Introduction to Development Economics

What is development economics about? More than growth. Structural change. Institutional change. LDC’s not only have lower levels of per-capita income (productivity), but also lack institutions common to DC’s; e.g. law, property rights, administrative systems.

Differences in performance across economies are great and persistent. It is difficult to understand why they persist. Indeed, as Lucas has remarked, once one starts to think about this problem it is hard to think about anything else. It may be easy to understand why China was so much richer than the west 2000 years ago -- communication and information were non-existent. Difficult for societies to learn. But now it ought to be easy to copy and learn. Yet differences persist and grow (divergence, big time). Why?

This could be due simple country differences and characteristics. But if so there is very little we can say. Moreover, we could try to explain why these differences arise. It is also hard to believe these are due to permanent differences. After all, Europe was poor 2000 years ago and China was rich. Geographic advantages today were disadvantages before ferrous metallurgy.

Focus on institutions and policies is the result of research on comparative economic performance which has produced some critical stylized facts:1

1. Factor accumulation does not account for the bulk of cross-country differences in the level or growth rate of GDP per capita. Rather it is TFP, whatever that means. Differences in levels are large and cannot be explained by factor accumulation
2. Divergence, rather than conditional convergence, is the big story. There are huge, growing differences in GDP per capita.
3. Growth is not persistent over time
4. All factors of production flow to the same places – e.g., the rich countries
5. National policies influence long-run growth

These facts, which we need to explore at more length suggest that development is not just about raising the savings rate. Nor is it a question about differences in the amount of things. It is primarily about why certain countries cannot adopt policies or develop institutions that permit long run economic growth.

One way to approach development economics is to ask why certain societies adopt institutional structures that are conducive to successful economic performance, while others do not. This is, to some extent, a question of anthropological economics; the study of the evolution of economic systems and the analysis of why some systems (species) became extinct, or at least branched off.2 The idea is that one can learn the most about economic development by looking at those phenomena which separate those economies that made it (it being a successful transformation to a modern economy) from those that did not.3

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1See, for example, Easterly and Levine.
2 This seems related to the idea that history matters; that economic development is path dependent. The work of Brian Arthur emphasizes path dependence. In development economics we examine this notion when we look at history versus expectations, work by K. Matsuyama and Paul Krugman.
3It is interesting, in this regard, to remember that Rostow’s Stages of Economic Growth was written as a manifesto for developing economies.
This is related, of course, to economic history; we are at the frontier (or intersection) of the two disciplines, where they approach each other. Indeed, North has argued that the “central puzzle of human history is to account for the widely divergent paths of historical change. How have societies diverged?” (North 1990: 6).

It may also reflect the importance of culture (though this is something that tends to bring development economists, as well as economic historians and comparative economists, into disrepute; association of the devlops with the sociogs). Notice that when you ask this question you are necessarily emphasizing the importance of institutions, as opposed to lack of resources, as crucial for development economics.

When we focus on institutions there is always the question of why inefficient institutions are not replaced by more efficient ones? Why doesn’t an Alchian-like evolution process result in emulation of efficient institutions? How then can we explain the radically different performances of economies for long periods of time? North’s answer focuses on the role of transactions costs and incomplete information. Organizations and institutions are positive feedback mechanisms. There is a lock-in effect at work. When institutions are inefficient entrepreneurs can seek non-productive means of wealth seeking (redistributive) rather than productive means.

Institutions determine the performance of economies, but what determines the efficiency of institutions? This is a central question for this approach.

**Development Economics as a Field**

Why is development economics a separate field? Pessimism. To some extent this stems from a belief that orthodox economics inappropriate. Why? Pervasiveness of market failure. Poor countries are different. Structural constraints.

How relevant is the western experience for developing countries? Notice that for the former, the key breakthrough was institutional innovation. These societies had to develop new systems of organization that would foster innovation. This led to important breakthroughs. In the developing countries the primary factor is also institutional; were it not, then capital flows would suffice to make these countries grow faster.

To some extent this is a function of the view on convergence. If the world is explained by

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4 Hence, Douglass North is probably the most important contributor to this field. An early, important, example of this is John Hicks’s *Theory of Economic History*. The work of Avner Greif is a recent example of important work in this area.


