

## CHAPTER 1. A NEW THEORY OF ECONOMIC PROGRESS

Discussion of the lack of economic development in much of the world often begins by asking, “Why can’t they be more like us?”—us being the developed nations. What is it they lack? A common answer is that they lack the necessary resources: if we just pour enough money into the underdeveloped world, it will develop. However, development projects based on this assumption have generally failed: Jeffrey Sachs’ Millennium Villages project is but a recent example.

A different answer is that the underdeveloped world lacks good political institutions: without them, no amount of resources will make much difference. This has been argued most recently by Daron Acemoglu and James Robinson in their best-selling *Why Nations Fail*. We will see that there is much to be said for this answer. However, Acemoglu and Robinson are a little vague about what good political institutions are: they imply that the key is democracy. But even casual observation suggests that democracy is neither necessary nor sufficient for economic development. Moreover, democracy appears to be a major contributing factor to the problems of the developed world.

Indeed, the whole idea of the developed world as a model for the underdeveloped is unjustifiably smug. The developed world has serious problems of its own—only partly a result of the recent financial crisis. These problems include unsustainable welfare states, mounting government debt, and slowing economic growth. In many ways, these problems are not so different from those of many less developed countries. It is said in Latin America that Brazil is becoming Argentina, Argentina is becoming Venezuela, and Venezuela is becoming Cuba. One might add, with only a little exaggeration, that Italy is becoming Brazil, and the United States is becoming Italy!<sup>1</sup>

The two issues—the lack of development in much of the world and the increasing problems in those parts of the world that are developed—may seem unrelated. But they are in fact different expressions of the same fundamental problems of economic progress. To address those problems, we need to understand at a deeper level how economic progress works and the nature of the obstacles that stand in its way. In this book, I offer such an understanding, in the form of a new theory of economic progress.

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<sup>1</sup>On the last assertion, see (Zingales 2012).

## **A NEW THEORY OF ECONOMIC PROGRESS**

Alfred Marshall, one of the fathers of modern economics, defined economics as the study of how people make a living.<sup>2</sup> Standard economic theory assumes that people do so through production—that they make a living by producing goods, both for their own consumption and to exchange for the goods that others produce.

The new theory, in contrast, begins by recognizing that people can also make a living in two other, quite different, ways. One is through commerce: people can make a living as middlemen—buying and reselling for a profit the goods that others produce. And people can make a very good living through predation—by employing force to take the goods that others produce or trade.<sup>3</sup>

The new theory understands economic progress in terms of the joint evolution over time of these three economic activities—production, commerce, and predation.<sup>4</sup> It is useful to divide the process conceptually into two sub-processes. One involves the interaction of commerce and production to generate economic progress. The other involves the interaction of predation and economic progress and generates the evolution of political institutions. As we will see, this second sub-process strongly affects the pace of the first and is in turn affected by it.

### **Economic progress**

What do I mean by economic progress? In a narrow sense, I mean increasing productivity in production—the ability to produce more and better goods from given resources and effort. But, more broadly, I mean better material circumstances—not just

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<sup>2</sup>“Political Economy or Economics is a study of mankind in the ordinary business of life; it examines that part of individual and social action which is most closely connected with the attainment and with the use of the material requisites of wellbeing...” ((Marshall 1890) 1.1.1-2)

<sup>3</sup>The first to have understood predation in this way—as a way of making a living alternative to production and commerce—seem to have been (Pareto 1902) and (Oppenheimer [1908] 1914). More recent authors who have explored the implications of thinking of predation as an economic activity include (Lane 1958), (McNeill 1980), (Gellner 1995), and (Hirshleifer 2001).

<sup>4</sup>This process is at the core of the evolution of human societies in general, and it has played a significant role in the biological evolution of mankind ((Ofek 2001)).

more and better goods, but also better health and living conditions, and a more satisfying and fulfilling life.<sup>5</sup>

Economic progress is the result of the interaction between commerce and production. Commerce facilitates exchange among producers, thereby expanding the market for their output. A larger market creates opportunities to reorganize production more productively, to apply new technology, and to produce new kinds of goods. The resulting rise in productivity increases incomes all round and lowers the price of goods. These changes, in turn, open up new opportunities for commerce, leading to further market expansion—and so on, indefinitely.

In a recent example of this process, improvements in transportation—particularly the development of containerization—and in retail trade—particularly at Walmart—led to a significant expansion of the market in the 1980’s and ‘90s. Before these improvements, exchange in inexpensive goods between producers in China and consumers in the United States had been uneconomical; but now, it became potentially profitable. The result was a massive international reorganization of production, which came to be known as ‘globalization’. The result was a huge increase in productivity. The consequent rise in incomes, especially in China, and fall in the price of goods opened up further opportunities for commerce and led to further expansion of the market and to continuing economic progress throughout the world.

Note the central role that commerce plays in the process. Changes in commerce—of which transportation is a part—were, in this example, responsible for the initial expansion of the market. And commerce, in the form of Walmart and other large retailers, played a major role in bringing about and financing the reorganization of production that it made possible, as well as spreading the necessary technology. Of course, commerce did all these things in the pursuit of profit, and indeed it benefited handsomely from the changes it brought about. However, because of competition in commerce, the gains to producers and consumers exceeded—by orders of magnitude—the gains to commerce itself.

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<sup>5</sup>(Deaton 2012) and (Brooks 2012) discuss the connection between the narrow definition of economic progress and the different aspects of the broader definition.

Economic progress—illustrated in this case by globalization—occurs naturally, in and of itself: it requires no external cause or agency. That is, economic progress is a self-perpetuating process. External factors can, however, impede the process. For example, full containerization only became possible in the United States when transportation was deregulated in the 1980s and ‘90s.<sup>6</sup>

To understand the nature and origin of such impediments we need to look at the second sub-process—political evolution.

