Despite the focus of Adam Smith and 19th century economists on the determinants of the wealth of nations, there was no such field as “development economics” before the Second World War. Development economics came into being as a separate field when countries, formerly under colonial rule, attained their independence. Since they were mostly poor, with heavily rural populations, it was natural that a major objective of the bodies politic – including not only politicians and bureaucrats, but all who could be considered part of the “modernizing elite” – was to achieve economies and living standards similar to those in the developed, as they were then called, economies. They perceived wheat and paddy fields, and/or plantation agriculture in their countries, but a predominance of manufacturing industry in developed countries, and concluded that “industrialization” -- not mechanization – was the key to development.

Attainment of that objective was seen to be a major responsibility of governments, and the question immediately arose as to the policies to be adopted. Development economics was a new field, in large part because earlier economic growth in the developed countries had more or less “just happened”: while development of roads, railroads, education systems, and other measures had been undertaken by governments, it had not been done as part of a conscious “development” policy.
In addition, the atmosphere of the times led to focus on government policies: the Keynesian revolution had led economists to reject their earlier notions that markets could achieve desirable outcomes without intervention, while the then-apparent success of the Soviet Union further encouraged the idea that governments should take a leading role in the development process.

Against this background, the field of development economics was born. Its early distinctive characteristic was the insistence that developing economies were “different” and that, somehow, the normal sorts of analyses used in advanced economies were not appropriate. And, because development was seen as a major, if not the primary, objective of governments, focus was heavily on policy. Analysis, such as it was, was usually based on stylized facts, and those stylized facts sometimes led to gross misinterpretations of what good economic analysis would indicate.

I shall argue that development economics is an “applied, applied” field. Applied fields, such as international economics, public economics, health economics, and so on, must be applied, but it is in the application of those applied fields that development economics takes on its character. It does so in large part because application of the applied field is not always straightforward; indeed, one of the factors contributing to early misunderstandings of development problems and policies was a failure to recognize the ways in which theory (and data) should be applied and interpreted.

In all fields of economics – public finance, agricultural economics, health economics, and so on – the experience was much the same. When economic theory was applied, it was done so in ways that led analysts to reject its usefulness in developing countries. Gradually, appreciation of the context and relevant interpretation of the theory developed, but it took
time. I shall develop the argument based on the example of international trade and trade policy and its role in development. The ways in which development economics requires analysis additional to (not instead of) standard received wisdom are well illustrated by the differences between a simplistic interpretation of the neoclassical 2x2x2 model of trade theory and current thinking about the role of trade and trade policy in development.

In part because the LDCs, as I shall call them – the term was initially “underdeveloped” - were heavily dependent on imports for all but the simplest manufactured goods and in part because “industrialization” was thought to be essential and to require protection of domestic industry, a great deal of attention was initially paid to trade policy. But economists and policy makers started by taking the received, and universally accepted, doctrine of comparative advantage and interpreting it in a two-by-two framework to mean that LDCs’ comparative advantage was (and would statically remain) in agriculture (or, in a few cases, minerals, but always primary commodities). Since it was thought that growth of industry was essential for overall development, international trade theory was rejected as being unacceptable in developing countries, and the “infant industry” argument was seized upon as a rationale for restrictive trade policies. It took years before it came to be recognized that there were myriad industrial products and many agricultural products, and that there was comparative advantage within agriculture and industry, as well as between those sectors. It took even longer to recognize that there were numerous service-sector activities, many of which were also tradable.

What followed from the initial rejection of the presumed implications of the 2x2 comparative advantage interpretation well illustrates the “applied, applied” nature of development economics. It also illustrates what development economists applying their
applied field should know whether it is tax policy, agriculture, health, education or any other sphere of economic activity.

It is well known that high levels of protection were imposed to encourage development of domestic industrial activity. Mostly this was done by imposing quantitative import restrictions (supposed to restrain imports to a level “sufficient to meet domestic demand once domestic capacity was fully utilized”) or import prohibitions, although very high tariff barriers were sometimes also erected. A first step is to note that the original infant industry rationale never called for quantative restrictions and import prohibitions: strictly speaking, it called for a subsidy for production in appropriately defined new industries. Even that prescription would have raised considerable complexity, as the appropriate level of subsidy would have had to be determined on many commodities (not the one import-competing good assumed in the 2x2 context) based largely on forecasts of future prices and costs in domestic and foreign markets. But there was much more to it than that.