6 We shall re-examine this notion when we discuss Paul Romer’s notion of “idea gaps versus “object gaps” in economic development.

7 Greif presents an analysis of the evolution of institutions.

8 This reflects a particular view of economic history, the work of Nathan Rosenberg and L. Birdzell (1986) and Douglass North (1990) being noteworthy in this regard. A Marxist, for example, would presumably take exception to the statement in the text.
Solow-type growth models, then we should expect poor countries to converge to the per-capita incomes of the rich. The question is how long will this take. This could seem to suggest that little needs to be done, in a policy sense, to initiate the growth process. But this is almost certainly too sanguine a view. Besides, the fact of convergence does not indicate that pace. Simple catch-up may take an incredibly long time. Moreover, there is some evidence that convergence is, at best, conditional, and a lot of evidence that divergence is the actual norm.

The experience of countries in transition is informative in this regard. If transition were relatively costless and painless, then one could argue that institutions are not important to economic development. Why? Because institutions are precisely what transition economies lack. Transition economies have already experienced the rural-urban transition, with large shifts of workers from agriculture to industry. They typically have large manufacturing sectors; often very large when we control for per-capita income. What is lacking in these economies are the institutions common to DC’s. The fact that the transition to a market economy is rocky suggests that developing these institutions is tricky.

**Structural Constraints**

One of the central tenets of classical development theory is the view that developing countries face a different situation than DC's did. I will discuss one aspect of this below (export pessimism). One reason is a view of the development process that is due to Gershenkron. His central tenet was that,

in a number of important historical instances industrialization processes, when launched at length in a backward country, showed considerable differences, as compared with more advanced countries, not only with regard to the speed of the development (the rate of industrial growth) but also with regard to the productive and organizational structures of industry which emerged from those processes. Furthermore, these differences in the speed and character of industrial development were to a considerable extent the result of application of institutional instruments for which there was little or no counterpart in an established industrial country (Gershenkron 1962: 7).

The idea is that Germany's industrialization would be different from Britain's due to timing. Gershenkron argued that “the more backward a country’s economy [on the eve of industrialization] the greater was the part played by special institutional factors [banks, the State] designed to increase the supply of capital to the nascent industries” (Gershenkron 1962: 354). The implication for LDC's was that they would have to follow a different path as well. A modern application of this view is in Amsden's analysis of Korea.

There are, of course, advantages as well as disadvantages in a later start. The late industrializers can import technology rather than invent it themselves. Facing a portfolio of modern techniques the key problem seems to be that of applying technology, although experience suggests

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9With the possible exception of measures to enhance capital mobility, and to study its effects on the process of convergence.

10That is, countries of similar orientation converge, but not independent of the institutional setting.
that there is an extra organizational problem of getting advanced techniques to work well in backwards countries.

Development economics is clearly more than just growth theory. In the latter we deal with balanced growth paths; expanding economies where the structure of the economy is unchanged. One view of development economics is that it is precisely structural change which is the defining characteristic. In this approach the idea is to study the structural changes that occur during the process. It is morphological — how does a caterpillar become a butterfly. The analogy with development of an organism is apt. In this view the recipe for development is in the genes – the instructions are there – but time is needed for the changes to occur. These changes occur in all economies. We are looking for patterns that elucidate this.

Structural change here refers to changes in the relative importance of sectors in the economy. Development is the transformation of the economy via these changes that are the key elements to economic growth.\textsuperscript{11}

What are these structural changes? The principal changes that are identified are:

- increases in the rates of accumulation (Rostow, Lewis);
- shifts in the sectoral composition of economic activity, whether output or employment or factor use (Kuznets, Chenery); often called industrialization;
- changes in the location of economic activity (urbanization);
- and such changes as the demographic transition and changes in income distribution.