### **Political evolution**

The greatest impediment to economic progress is predation. Predation inhibits production directly—depleting the resources of producers and diminishing their incentive to produce and to invest in production. But, as in this example, the greatest harm of predation comes from its impact on commerce (we will see in later chapters that regulation can be a disguised form of predation). Predation on commerce impedes expansion of the market, stalling the otherwise self-perpetuating process of economic progress.

Predation is closely related to government. Predation is the taking of goods through the use or threat of force; government is an organization that enjoys a preponderance of force in a given territory. We will see that government arose historically either as an instrument of predation or as a means of protecting against predation.

We will call government that is created for the purpose of predation, predatory government—for example, the government imposed on England by the Norman invasion. We will call governments created by a group of people to protect them against predation, associational governments—for example, the governments of the independent medieval Italian cities or of the Dutch Republic.

Government has developed over time in a process of political evolution. The principal trait selected for in this process has been the ability of governments to prevail in war. This in turn depends largely on the ability to mobilize resources: “money is the sinews of war”. But extracting resources from an economy, depending on how it is done, can damage it severely, cutting off the continued flow of resources. So a government that can

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<sup>6</sup>(Levinson 2006)

extract resources from its economy without destroying it possesses a strong selective advantage. As a result, the process of political evolution has selected for forms of government that are less harmful to their economies and consequently more hospitable to economic progress.

The key to economic progress, therefore, is getting government right. But to understand what this involves, we must understand how government affects economic progress. And to understand that, we need to know how economic progress works—the first part of our theory. Moreover, our ability to influence the nature of government is limited. Like the economy, government is not a product of conscious design but the result of an evolutionary process. If we are to influence that process for the better, we must understand how political evolution works—the second part of our theory.

### **The theory in a nutshell**

We can summarize the new theory concisely in terms of the three different economic activities—the three different ways of making a living—and the interaction between them:

1. Commerce promotes production, predation inhibits it;
2. Limit predation—get government right—and economic progress will take care of itself.

### **WHY DO WE NEED A NEW THEORY?**

But why do we need a *new* theory of economic progress? Surely, economics already has such a theory. It does, but the conventional theory—the theory of economics textbooks and classrooms—is a failure.

### **The failure of the conventional theory**

How should we judge the success of a theory? A theory should be able to explain the facts: in this case, the important facts are how the pace of economic progress has changed over time and how it differs from one place to another. And a theory should provide a reliable guide to action. For example, it should be able to tell us what can be done to promote economic progress in the underdeveloped—and what should not be done.

*What are the facts?*

The big fact about the changing pace of economic progress over time is Industrial Revolution that took place in the period around 1820. Before then, economic progress had been slow and uneven—with long intervals of stagnation and even decline. Since then, economic progress has been much faster and considerably more steady.

How great was the change? To quantify economic progress, economists use an estimate of an economy's total output of goods and services—its Gross Domestic Product (GDP). GDP per person serves as a measure of an economy's productivity and of the average income it generates. The rate of growth of GDP per person is an estimate of how rapidly productivity and income are increasing—a measure of the pace of economic progress.

Comparing GDP over time is inherently difficult, but the difficulty is greatly compounded when the comparison spans the centuries.<sup>7</sup> There have been, nonetheless, some heroic attempts to do this, most notably by Angus Maddison.<sup>8</sup> Maddison has estimated that between the years 1000 and 1820 GDP per person in Western Europe rose from about \$400 a year to about \$1,200—an average annual rate of growth of 0.13%.<sup>9</sup> Then, between 1820 and 2001, GDP per person rose from about \$1,200 to over \$20,000—an annual growth rate of over 1%.<sup>10</sup> Around 1820, therefore, the pace of economic progress in Europe seems to have accelerated by a factor of about eight.

The big fact about differences in economic progress from one place to another is simply the huge size of those differences. Comparing GDP across countries is difficult

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<sup>7</sup>For example, over time, we see a change not only in the quantity of goods produced, but also in the nature of those goods and in the range of goods (see (Holcombe 2007) on this). This is already problematic when comparing today with 1980; when comparing today with 1000, the problem is hugely magnified. Another difficulty is the need to correct for changes in prices. Again this becomes much harder to do over longer intervals of time.

<sup>8</sup>(Maddison 2003)

<sup>9</sup>Between 1000 and 1600, the period that will mainly concern us, annual GDP per person rose from about \$400 to about \$900—a slightly lower average rate of growth.

<sup>10</sup>These numbers are for Western Europe, the United States and other European offshoots, and are measured in 1990 prices.

too, but the pattern is nonetheless unmistakable. By the year 2000, for example, GDP per person in the United States had reached about \$34,000.<sup>11</sup> In the same year, it had reached about \$7,200 in Brazil; and in the Republic of Congo it had reached only \$1,300—roughly the level the United States had already reached in 1820.<sup>12</sup>

*How does the conventional theory explain these facts?*

The conventional theory's explanation of these facts follows inevitably from its basic assumption. That assumption is that an economy is always at its full potential: given its resources and technology, its output is always as great as it can be. If this is so, an economy's output can increase only if its resources increase or if its technology improves. And its productivity, the output obtainable from given resources, can increase only as a consequence of technological progress.<sup>13</sup>

According to the conventional theory, therefore, the acceleration in the growth of productivity since the Industrial Revolution must have been the result of an acceleration in technological progress. This is certainly not implausible. Consider, for example, the leap from candlelight to electric lighting, of from travel by horse and sailing ship to travel by automobile and jet. Around the period of the Industrial Revolution, humanity seems to have crossed a scientific-technological threshold, making possible enormous increases in productivity and income.<sup>14</sup>

The conventional theory attributes the slow average productivity growth before the Industrial Revolution to the slowness of technological progress. However, slow technological progress cannot explain the actual reversals of economic progress that took place. For example, a period of relatively rapid economic progress between 1100 and

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<sup>11</sup>In current dollars.