Development economists concerned with trade policy had to go through several stages to get the theory and the policy coherent and to recognize reality. One step was to recognize that import prohibitions and/or highly limiting quantitative restrictions had tariff equivalents, and that the total protection afforded by trade regimes was not the tariff, but the tariff equivalent of all measures, including surcharges on imports, the tariff equivalent of quotas, domestic content requirements, and other protective devices, and of any other imposed costs. And, while there certainly was an infant industry case that might be made, that case did not call for indiscriminate import prohibitions and justify protection at any level. It also had to be taken into account, however, that in many countries fixed nominal exchange rates at relatively high rates of inflation left the currency overvalued, in the obvious
sense that, even with existing tariffs and other restrictive measures, there was excess demand for foreign exchange. That, in turn, meant that the exchange rate regime itself constituted a subsidy to those permitted to import and a tax on exporters.

The notion of effective protection, which was developed in the 1960s, was important in this context as well. Until it was developed, some economists, using the arguments for free trade, had backed reductions in tariffs on raw materials and intermediate goods even when there was higher protection on final products, without recognizing that those tariff reductions in fact increased effective protection.

It also had to be recognized that quantitative restrictions could, and often did, have effects that tariffs do not have. These included the conferral of monopoly power on domestic producers, which was highly damaging to incentives for productivity increases, and indeed, for the entire economy. But in addition, significant production inefficiencies resulted when domestic producers of final goods had to slow or stop domestic production while awaiting their import licenses or foreign exchange allocations, when a strike at the factory of the one domestic producer led to lack of domestic supplies, or when they had to resort to the use of inferior intermediate goods because of the unavailability of licenses for imports. This was exceptionally costly with single-sources for most intermediate goods. And, of course, domestic monopolist producers had little incentive for quality improvements, on-time delivery, and other demands of a modern industrial economy.

Yet another aspect of learning resulted from the fact that many trade regimes were sufficiently restrictive that economic activities arose to take advantage of them. Some of these activities were quite legal: firms bought up foreign exchange licenses for particular imports without intending to use them in order to prevent their competitors from receiving
them; when the authorities decided to allocate import licenses for scarce raw materials and intermediate goods in proportion to each firm’s share of total capacity, firms expanded capacity in order to increase their entitlements to import licenses, even though all firms had excess capacity because of their inability to obtain the necessary imported inputs. But other responses were illegal. These included over- and under-invoicing of imports and exports (and exports had to be regulated to insure that exporters did not retain their foreign exchange earnings abroad, thereby avoiding capital controls), smuggling, and bribing of customs officials.

Over the longer term, there were still other effects which, with 20-20 hindsight, were predictable and important. Three of these are important enough to deserve mention here. First, the “infant” industries became, in Jagdish Bhagwati’s phrase, “senescent” without growing up. Second, over time “foreign exchange shortage” became more severe and growth rates fell in a stop-go pattern. Third, once import-substitution regimes were under way, a number of serious vested interests, not previously there, grew up to oppose efforts to dismantle them.

Turning first to the infant industry argument, there is no denying that there may be cases in which a new activity, accorded some degree of support, could and would reduce its costs in such a way as to make the initial investment (of high costs for the output, however financed) yield an adequate rate of return. But the fact that there may be such an activity or activities does not give the policy maker any techniques for identifying which those activities will be. And if the policy maker asks private sector participants to inform him as to how much costs may fall, it is certain that the private entrepreneur’s incentives will be to overestimate his initial costs (to receive more financial support or protection) and
overpromise on prospective subsequent cost reductions. And, anticipating the political economy point to be discussed below in at least one dimension, once a producer had built his factory and employed his workers, his workforce becomes a built-in lobbying group arguing against reductions in protection. Time-inconsistency is a major problem.

A genuine infant-industry case would, in any event, be a case for a subsidy, not a tariff, as was always known but forgotten. In fact, in a world of scarce budgetary resources and (as always) major political demands for those resources, there have been few cases (and none I know of) where a subsidy was used as the tool for encouragement of the supposed infants. Moreover, in most instances, one would expect that an activity whose costs could be expected to drop sufficiently to make the initial losses worthwhile would be an activity where exports would develop. Imposing high levels of protection for that activity insures that there will be little knowledge of, or experience with, foreign markets. Indeed, the discrepancy between the prices of outputs in the highly protected markets and those in other countries will almost surely guarantee that newly established industries do not expand sufficiently to export significant quantities of their output. Indeed, it could be argued that a genuine infant-industry policy would be one that provided uniform incentives for producing and developing any product, and that the Korean approach to so-called outer-oriented development was closer to the textbook case than any of the import-substitution regimes. But that is a story for elsewhere.