The basic methodology of structural change analysis is cross-country or time series regressions of the experiences of many countries. In the cross-section mode, the basic regression is one of the form:

$$X = \alpha + \beta_1 \ln y_i + \beta_2 (\ln y_i)^2 + \gamma_1 \ln N_i + \gamma_2 (\ln N_i)^2 + \sum \delta_i T_i + \epsilon F_i$$ (1)

where $X$ is the dependent variable of interest,\textsuperscript{12} $y_i$ is per capita gross product in country $i$ (in $\$1964$), $N$ is population, $T_i$ is time period,\textsuperscript{13} and $F$ is net resource inflow as a share of domestic product. The idea of (1) is to capture the dynamics of the transition to an industrialized country. One sees how the dependent variable, be it consumption, or share of employment in manufacturing or whatever,

\textsuperscript{11}Thus, according to Chenery (1979: xvi) economic development is viewed “as a set of interrelated changes in the structure of an economy that are required for its continued growth.” Kuznets argues that “some structural changes, not only in economic but also in social institutions and beliefs, are required, without which modern economic growth would be impossible.” (1971: 348). Abramovitz is perhaps even more categorical: “Sectoral redistribution of output and employment is both a necessary condition and a concomitant of productivity growth” (1983: 85).

\textsuperscript{12}Usually measured as the ratio of the variable to GDP.

\textsuperscript{13}The idea here is to proxy for periods of time since eras differ. But rather than use a single time trend, this is broken into sub periods. Thus these would be dummy variables for periods such as 1950-55, 1955-59, etc. This is used when the estimation is pooled cross section time series.
varies with income. Estimation of (1) with cross section data for 101 countries. Typical results are apparent in figures 1-6.

One can see the Chenery approach as producing stylized facts of structural change in development. We observe the shift in sector shares, the demographic transition; changes in the nature of trade, and other changes that occur as the economy becomes richer. This analysis gives us a picture of the normal development process. Of course there is a question if there is a “normal” process. And if there is, what are the causes that make this common across countries? In addition, one can always add the questions of whether these changes need to be pushed by planners, or whether market forces will bring them about themselves.

I think the major reason why this approach is now in less favor is the loss of confidence in convergence. There may be multiple patterns, and country differences may persist for long periods of time. In this case the patterns may not be general. And the most important question is to account for the differences.

Of course conventional theory does not predict precise convergence either. The convergence hypothesis, properly interpreted, does not really mean that all countries do actually converge. But it does mean that a failure to observe convergence must be traced to one or another of the so-called exogenous factors that we’ve just described. This has two important --- and unfortunate --- implications for the way we think about development.

First, it limits the search for deep explanations. It is not uncommon to find economists “explaining” inter-country variation by asserting that one country is more corrupt, or that another has some particularly hardworking cultural ethic. These explanations could be correct, but they are not very satisfying. They do not say why certain countries are corrupt or democratic. We want to know more.

The second problem with the convergence approach is that it generates a particular set of attitudes towards economic policy. By stressing the role of factors such as savings, population growth or levels of corruption that might actually be symptoms rather than causes of underdevelopment, they promote superficial (and sometimes wrong) policy interventions.

An alternative view stresses that societies may be fundamentally similar yet display persistently different behavior. This could be due to multiple equilibria. This could be due to self-fulfilling failures of expectations. Coordination failures result. A second reason could be that there are persistent effects of historical conditions -- initial conditions. It might be that these cause persistent differences in trajectories. Here we can think of development traps. Political economy explanations may follow from factors related to income inequality.

Why are Developing Economies Distinct?

To what extent are developing countries different? Some argue that a different type of economics is needed because of structural constraints that are different from western economies. One structural constraint that early development economists focused on was the presence of developed economies. The idea is that the terms of trade hurt the prospects of the developing
economies (Prebisch thesis). Of course, similar arguments were made a century-and-a-half ago when economies that are now developed were just beginning to industrialize. It is not clear, however, that these constraints are significant, over and above the policies of the respective governments. Another example would be rural-urban migration (Harris-Todaro effects) and limitations on relative price flexibility.

One aspect of structural constraints that is important are missing markets. Credit markets, in particular, are underdeveloped, and this has dramatic effects on development. We would want to know how critical are financial markets to development. This is interesting from the transition perspective, because these economies are underdeveloped in this sense, despite being industrialized. It could be quite useful in gauging the importance of these factors.

Development economics has typically ignored institutional and organizational development. How does organizational development affect the ability to contract? One suspects that this is critical, however. Consider the investment decisions of a rural household. Without secure financial markets, the best way to invest for the future may be to have more children, since they can provide for retirement. With social security systems and with secure financial markets, however, the family may invest in physical capital, which may have a potent effect on productivity. Underdeveloped financial markets may thus play a large role in underdevelopment traps.