<sup>12</sup>The numbers are in year 2000 international (purchasing power) dollars. They are taken from Alan Heston, Robert Summers and Bettina Aten, Penn World Table Version 6.2, Center for International Comparisons of Production, Income and Prices at the University of Pennsylvania, September 2006.

The 1820 number for the U.S. is from (Maddison 2003). While the two numbers are close, as noted in fn. 1 the meaning of such a comparison is questionable.

<sup>13</sup>The conventional theory has its origins in the work of Ricardo (Ricardo 1817), and it was elaborated in its modern form by (Solow 1970).

<sup>14</sup>(Mokyr 1990; Mokyr 2002)

1300 was followed, between 1300 and 1450, by a period of steep economic decline. Proponents of the conventional theory attribute the earlier period of economic progress to some major agricultural innovations in the early Middle Ages—the three-crop rotation, the equine harness, and the heavy northern plow.<sup>15</sup> But the absence of additional technological advances cannot explain economic decline.

The only alternative explanation available to the conventional theory—given its basic assumption—is insufficient resources. Such an explanation was indeed suggested by Thomas Malthus.<sup>16</sup> A period of economic progress raises incomes, and this causes the population to expand. With more labor, output grows too. But because the total amount of land is limited, increasing amounts of labor gain ever smaller increases in output. As a result, output per person—and so income per person—declines. The fall in income leads to a fall in the rate of population growth. Eventually, income sinks to the level of bare subsistence, at which point population stops growing altogether.<sup>17</sup>

So, according to the conventional theory, unless technological progress is sufficiently rapid, this ‘Malthusian trap’ prevents anything but a temporary escape from subsistence. The only reason there have been no subsistence crises in the developed world since the Industrial Revolution is because technological progress has kept ahead of population growth—at least so far.

The conventional theory also explains our second great fact—the huge differences in the level of economic progress from place to place—in terms of differences in resources and technology. The United States has progressed further than the Republic of the Congo because it has more resources and better technology.

#### *How the conventional theory fails*

These explanations have not held up under closer examination. For example, economic historians who have examined the evidence more closely have reject the

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<sup>15</sup>(White 1962)

<sup>16</sup>(Malthus 1798)

<sup>17</sup>See (Harvey 1991) for an discussion of this interpretation of the period of economic decline in the fourteenth century.



conventional theory's explanation of the ups and downs of the preindustrial economy.<sup>18</sup> The supposedly major innovations of the early Middle Ages turn out either not to have been new or to have been of little economic significance. So the relatively rapid growth from 1100 to 1300 could not have been the result of a leap in technological progress. We will see that the new theory offers a very different explanation.

Moreover, the extended crisis that followed, between 1300 and 1450, was not caused by a shortage of land or by overpopulation. Contrary to implications of such an interpretation, labor productivity did not decline and crop yields did not fall (as they should have due to the 'exhaustion of the soil'). Again, the new theory offers a very different explanation.

The conventional theory has done no better in explaining differences across countries.<sup>19</sup> And in this area it has also failed the second test of a successful theory—an ability to provide a reliable guide to action. For decades, experts in economic development grounded their advice in the conventional theory and therefore advocated policies intended to make up the deficiencies in resources and technology that were the supposed cause of underdevelopment: Sachs's Millenium Villages is only the latest example. These policies have universally been a failure.<sup>20</sup>

But the conventional theory's explanation of economic progress also fails at a deeper level. Is technological progress really an explanation of economic progress or is it merely an expression of it? Although the two tend to go together, we will see that significant economic progress is quite possible without major technological breakthroughs—as was the case, for example, during the expansion from 1100 to 1300.

Technological progress is obviously an important part of the story. But what causes technological progress? The conventional theory has no answer. It simply assumes that

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<sup>18</sup>See, for example, (Harvey 1991), (Jordan 1996), (Grantham 1999), (Steensgaard 1997), (Verhulst 2002), and (Grantham 2003).

<sup>19</sup>See, for example, (Easterly 2001).

<sup>20</sup>See, for example, (Lal 2000) and (Easterly 2006).

the pace of technological progress is determined by non-economic factors.<sup>21</sup> Why then did technological progress accelerate at the time of the Industrial Revolution and not before? Perhaps because of the Enlightenment or other cultural changes.<sup>22</sup> So the conventional theory has no *economic* explanation of economic progress.

#### *Why the conventional theory fails*

The failure of the conventional theory to explain economic progress is a direct consequence of its fundamental assumption—that an economy is always at its full productive potential. This is certainly not realistic. Is it plausible, for example, that the economy of the Congo is at its full potential? Its resources are considerable and, at least in principle, it has access to most of the technology of the developed world. True, the education of its labor force is not what it might be, but is that not in itself evidence of a failure to exploit potential? More generally, is it not more plausible that a lack of development is evidence of a *failure* to exploit an economy's potential? And is it any more realistic to think the U.S. economy is at its full potential? If so, what are all those startups about?

Of course, an unrealistic assumption can nonetheless be useful, if it simplifies a problem by stripping away inessential details. But in this case, the process of realizing an economy's potential and the obstacles in its way are not inessential details: on the contrary, they are the very essence of the matter.

#### *Institutions and the obstacles to economic progress*

The conventional theory's manifest failure to explain the facts has led economic historians, first, and then development economists to consider other possible explanations. Since the 1980s, attention has focused increasingly on the role of political institutions. The pioneers in this work were Douglass North, Mancur Olson, Nathan

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<sup>21</sup>It must be exogenous, because under the basic assumption the economy is already exploiting its technological potential to the full: all possible technological progress has already been made. Only 'impossible' (exogenous) technological progress is allowable under this assumption.

<sup>22</sup>(Mokyr 2009), (McCloskey 2010).

Rosenberg and L.E. Birdzell, and Eric Jones.<sup>23</sup> The book by Acemoglu and Robinson is the most recent contribution.

