Law belongs in the foreground because the source of sustained growth is innovation. Inflation, illiteracy, epidemics, and unusable road belong in the background of innovation’s portrait. If economic theories have power as Keynes believed, then understanding the double trust dilemma should help policy makers to accelerate growth and alleviate the poverty of nations.