A simple answer in theory to the disincentive to exporters was to “rebate”, or “refund” the excess costs of exporters. In many countries, export rebates were tried, under which exporters could be reimbursed (or, in a few cases, exempted in the first place) for the duties paid on their imports. But the success of these schemes was very limited. On one hand,
different firms had different costs created by tariffs on imported inputs whether expressed as a percentage of price or on a per unit basis. Authorizing civil servants to estimate firm-specific rebate rates proved fraught with difficulty: pressures were always present to grant higher rebates, and many schemes became little more than another avenue by which to line civil servants’ pockets. If, instead, uniform rebates were offered in particular lines of business regardless of import levels, the opposite effect took place. And, whenever documentation of import duties actually paid was required, delays were inevitable. An extreme case well illustrates the results of misapplication of theory: to offset the disincentives associated with the fixed nominal exchange rate and high levels of protection for domestic import-competing industries, the Government of India in the early 1960s instituted a fairly generous system of export subsidies. By 1966, however, even those measures had not had sufficient effect and the Indian rupee was devalued. Those believing that export supply was price inelastic were quick to note that exports had not risen in response and that the devaluation had thereby failed: in fact, on closer examination, export subsidies had been removed at the time of devaluation and in many lines of activity the number rupees received by exporters per dollar of exports was either unchanged or even occasionally less than had earlier been the case. Failure to recognize that the effective exchange rate diverged from the nominal one – a problem not often encountered in industrial countries – had misled policy makers and analysts.

Turning then to the dynamics of the policies, there were (interrelated) economic and political consequences. On the economic side, high levels of protection led to strong incentives for virtually all new resources and mobile existing ones to shift toward production of import-substituting goods. That, in turn, provided a disincentive for expansion of existing
or potential exporting activities. The Lerner symmetry theorem was abundantly proven correct: protection of imports WAS a tax on exports. On the import-competing side, the goods that were produced were generally high cost, with the domestic resource cost of saving a unit of foreign exchange considerably higher than the domestic resource cost of earning it. And, almost invariably, import-substituting production was, as Carlos Diaz-Alejandro pointed out, import intensive. Hence, import-substituting production and the demand for imports grew more rapidly than did real GDP, while export earnings failed to grow as rapidly, if they grew at all. Over time, the consequence was incipient balance of payments difficulties.

But these difficulties were met, at least initially, by tightening quantitative restrictions on imports. The process proceeded in slightly different ways in different countries, but in almost all, efforts were made to distinguish between luxuries (whose import would not be permitted) and essentials (whose imports would be permitted). This, of course, led to the opposite of the intended result: economies that had been dependent on imports for consumption goods became dependent on imports for intermediate goods, capital goods, and raw materials, which affected not only consumption and investment, but employment and output. Efforts were made to put a finger in the dike by further restricting imports, by adopting piecemeal and ad hoc measures to attempt to encourage exports, and so on.

An economist from Europe or North America would point out that the obvious solution was to devalue, or let the currency depreciate, removing at the same time, at least some of the excess charges on imports. In most of the LDCs, there was extreme reluctance on the part of the politicians (and many economists) to do this, for a variety of reasons. The reason most often voiced by economists was that it was desired to keep prices of imported
capital goods low to encourage capital formation; in fact, however, less foreign exchange generally resulted in fewer capital goods imports and investments. Another oft-stated reason was the belief that a devaluation would only result in inflation with little, if any, impact on resource allocation. And, of course, to the extent that some goods had been imported at artificially low prices, industrial producers and final consumers of those goods who had been fortunate enough to receive import licenses pre-devaluation did experience price or cost increases. But, in fact, devaluation usually reflected the effects of past repressed inflation.

The final argument against exchange rate changes centered on what would happen to output and growth. Generally, as import regimes became more restrictive, rates of growth of output and real incomes were incipiently falling. In many instances, the authorities then used increased government expenditures (intended to stimulate the economy) in an effort to sustain growth rates. In fact, to a large extent, these measures stimulated inflation and demand for imports and failed in their purpose.

Of course, over time, the restrictiveness of regimes at fixed exchange rates increased to a point where the authorities could no longer borrow, run down reserves, or find domestic substitutes for imports. The classic “balance of payments” crisis (on current account) ensued. Normally this required a devaluation, a rationalization of the usually-chaotic import regime, and a reduction in the fiscal deficit if inflation was to be prevented from accelerating. When these things took place, the reduction in growth rates, the increased prices, and reduced employment – each of which was generally greatly exaggerated – was blamed on the devaluation, rather than on the circumstances leading to it. But for present purposes, the point
to be noted is that the inappropriate initial policies had dynamic consequences that were not all foreseen or understood at the time the policies were adopted.