The contrast between development and transition economics is easy to characterize. Development economics takes structural constraints as given. Transition economics assumes that things are elastic, and that the major problems are allocation-related. Structural transformation is relatively ignored. In transition economics initial conditions are important, but much of the literature has applied insufficient focus on this.

Why is development economics so concerned with growth? It is largely the belief that growth is the surest way to alleviate poverty. That is not a perfect correlation. But it seems to be a key channel.

Early development economics focused on capital formation as the key to growth. The key problem was that investment had failed to materialize in poor economies. Arthur Lewis has stressed that:

“the central problem in the theory of economic development is to understand the process by which a community which was previously saving...4 or 5 per cent of its national income or less, converts itself into an economy where voluntary savings is running at about 12 to 15 per cent of national income or more. This is the central problem because the central fact of economic development is rapid capital accumulation (including knowledge and skills with capital). We cannot explain any ‘industrial’ revolution (as the economic historians pretend to

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14Because developing countries exported primary products while the developed world exported manufactured products. Since the former had low elasticities, expansion of output lowered revenues. This was taken as an argument in favor of import substitution.

15This may have been a function of the general development of economics, as these issues were ignored by most economists during the period prior to the late 70’s.
do) until we can explain why saving increased relatively to national income”  

Rostow emphasized the sharp increase in capital accumulation as one of the key structural elements of development.

The key task was then to start the development process. But how? Two views:

In the Rosenstein-Rodan version, Balanced Growth, the problem was what we would now call a coordination problem. Entrepreneurs failed to invest because, in isolation, there was no assurance that others would simultaneously invest. Hence, where would the demand for output come from? Coordinated investments were the key. As we shall see, there is a modern rebirth of this idea. For now, note that this view gave the intellectual underpinning for planning in the development process. 

The critique of this view, by Hirschman, shared the major diagnosis that capital formation was the problem. The difference was how to create the inducements to invest. The unbalanced growth view saw these incentives coming from the forward and backward linkages in the process. But it also gave assurance to the import-substitution view, since resulting shortages would be inducements for entrepreneurs to invest.

There was also a notion of "hidden resources" available to be tapped that was important here. This was important, for it implied that increased investment would not involve sacrifice of other aims. There were again two strands. The Nurkse-Lewis view was that surplus labor, residing in the countryside, could be used to work on investment projects. If labor were surplus in the countryside, then shifting this labor to the cities would not affect total output. Moreover, since the marginal product of agricultural labor was unchanged, factor payments to agriculture need not change. Hence, if consumption did not increase among the remaining rural labor force, an untapped potential was available to work on investment. This was a net increase, for these workers were consuming anyway, even though their marginal products were zero. Of course, there were a lot of ifs in this.

The second strand of the disguised potential view, again associated with Hirschman, focused on latent entrepreneurship. Creative disequilibria would pose challenges and generate responses. Latent entrepreneurship would emerge, technological breakthroughs would occur, and shortages would be ameliorated. This is a sort of decentralized disguised resources, as opposed to the Nurkse-Lewis model, which was much more suited to planning.

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16Lewis (1954: 155) reprinted in Agawarla and Singh, p. 416. Lewis went on to note that: “the central fact of economic development is that the distribution of incomes is altered in favour of the saving class” (1954: 156).

17Scitovsky emphasized the role of pecuniary externalities. The idea being that when one firm invests it affects the prices that other enterprises will face in the future. If firm A expands capacity, then the price of inputs to B will fall. Hence if B is considering investment it should think about what would happen if A invested. In such a case its demand would increase. But A does not take into account its effect on B. So coordinated investment is needed to incorporate the pecuniary externality.

18It is also similar to ideas that led to indicative planning in advanced capitalist economies.
This all combined to present a certain optimism about development. An important element of the development orthodoxy was the notion of multiple equilibria. LDC’s were viewed as being stuck in a low-level equilibrium trap. The key problem was to attain the take-off to self-sustained economic growth, as Rostow termed it. This trap could be due to problems with demography. Or it could be due to pecuniary externalities and increasing returns, ala Rosenstein-Rodan. In any event, the idea was that what LDC’s needed was a "Big Push" or a critical minimum effort to escape the trap.