Recognizing the importance of the political obstacles to economic progress is an enormous step forward. But it is not in itself enough. Much of this body of work considers the political obstacles without paying much attention to how economic progress works. Indeed, much of it simply adopts the conventional theory of economic progress either explicitly or implicitly. It assumes that, given the constraints imposed by the political institutions, the economy is at its full—constrained—potential.

But, as already noted, we cannot understand the impact of political institutions on economic progress without understanding how economic progress actually works. Only if we do understand this can we know which political institutions are necessary—or even desirable—for economic progress. Similarly, we need to understand how their interaction with the process of economic progress affects the evolution of political institutions.

In the absence of such an understanding, we once again have a non-economic theory of economic progress. Now, rather than economic progress being seen as a consequence of the external factors that determine technological progress, it is seen as a consequence of the external factors that shape political institutions. For example, the Industrial Revolution is seen as the result of the Glorious Revolution of 1688 and economic underdevelopment is seen as a consequence of cultures unsuited to democracy.

### **Alternative theories of economic progress**

The conventional theory is not, however, the first attempt by economists to explain economic progress. Indeed, the book that founded economics as a discipline offered just such an explanation.

#### *Adam Smith's theory of economic progress*

Adam Smith's primary motive, in writing the *Wealth of Nations*, was to show that a particular set of political institutions—a system of natural liberty—was the one most

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<sup>23</sup>(North 1981); (Olson 1982), (Rosenberg and Birdzell 1986); (Jones 1988). To these economists should be added Ernest Gellner, a social anthropologist, whose ideas on the subject are reviewed in (Macfarlane 2000) Ch. 13.

conducive to economic progress. To make his case, he developed a theory of economic progress very different from the conventional theory that later supplanted it.<sup>24</sup>

The core of Smith's theory is his famous dictum that the division of labor is limited by the extent of the market.<sup>25</sup> The division of labor—specialization—increases productivity. But it is worthwhile only if the specialist can find enough work to keep him fully occupied. This requires that the market for his product be sufficiently large.<sup>26</sup>

Implicit in these simple observations is a process of self-perpetuating economic progress. Expansion of the market opens the way for a greater division of labor, which increases productivity. Higher productivity raises incomes and lowers the price of goods, opening up yet further opportunities for market expansion. That is, market expansion creates potential; realizing that potential leads to further market expansion and yet more potential, and so on indefinitely.<sup>27</sup>

For this process to take place, no external causes are necessary. However, external causes can block the process. Smith saw the principal obstacle to self-perpetuating economic progress in the policies and actions of governments.<sup>28</sup> He considered the contemporary British policy of Mercantalism to be particularly inimical to it. Smith argued that all that is required for continuing economic progress is that governments do not prevent it.

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<sup>24</sup>(Buchanan 2008)

<sup>25</sup>The title and theme of Chapter 3 of Book I.

<sup>26</sup>This idea, sometimes called the 'Smith theorem' was certainly not new to Smith: "Writers on social science from the time of Plato downwards have delighted to dwell on the increased efficiency which labour derives from organization." (Marshall 1890) Book IV, Chap. VIII. § 1. However, Smith was the first to place it at the center of a theory of economic progress.

<sup>27</sup>The self-perpetuating process, called 'generalized increasing returns' by (Buchanan 2008), was elaborated considerably by later authors—especially Allyn Young ((Young 1928; Young 1929; Young 1990 [1929])). See (Chandra 2004) for a full discussion.

<sup>28</sup>Again, this view was not unique to Smith. It was a common theme among Enlightenment and Classical Liberal thinkers, including Montesquieu, Hume, and Toqueville. ((Macfarlane 2000) Ch. 4).

*Is the new theory, then, really new?*

The astute reader will have noticed that Smith's theory bears more than a passing resemblance to the new theory I outlined above. Of course, new ideas are never completely new: they are always combinations of existing ideas.<sup>29</sup> My new theory of economic progress is no exception to this rule, and Smith's self-perpetuating process is its core component. Indeed, the new theory is firmly Smithian.

That said, the new theory differs in many ways from Smith's own. We will see that it provides a richer description of the process of economic progress. For instance, the reorganization of production induced by market expansion involves considerably more than an increasing division of labor. The new theory also offers an explanation of the evolution of government and of its interaction with economic progress that goes beyond Smith's discussion of the impact of government on the economy.

The differences between the new theory and Smith's stem largely from the additional insights obtainable by framing the theory explicitly in terms of production, commerce, and predation and their interaction. Of course, this division of economic activity is itself an example of Smith's dictum. While early humans engaged in production, exchange, and predation, they did not specialize in any one of them.<sup>30</sup> Only when the volume of exchange grew large enough did it become worthwhile to specialize in commerce. And only when agriculture created large sedentary populations did predation become attractive as a full-time occupation, giving rise to the first governments and states.<sup>31</sup>

*How both the new theory and Smith's differ from the conventional theory*

Nonetheless, the new theory has much in common with Smith's, and both differ fundamentally from the conventional theory.<sup>32</sup> The conventional theory—which might be called Ricardian, because of its origins in the work of Ricardo—assumes that the

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<sup>29</sup>(Duggan 2007)

<sup>30</sup>(Ofek 2001) shows how important exchange was for the development, and even for the physical evolution, of early humans.

<sup>31</sup>(Carneiro 1970)

<sup>32</sup>The conventional theory has its origins in the work of Ricardo (Ricardo 1817). The distinction between Ricardian and Smithian theories of economic progress is due to (Grantham 1999).

economy is always at its full potential. It sees the economy as being at rest (in equilibrium)—all internal forces for change having already worked themselves out. Any change must therefore be caused by external factors that affect the economy's potential, such as technological progress or changes in political institutions.