These ideas are returning in economics. Paul Krugman refers to this as a counter-counter-revolution in development economics (see below). He has suggested that these ideas lost their force in the early 60’s due to the inadequate modeling of the period. We shall look at modern versions soon enough, but I would suggest that this is not the reason why these ideas lost their force. More important, I would argue, were the practical policy difficulties associated with achieving coordination, and with the non-market failures that accompany such efforts. A non-market failure refers to the inefficiencies of non-market institutions. These are due, in large part, to the weak incentives associated with hierarchy. The prevalence of non-market failures in socialist economies has become accepted wisdom. It leads to distortions that are often orders of magnitude greater than any market failures. It also leads to rent-seeking behavior, which has become a problem that dominates LDC’s.

One interesting line of inquiry, that this analysis suggests, is to study the relative importance of market versus non-market failure in developed versus underdeveloped economies. That is, how does economic development affect the relative importance of the two types of failures. One might argue that in LDC’s the competence of government officials is relatively low, so that non-market failures may be high. But one must also note that the underdeveloped state of credit and labor markets may be important too. It seems that development economics has focused heavily on the latter, while comparative economics has focused on the former. A fusion could be quite helpful. But now we must return to our story.

Although the hidden resources view reflected a good deal of optimism, there was a pessimistic side to the picture shared by the classical development theorists. This dealt, almost exclusively, with the external environment. Nurkse argued that the "era of export-led growth" was over, and that trade could not act as an engine of growth for developing countries. This was primarily due to the fact that the demand for the tropical products of the developing countries was income inelastic. Prebisch and Singer completed the argument with their thesis that the commodity terms of trade for developing countries inexorably declined, and would continue to decline, over time. This occurs because the foreign demand for LDC exports was lower than for imports. Essentially, LDC exports were exogenous. A devaluation would not increase revenues. Hence, controlling imports would not hurt the volume of trade. This led to the prescription of import-substitution policies.

One sees in this a preference for quantitative controls. The typical neoclassical response to

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19See Bardhan (1993).
20Williamson distinguishes between the high-powered incentives associated with market relations and the weaker incentives associated with non-market governance.
21This fit very much in line with the balanced growth prescription.
these problems, if they existed, would be to impose a tariff or subsidy. But the reflexive policy seemed to focus on quantitative restrictions. This reflects, to some extent, the view of human behavior in developing countries; what we may term the structuralist view. We shall return to this below.

The final piece in the puzzle is the two-gap model, associated with Chenery, among others. The essence of the two-gap model is the notion that foreign exchange is a key bottleneck. Start with a Harrod-Domar model, where growth is the ratio of the savings rate to the marginal capital-output ratio. If the latter were 3, then to achieve a respectable growth rate of output of say, 5%, would require an investment rate of 15%. Hence the focus on increasing savings. Now add to this a dependence of growth on key imported inputs. Imagine a Leontief production function with imported inputs that have no domestic substitutes. This implies that increased domestic savings will not have a positive effect on growth unless sufficient foreign exchange can be earned to finance the necessary imports. But here the foreign exchange bottleneck enters the picture. Due to elasticity pessimism the LDC faces an inelastic demand for its exports. These cannot be augmented. Hence to increase growth foreign exchange must be augmented by foreign aid, and by restrictions on imports. Notice how this easily fit with the preference for planning and the pessimism about the external environment.

Needless to say, this anti-export bias in development economics did not last. The basic flaw was the lack of concordance with the facts. The successes of countries that pursued export promoting strategies, combined with the costs associated with import-substitution (e.g., rent-seeking) played a critical role. A series of important studies of actual experience played an important role as well.

It is important to understand how this view of the development problem arose out of a particular approach to the problems of LDC's; what is called the structuralist view. The essence of the structuralist view is inflexibility. The structuralist sees obstacle, bottlenecks, and constraints everywhere. Essentially the world is inelastic. This general inflexibility is exacerbated in LDC's, where the peculiarities of peasant behavior inhibit adjustment. People are ruled by custom and tradition, not self-interest. There is a lack of entrepreneurial ability.

The structuralist view is consistent with a general distrust of the price mechanism. When the world is inelastic, very large price increases are needed to achieve even small quantitative changes. Large price changes are, however, disturbing to the social order, primarily because they result in changes in income distribution. This may lead to political reactions that overturn the policies. Administrative and quantitative controls are thus the best way to achieve results.