In contrast, Smithian theories, such as the new theory and Smith's own, see the economy as constantly changing. This is the result of the action of internal forces, exploiting the economy's potential. Contrary to the assumption of the conventional theory, this process does not end in rest, because exploiting potential creates more potential. The source of change for a Smithian theory, therefore, is internal, and technological progress and changes in political institutions are both themselves internal to the process.

As a result of this fundamental difference, explanation means something different for the two types of theory. For the conventional theory, explaining something—the Industrial Revolution, for example—means identifying the external factors or events that caused it to happen. For the new theory, explaining something means understanding how it came about as a natural consequence of the processes that generates economic progress *in general*. We will see, for example, that the Industrial Revolution can be explained in this way and that the dramatic acceleration in productivity at that time was no more than a natural property of the process.<sup>33</sup> There was, in fact, no revolution!

*Why then did the conventional theory supplant Smith's?*

Given the inadequacies of the conventional theory of economic progress, how did it come to supplant Smith's more illuminating theory? In developing his theory, Smith realized that an increasing division of labor gave rise to a complex problem of coordination. He found the solution to this problem in the system of market prices that economic activity generated. This drew him into an extended digression on the formation of prices and on their role in the allocation of resources.<sup>34</sup>

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<sup>33</sup>See Chapter 17.

<sup>34</sup>“[Smith's] discussion of value and distribution is really irrelevant to the *Wealth of Nations*. His chief interest was in destroying the errors of mercantilism, and considering the general process of the economy.” (Currie 1990) p86

Over time, for various reasons, economists lost interest in explaining economic progress and became increasingly fascinated with price formation and resource allocation. The development of a satisfactory theory of prices and allocation more or less required the assumption that the economy is stationary at its full potential. In this context, it is a reasonable simplifying abstraction.

For most economists, the theory of prices and allocation became the general framework for all of economics: that is, most economists today believe that every economic question should be framed in its terms.<sup>35</sup> It is hardly surprising, then, that when economists came once again to take an interest in explaining economic progress, their point of departure would be the static theory of prices and allocation.

They turned this into a theory of economic progress—a theory of *change*—by invoking external factors such as technology and political institutions on which the potential of the economy depended. As these factors change, so does the economy’s potential, resulting in movement of an otherwise unchanging economy. It was this modification of the theory of prices and allocation that became the conventional theory of economic progress.

Modern economics has largely forgotten Smith’s ideas on the nature of economic progress—as opposed to his ideas on prices and allocation. Indeed, market expansion and the increasing division of labor make no sense under the assumptions of the standard theory of prices and allocation. Since the economy is always at its full potential, the market has already expanded to the maximum possible extent and the organization of production is already as productive as it can be. Subject closed.<sup>36</sup>

Smith’s ideas have had greater appeal, however, among economic historians. Investigating the evidence of the past, they have found that Smith’s ideas explain the facts far better than does the conventional theory. In fact, it was through the work of economic historians such as George Grantham, Rick Szostak, and Alfred Chandler that I

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<sup>35</sup>I discuss how and why this happened, and its consequences, in (Kohn 2004).

<sup>36</sup>There have been a very few attempts by theorists to think in Smithian terms. The most notable is Schumpeter’s theory of economic development ((Schumpeter 1955 [1911])). Others include (Young 1928) and (Kaldor 1972).

myself came to be persuaded of the superiority of a Smithian approach.<sup>37</sup> Grantham in particular develops a Smithian theory that goes well beyond Smith's own: I have incorporated much of it into the new theory.

I must emphasize at this point that although I reject the conventional theory of economic progress, I by no means reject the theory of prices and allocation on which it is based. On the contrary, the incentives created by prices and by differences in prices play an essential role in the process, and I rely heavily on the insights of the theory of prices and allocation to understand that role.

### **THE PLAN OF THE BOOK**

The book consists of two sections. The first, consisting of Chapters 2 through 12, derives the new theory from the evidence of preindustrial Europe. The second, consisting of Chapters 13 through 17 puts the theory to the test. Chapters 13 through 16 test the ability of the new theory to explain the facts of economic progress in preindustrial China. Chapter 17 tests the value of the new theory as a guide to action in addressing the two problems with which we began—the lack of development in much of the world and the current crisis in the part of the world that is developed.

### **Why preindustrial Europe?**

Why choose to derive the theory from the evidence of preindustrial Europe? The answer is it was an accident: I did not choose! As I explained in the preface, I did not start out intending to develop a theory of economic progress at all. I intended, rather, to write a history of financial systems, beginning with preindustrial Europe. But, for an economist, one of the most important questions about the financial system is, what role does it play in economic progress? To answer that question, I needed to understand how economic progress worked. The subsidiary question became the main question, and this book is the result.

The accidental provenance of the theory is an advantage. I did not begin the project with an abstract theory in mind, based on *a priori* reasoning, and then look for historical evidence to back it up—a procedure historians call, disparagingly, 'theorist's history'.

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<sup>37</sup>(Grantham 1999), (Szostak 1991), and (Chandler 1977). Matt Ridley's recent book also conceives of economic progress in explicitly Smithian terms ((Ridley 2010)).



Rather, I began by carefully studying as much evidence as I could find on the economic and political evolution of preindustrial Europe. I did this, to begin with, without any intention of developing a theory of economic progress. Gradually, however, patterns emerged, and they eventually coalesced into just such a theory. So the evidence came first, and then the theory.

While it was an accident that the evidence happened to be that of preindustrial Europe, it was a fortunate accident. As a 'sample', preindustrial Europe has some important advantages. Its economic and political arrangements were much simpler than today's, making them far easier to understand. The extended length of the period—a thousand years—makes it possible to see long-run processes working themselves out. This is essential in understanding both economic progress and political evolution, because both processes are slow and gradual. And the considerable variation, both across Europe and over time, made it easier to isolate relationships and identify effects.

One important example of the advantages of preindustrial Europe as a sample is that it makes obvious that commerce is an economic activity distinct from production. In the modern economy, the distinction. Since the late nineteenth century, the scale of industrial enterprise has grown much larger, and production has increasingly integrated forward into commerce.<sup>38</sup> The combination of production and commerce in many large firms today makes it more difficult to see commerce as an economic activity in its own right. In preindustrial Europe, peasants and artisans made their living from production; and merchants made their living from commerce. Given the small scale of enterprises in production, it made no sense for them to do their own marketing.<sup>39</sup>

A second important example of something that is much clearer in preindustrial Europe than today is the distinction between the two types of government and their relation to predation. Studying preindustrial Europe, one cannot help but notice that the government of kings and princes is not the same thing at all as the government of cities

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<sup>38</sup>(Chandler 1977)

<sup>39</sup>“Before the Industrial Revolution especially, the hand that turned the wheel of commerce was not the producing craftsman but the merchant and tradesman. ... a most significant feature of the period before 1760 was the almost absolute dependence of the producing class upon the trading class.” ((Westerfield 1915) p 125)

and villages. The government of kings and princes existed to prey on the territory it controlled, to protect that territory from other predators, and to expand it. In contrast, the governments of cities and villages were created by their inhabitants to organize joint action primarily in defense against external predators.

The distinction is much less clear today. Some governments in the developing world are obviously predatory. Others, and most in the developed world, are nominally associational. However, we will see that even in preindustrial Europe, as associational government became larger it tended to become more predatory (we will also see why). Today's governments are huge in comparison, so it is not surprising that there is a large element of predation in what they do. In addition, modern governments have taken on many additional functions, fostering the impression that the purpose of government is to help us. As a result—not entirely unintentional—the connection between government and predation has become less obvious.

### **Deriving the new theory**

The derivation of the new theory is divided into three parts—each devoted to one of the three economic activities. The first part, consisting of Chapters 2 through 5, focuses on production. Each chapter looks at one aspect of the process that, over time, increases productivity—expansion of the market, the resulting reorganization of production, the technological progress that this induces, and the role of entrepreneurs and cities in making it all happen. Each chapter reviews the evidence of preindustrial Europe and then draws lessons from it applicable to economies in general. The two major themes running through all these chapters are the self-perpetuating nature of the process and the central role played in it by commerce.

In the second part of the derivation, Chapters 6 through 9, the focus is on commerce itself. Commerce includes systems of payments, finance, and transportation—all of which, historically, differentiated from the central activity of commerce, trading, through a process of division of labor. (Chapter 8 on payments and Chapter 9 on finance are all that remains of my original project of writing a history of financial systems!) The productivity of commerce, in all its parts, increased through a process that paralleled the one taking place simultaneously in production. Rising productivity in commerce was

critical to overall economic progress, because it facilitated long-distance exchange and so market expansion.

In the third part of the book, Chapters 10 through 12, the focus is on predation and government. After examining the economics of these activities, Chapters 10 and 11 trace the political evolution of preindustrial Europe. As we have noted, this was shaped by the fiscal pressure of war, selecting for regimes of government that were more hospitable to economic progress. Chapter 12 asks what it was that made them so. What was it that distinguished the economically successful regimes of government from the unsuccessful ones? More generally, what is it that economic progress requires of government?

### **Is this a work of history?**

Deriving the new theory requires close engagement with the history of preindustrial Europe. However, this book is not primarily a work of history. While I do hope that it provides some new insights into the economic and political history of preindustrial Europe, that is not its primary purpose. Certainly, it is not intended as a comprehensive economic or political history. My purpose, rather, is to derive from the historical evidence the principles of economic progress *in general*.

Moreover, while I work with historical evidence, I am not a ‘real’ historian. I do not employ the methods of the real historian—working with primary source material to establish the historical facts or to explain a particular event or period. Rather, I rely entirely on secondary sources—on the original historical research of numerous real historians—to whom I am eternally grateful! I have tried to be comprehensive in my reading, seeking out different views when there is a lack of agreement. Reading all of this historical work has enabled me, in a sense, to ‘observe’ the economy of preindustrial Europe.<sup>40</sup> From this observation, I have derived a theory of economic progress that is intended to apply not only to preindustrial Europe but to all economies. In other words, I am not a historian but a theorist.<sup>41</sup>

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<sup>40</sup>As one distinguished economic historian put it, my work is ‘derivative’ of the work of real historians. (I don’t think she meant this as a compliment!)

<sup>41</sup>I hope my procedure might be considered ‘historian’s theory’ rather than ‘theorist’s history’ (see above).

### **Is the new theory really a theory?**

To most economists, however, this will not look like a work of theory. What most economists understand by ‘theory’ is mathematical modeling, and there are no mathematical models in what follows. The reason why mathematical modeling is so characteristic of the conventional theory and why it is absent from the new theory lies in the different way the two theories envision the economy.

As we have seen, the conventional theory envisions the economy as being at its full potential—in a state of equilibrium. As a result, the economy can be described with a set of equations that characterize that equilibrium. The set of equations constitutes a mathematical model of the economy—an analog. This analog can be used to check the logical consistency of propositions about the economy. And it can be used to simulate or predict how the economy would respond to a change in external factors—for example, in formulating policy.

The new theory, in contrast, envisions the economy as being in constant motion, striving to exploit its potential. Since this striving creates new potential, the economy’s being at its full potential does not even make sense. The economy is not in equilibrium: internal forces are constantly causing it to change and to evolve. In these circumstances, mathematical modeling is much more difficult and considerably less useful. In particular, it is not possible to construct a simple analog of the economy.