It is hard not to see the connection between the structuralist view and the standard ideology of planning. The view that the world is inelastic, and the general distrust of the price mechanism is the characteristic view of Soviet economic man. It is interesting to note that the Soviet planning model developed with a view to achieving large scale change. It too was a development model. And it was a development model designed to achieve a maximum of change in a minimum of time.

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22The typical view would be that imports of consumption goods by the rich needed to be curtailed to finance investment. But rather than tax imports, quantitative restrictions were imposed.

23The connection to views about the former socialist economies is too obvious to miss.
Gregory Grossman termed this the "Economics of Virtuous Haste." Mobilization is the key notion of the Soviet planning model, along with a strong tendency to dismiss notions of economic efficiency.24 The massive changes that this system succeeded in producing in the Soviet Union, and other economies, was a strong example for many developing countries. Nehru seems, for example, to have been a great admirer of the Soviet Union, and this admiration explains the adoption of many of the features of early Indian planning.

There has, of course, occurred a counter-revolution to the development orthodoxy.25 The current wisdom emphasizes the value of export-promoting strategies rather than the inward-looking policies. Moreover, it treats agents in developing countries as rational, and tries to explain why they behave the way they do. That is, what is the nature of market incompleteness that leads to imperfect outcomes. In general the new orthodoxy is more neo-classical. It is also less optimistic.26 The current view treats the development process as more complex than did the development orthodoxy. This is due, in large part, to the fact that modern development economists tend to eschew uni-causal theories of development. Development is seen as a complex multi-factor process; consequently there are no simple answers.

Recent analyses have also dropped the notion of irrational peasants. Today the focus is on how rational agents adapt their institutions to cope with the problems they face. For example, how does an Indian village cope with uncertainty over climate in the absence of futures markets and formal insurance. Today the emphasis is on the role of institutions in coping with missing markets. Constraints come not from irrationality,27 but rather from path dependence.

Transition and Development

What is the relationship between transition and development? The primary point is that in typical developing countries, development involves the simultaneous development of industrial structure (industrialization, urbanization) and economic institutions. Transition economies have already gone through industrialization. But they have not developed economic institutions.

One example of the type of questions one may ask relates to the path that transition economies must follow. Transition economies, like LDC's, hope they are on a path to become advanced capitalist economies (ACE's). The question is whether there is a direct path from being a Soviet-type economy to becoming an ACE, or whether an economy must follow the same path that current ACE's followed. In a practical sense, will transition economies, in the process of transition, become essentially underdeveloped economies? Will they lose the industrialization they have achieved until market-based institutions are formed? To make this more concrete, think of

24Soviet growth, of course, was almost exclusively extensive. This system was quite successful at solving the rural-urban migration problem, but at what cost?
25Krugman argues that there is now a counter-counter-revolution; the re-discovery of the "Big-Push" type models. It is not clear that this will really be a counter-counter-revolution, however, in the sense of changing the overall view of the development process. One does not see in the rebirth of these models a new view towards openness, for example.
26Except with respect to the external environment. Just as the old orthodoxy was pessimistic on this regard, the new view is optimistic about the beneficial effects of openness.
27Which must be distinguished from bounded rationality.
privatization. Russia has large integrated enterprises. But they are not capitalist firms. The goal of privatization is to turn these enterprises into corporations, without going through the phase of owner-manager firms. The question is whether this is feasible. Can a western-style corporate governance structure be grafted on to an organization that was designed to facilitate central planning? Or are the rules and behaviors in an organization inert, so that only gradually can it be transformed? This is perhaps the central question of transition. For if the answers are negative much less of the inheritance of the socialist period will function in the new system.

![Figure 1: Schematic of Human Evolution](image)

The compelling issue of transition economics is that simply removing distortions and impediments to markets does not accomplish the task of economic renewal. Indeed, the apparent fall in output suggests that there is a friction to this process that was not anticipated. Development is the process of turning a less complex organism -- a child -- into a more complex one, an adult. In market economies this takes place over a long period of time. Transition involves changing the organism from one type to another. It is the process of turning a baboon into a human. It is much more difficult. Perhaps it teaches us something about the nature of humans.

To make this analogy more compelling consider an evolutionary path. We can consider the pre-industrial revolution economy to be a pre-cursor to homo sapiens. Consider figure 1, which gives a schematic of human evolution. Neanderthal and homo sapiens share a common ancestor, homo habilis. Notice that neanderthals and homo sapiens share many common features. We know that the DNA must be very similar, given how much of the genetic code is shared between humans and fruit flies. Yet, the species cannot jump from the one path to the other; neanderthals were a dead-end.

Now consider the evolutionary path of economic systems, in figure 2. The socialist economy shares with capitalism a common ancestry, pre-industrial society. Underdeveloped countries do as well. Indeed underdeveloped countries ought to be thought of as still of this ancestor. But socialist economies represent not a precursor but the alternative evolutionary path -- the neanderthals. Evolution along a different trajectory. Transition is thus the process of jumping

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28It is certainly stretching this analogy way too far to note that some recent anthropologists suggest that neanderthals became extinct because they refused to migrate, and hence, did not adopt technologies that are associated with migratory behavior. In other words, they were less able to adopt new technologies.
from this deadend -- neanderthals would be generous -- to the "successful" path. Transition is the process of accomplishing this jump. This is possible because we humans can alter policies -- unlike DNA, for now -- but it is unexplored until the transition. This suggests that the difficulty of transition will depend on how far along the "mistaken" path an economy traversed. This will be smaller for Vietnam or China than for Russia. It is critical to understand the empirical record of transition.

Transforming an economy from plan to market is an unprecedented historical event. The development of market economies in the industrialized countries was a process that took centuries.

**Figure 2**: Schematic of Industrial Evolution

This was a gradual process, unguided by any plan or goal for the end result. Transition, on the other hand, represents an attempt to transform an economy in a conscious fashion. Transition thus involves the study of the *creation* of markets; hence, it should be of interest to all economists. Transition is thus a social experiment, and we are fortunate enough to be witnesses to it. We could rightly say that this is the second great social experiment in economic history; and in the history of this century.\(^{29}\) It is thus tells us something about the ability of policy to drive economic processes. It may also turn out to be a measure of our understanding of the conditions needed to support a market economy; if it turns out that the policies suggested by economic analysis are insufficient to make the market take root, this would tell us about the deficiencies of economic analysis. A key question is then whether it is possible to design and implement a blueprint for transition. It is thus worth studying for this alone.

Transition is also interesting to study from the perspective of development economics. Typically development economics studies the experiences of poor countries; poor in a particular way. Not just low *per-capita* income, but underdeveloped. Most transition countries (with exceptions, notably China and Vietnam) are relatively poor, but they are already industrialized, urbanized, and have educated work forces. Underdeveloped countries do not. The experience of countries in transition is thus informative about a key question of development economics: the importance of institutions to development. If transition were relatively costless and painless, then one could argue that institutions are not important to economic development. Why? Because institutions are precisely what transition economies lack. Transition economies have already experienced the rural-urban transition, with large shifts of workers from agriculture to industry. They typically have large manufacturing sectors; often very large when we control for per-capita income. What is lacking

\(^{29}\)Socialism, and the development of the Soviet-type economy, obviously being the first.
in these economies are the institutions common to DC’s. The fact that the transition to a market economy is rocky suggests that developing these institutions is tricky. This suggests that institutional gaps may be the key problem that faces developing countries, rather than lack of resources. And it thus suggests that problems of developing countries and transition economies may not be all that different.

Transition, in fact, studies the route back. The socialist period was a detour on the road to economic development. A highway to no where. The highway ends with the demise of communism. Now these economies seek to get back to the development road. But they have detoured. They are not where they were before communism -- not just rural-urban transition, but heavy industry, literacy, semi-modern health and welfare system. To get back to the development path requires an off-road vehicle. How bumpy this path will be depends on how extensive was the detour, and how critical are the missing institutional features of the market system -- which is the height of the bush in this metaphor.

Notice that if re-allocating resources were costless there would not be any serious issues in transition. The problem is that these costs are high. Creating economic organizations is not trivial.

The normal view of development is that the development of institutions and industrialization is interactive. Of course, economists tend not to focus as much on institutions. But in a comparative sense it is clear that this is really critical.