The new theory engages instead in a different type of theorizing—one that Richard Nelson has called ‘appreciative theorizing’ :

[Appreciative theorizing] tends to be close to empirical work and provides both interpretation and guidance for further exploration. Mostly it is expressed verbally and is the analyst’s articulation of what he or she thinks really is going on. However, appreciative theory is very much an abstract body of reasoning. Certain variables and relationships are treated as important, and others are ignored. There generally is explicit causal argument.<sup>42</sup>

Appreciative theorizing is what natural scientists do when they first try to achieve a basic understanding of their subject matter. They begin with extensive and careful

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<sup>42</sup>(Nelson 1998)

observation of the process of interest. This leads eventually to the recognition of patterns and to generalization about the nature of the process.<sup>43</sup> In some cases, the process is such that these generalizations can be summarized in a mathematical model—in mechanics, for example. In other cases, the process is such that no such summary is possible—for example, in evolution. It all depends on the nature of the process.

There are other examples of appreciative theorizing in economics. In particular, this is precisely the type of theorizing employed by Adam Smith. Smith's appreciative theorizing on prices and allocation lent itself to eventual mathematization, and the resulting mathematical theory of prices and allocation became the basis for the conventional theory of economic progress. Smith's appreciative theorizing on economic progress did not lend itself to mathematization and was therefore largely forgotten.<sup>44</sup>

The conventional theory views the economy as a machine and finds its model of theorizing in physics. The new theory views the economy as an evolving human ecosystem and finds its model of theorizing in biology. The new theory, then, really is a theory—just of a different type from the conventional theory. And, I would argue, one more appropriate to the subject matter.<sup>45</sup>

I will have more to say about this later, in the Appendix. The discussion will be more productive then, once the new theory has been fully developed, and it is clear just what it involves.

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<sup>43</sup>“There is a tendency to undervalue keen observation and shrewd generalization, virtues that are usually practiced by biologists. . . . There is a lot to be said in favor of staring at the piece of reality you are studying and asking, just what is going on here? Economists who are enamored of the physics style seem to bypass that stage, to their disadvantage” (Solow 1997) p 56

<sup>44</sup>More recent examples of appreciative theorizing in economics include Nelson's own work (most notably, (Nelson and Winter 1982)), as well as that of Jane Jacobs ((Jacobs 1969)) and of William Lewis ((Lewis 2004)).

<sup>45</sup>“Unfortunately, there exists in the profession an unwarranted bias toward the use of mathematics even in situations where it is unproductive or useless. One manifestation of this is the common use of the terms ‘rigorous’ or ‘analytical’ or even ‘theoretical’ as identical with ‘mathematical.’ None of these links is, of course, correct.” (Jensen 1983)

### Testing the new theory

Having derived the new theory in the first section of the book, the next step, in the second section, is to test it. One test of a theory is how well it explains the facts—in this case the facts of economic progress and political evolution. As we will see, it explains the facts quite well for preindustrial Europe. But that is not a very powerful test, since the theory was constructed to fit those facts.

Are the patterns and relationships identified in preindustrial Europe really general? Do they hold at other times and in other places, or are they specific to one particular ‘sample’?<sup>46</sup> To answer these questions, we need an ‘out-of-sample’ test—an application of the theory to a different body of evidence, one not used in its derivation. If the theory is valid in general, it should be able to explain the new set of facts as well.

In Chapters 13 through 16, we will conduct such an out-of-sample test by applying the theory to the evidence of preindustrial China. Chapter 13 examines China’s very different political evolution. Chapter 14 explores the impact of the different political environment on China’s economic progress. Chapters 15 and 16 examine how commerce and production respectively evolved in this environment.

We will see that the new theory passes the out-of-sample test quite well. The Chinese evidence is consistent with its key elements. The self-perpetuating nature of economic progress is just as evident in preindustrial China as it is in preindustrial Europe—as is the role of commerce in facilitating the process. The same principles that explain differences in political evolution within Europe explain the differences between Europe and China.

And the theory explains quite successfully the path of economic progress in China and why economic progress there was slower than it was in parts of Europe. In particular, we will see that changes in the pace of economic progress over time in China, and the differences between China and Europe, can largely be attributed to changes and difference in their political environments.

This test of the theory is, of course, limited in that it uses the evidence of yet another preindustrial economy. It is possible, at least in principle, that modern economies are different in some fundamental way the theory fails to capture. I do not think so, and I will

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<sup>46</sup>The problem is closely related to the concept of ‘overfitting’ in statistics.

discuss this possibility further in the concluding chapter. However, much work remains to be done, and I invite others to join me in testing and refining the theory further.

### **Applying the new theory**

If one test of a theory is its ability to explain the facts; another is its value as a guide to action. The concluding chapter tests the value of the new theory in this way by applying it to the two current problems with which we began—the lack of economic development in large parts of the world and the crisis that current afflicts the developed world.<sup>47</sup> I offer just a sampling of the results here: we will go into greater detail in Chapter 17, after we have reviewed the evidence and developed the theory in detail.

#### *Getting government right*

The new theory suggests that in both cases the source of the problem must be government: if we get government right, economic progress should take care of itself. But what exactly does it mean to get government right? The new theory, and the empirical evidence on which it is based, provide some answers.

What is it necessary that government do to facilitate economic progress? Mainly, it is a matter of what it should *not* do. In particular, it should not engage in predation. Correspondingly, the most important positive thing government should do is protect its population against predation by other governments. There are others positive things government can do to facilitate economic progress, such as providing ‘public goods’. But government does not *need* to do these things. We will see that people are quite capable of getting together, without involving the government, to do them for themselves. And having the government do them creates significant opportunities for government predation.

We will see that getting government right does not mean getting it perfect: it is less a matter of ‘right’ or ‘wrong’ than of more or less right. We will encounter historical examples of governments that in many ways were quite bad but that were, nonetheless, sufficiently good to permit considerable economic progress.

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<sup>47</sup>The concluding chapter also recapitulates the new theory, as modified in light of the additional evidence of preindustrial China, and looks at the implications of the new theory for economic history.

Correspondingly there is no unique model for the right form of government. For example, some sort of consent of the governed seems to be helpful. But this need not imply parliamentary democracy with universal suffrage—however desirable some may consider this to be for non-economic reasons. Indeed, in the period under study, this form of government did not exist—nor did it exist during the subsequent Industrial Revolution. Even so, there were extended periods of economic progress under various other forms of government.

### *Economic development*

If the key to economic progress is getting government sufficiently right, then the big question for economic development is how to get there. Unfortunately, both theory and evidence suggest that it is not easy. Parts of preindustrial Europe developed a form of government conducive to economic progress not by design, but rather through a long process of political evolution.

What drove that process was competition. Governments did not start to ask the consent of the governed because philosophers advocated it or because foreign experts recommended it as ‘best practice’. Rather, they did so under the unrelenting pressure of war. This forced them to be efficient in mobilizing resources, and the best way to do this turned out to be to ask the consent and seek the cooperation of those who were to provide the resources. Where competitive pressure was absent, so was consent of the governed.

What is the lesson of this for development today? If, as some say, war is not the answer, then some other sort of competitive pressure is needed. Certainly, it is a serious mistake to provide bad governments with foreign aid and loans, thereby freeing them of any pressure to seek the consent of the governed.

The new theory can help not only by offering a better understanding of political evolution but also by offering a better understanding of how economic progress works. As just one example, it is generally recognized that increasing openness is conducive to development. The conventional theory understands openness exclusively in terms of prices, and its adherents therefore focus on reducing tariffs and other barriers to trade. The resulting expansion of the market is certainly very desirable, but its impact will be limited unless the developing economy can respond to the opportunities that international trade opens up.



The new theory shows that commerce and finance play an essential role in responding to such opportunities. The implication for developing countries is that openness should mean not only openness to foreign goods but also openness to foreign firms—especially those in commerce and finance. The greater openness in China in this sense compared to India may go some way to explain the more rapid progress of the former.

The new theory also provides a guide as to what development policies are unlikely to help. For example, we will see that economic progress is essentially an urban phenomenon—it originates in and near cities. Consequently, the idea of developing isolated villages is entirely wrong-headed. If a village is in the hinterland of a thriving city, it will develop without anyone's help; if it is not, then it will fail to develop however much money Jeff Sachs pours into it. The solution to poverty in isolated villages is not development but migration.

#### *The current difficulties of the developed world*

If the key question for development is how to get government right, then the key question for addressing the current difficulties of the developed world is how to keep it right. Obviously, the developed world did succeed in getting government sufficiently right for there to have been considerable economic progress. However, its current difficulties strongly suggests that the 'rightness' of government has been eroded and that the problem of predation is growing.

From the perspective of the theory, this is not surprising. It is not in the nature of the process that government stay right. It will not, because predation, like production and commerce, evolves. Just as entrepreneurs of commerce will find new market opportunities and entrepreneurs of production will find new ways to lower costs, entrepreneurs of predation will find new ways to use force or the threat of force to take resources from others.

For example, in the early Middle Ages, nobles made their living by enslaving peasants and by robbing passing merchants. Later, they found they could do better by leasing out their land and by charging merchants tolls. Later still, as states formed and became powerful, nobles sought positions as state officials. As such, they could engage in predation using the power of the state rather than their own—through patronage, misappropriation, and corruption.

As the nature of the state has changed, so have the way its servants have found to mobilize its power to their own benefit. For example, corruption has become more subtle. Rather than taking cash payments for favors, politicians in the developed world today provide favors on credit. They can do so, because they are confident they will be compensated later when they leave office—as lobbyists or board members or in other ways.

One striking example of the evolution of predation is the changing role of government debt. We will see that the emergence of government debt in preindustrial Europe was a crucial positive development. Only the ‘right’ forms of government—those good for economic progress—were able to issue debt consistently. This increased their access to resources differentially and enabled them to prevail in war over the ‘wrong’ forms of government, leading eventually to the disappearance of the latter.

For centuries, governments issued debt only to finance war, and they attempted to pay down their debt once the war was over. Only quite recently have predatory entrepreneurs come to realize that debt issue need not be linked to war. It provides a wonderful way of financing the provision of favors without arousing opposition by raising taxes.

What can be done about this degeneration of government? While the new theory offers no specific answers, the concluding chapter considers some possible courses of action consistent with its findings. Unfortunately, even if we solve today’s problems, the theory implies that there will be others tomorrow. Economic progress and political evolution will open new opportunities for predation, and entrepreneurs of predation will find ways to exploit them. The price of economic progress—like that of liberty—is eternal vigilance!

### **A bonus: a new framework for economics as a whole**

Just as I did not originally intend to develop a new theory of economic progress, so did I not intend to develop a new framework for economics as a whole. However, the new theory of economic progress does offer just such a framework.

We have seen that economists have come to regard the theory of prices and allocation as the appropriate framework for economics in general. Its advantage in this respect is the mathematization it permits, which offers precision and ensures logical consistency. Its

disadvantage is that the simplifying assumption that makes that mathematization possible precludes consideration *a priori* of much that is interesting and important.

For example, for the theory of prices and allocation, commerce is a ‘veil’ to be drawn aside to reveal the underlying forces that determine prices. This is well and good for a theory of prices, but it precludes even discussing the essential role of commerce in creating and exploiting potential and so in driving economic progress. Similarly, we will see that exploiting potential requires entrepreneurship, and that understanding entrepreneurship is therefore an essential part of the theory. Since the theory of prices starts from the assumption that there are no opportunities, it does not offer a promising framework for discussing entrepreneurship. The new theory, in contrast, makes commerce a central part of the story and accommodates entrepreneurship naturally, together with many other things the theory of prices excludes by assumption.

Of course, I am not the first to notice the limitations of the theory of prices as a general framework, and many economists have persisted in working on the parts of economics that ‘don’t fit’ the standard framework.<sup>48</sup> The new theory offers a general framework in which all of this work can fit. The Appendix to the book explores this possibility in greater detail.

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<sup>48</sup>I describe some of this work in (Kohn 2004).

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