As the restrictiveness of the trade regimes increased, the policy responses implied increasing complexity of those regimes. The number of tariff categories, licensing regimes, surcharges, and other instruments designed to contain the quantity of imports rose dramatically: in Turkey, for example the number of separate tariff classifications rose from around 6,000 to 28,000 over the course of only several years. But this complexity put a heavy burden on domestic civil servants. Administration was difficult and sometimes impossible. Temptation confronted the authorities when they were allocating increasingly valuable import licenses; and even the most upright of officials was caught in a tangle of regulations that were difficult to unscramble or interpret. The visible result was increasing delays in license issuance and customs clearance. The more damaging result, over time, was the degree to which civil servants (in other lines of activity as well as customs administration) fell into disrepute. A major lesson, which is still being learned, is that the administrative abilities necessary to administer complex regimes is a really scarce resource, and is needed in a host of activities – tax administration, procurement regulation, public health, education, and so on – and that complexity drains administrative resources away from other, high-return, uses.

The final lesson – and in some ways the one still most needing to be learned – concerns the political economy of economic controls. Once imports were restricted, a large number of vested interests sprang up to fight for their continuation, if not intensification. And, at the same time, many of those who did not initially receive protection were able to find reasons why their circumstances merited similar treatment. Bureaucrats administering controls may genuinely believe that it is in the country’s interests that these controls be
enforced; but they may also gain personally, perhaps in power, and perhaps by seeking side payments of one kind or another. Politicians can benefit from controls in several ways, including being able to help important constituents or to receive valuable licenses themselves. And, of course, the businessmen and workers in protected industries constitute an important constituency supporting the restrictions. Many Indian observers believe that Jawarhalal Nehru, who oversaw the introduction of import substitution in India and clearly believed that it was in the country’s best interest, had he lived, would have been unable to dismantle the system when he perceived that it failed to fulfill its intended purpose.

A major topic for research in recent years has been the political economy of economic policy reforms, and much has been learned. But there is still a fundamental question: when policies are sufficiently distortionary, it seems clear that there is some minimal level of reform that is necessary to move the economy in the desired direction; there is also a set of politically feasible policies. One pressing issue for research is to learn more about ways to judge whether there is any intersection between the politically feasible and the economically promising. Many reforms, including the Indian devaluation of 1966, have not only failed to achieve their purpose, but have left a legacy of resistance to reform that has made the task more difficult at later dates.

One could continue about the lessons learned regarding trade, and trade regimes, and how they operate in developing countries. Analysis of domestic content laws and their effects, of effective protection rates, and of a host of other trade policy instruments has greatly increased our understanding of these measures and their effects. But for present purposes, enough has been said to focus on the more general points.
First and foremost, linkages between markets in most LDCs are much tighter than was initially recognized. Trade restrictions helped some domestic industrial producers, but harmed many others. Agricultural producers were harmed, not only by having to pay higher-than-international prices for their inputs and their consumer goods, but also by receiving a lower return on their outputs than they would have at more realistic exchange rates. The degree of discrimination against agriculture was not widely recognized for years, but agriculture was a major victim of restrictive trade regimes and overvalued exchange rates.

Second, there are often complex interactions not seen in developed countries that need to be recognized if analysts are to assess the situation appropriately. A good example is agricultural marketing boards which have often set prices to farmers: in those instances, changes in the exchange rates have not elicited producer responses, but that doesn’t prove that farmers wouldn’t respond if prices did change. It may also prove that marketing boards should be charged with passing on changes in border prices or, better yet, be subject to competition from private firms, as is increasingly happening. Other examples include the impact of reducing tariffs while import quotas remain unchanged, and raising social security taxes in the context of a large informal sector, which may lead to reduced revenues and further shifts away from formality. But there are many more.

Secondly, macro-micro linkages are strong. Not only did foreign exchange “shortage” result in sharp slowdowns in economic growth, but incipient inflationary pressures discriminated against tradable activity under a fixed exchange rate regime (unless the tradable was a prohibited import). These same sorts of macro-micro ties are continuously felt in other sectors of economic activity. A particularly dramatic example was in Sri Lanka after the tsunami of December 2004. There, it was proposed that all houses destroyed by the
tsunami – all 80,000 of them - should be replaced within the year. It was further argued that there was no macroeconomic constraint because sufficient funds had been received from relief and aid agencies that the rebuilding could be financed. On closer examination, however, it turned out that the normal rate of production of new residential housing units in Sri Lanka was about 5,000 per year! The available foreign exchange might have financed some additional imports of building materials, but there was little doubt that had the plan been attempted, the donations of foreign exchange might have left carpenters, electricians, plumbers, and the like, very well off, but it is quite clear that had plans not been scaled back, there would have been major macroeconomic consequences of the decision. The same can be said in many other situations: loss-making state owned enterprises can constitute a major drain on investible resources, whether they are financed by directed lending by banks or by a larger fiscal deficit of the central government. There are many examples, but the state-owned electric power company in the Dominican Republic, which incurred a deficit in excess of 10 percent of GDP in the mid 1980s, is a dramatic case in point. The power sector may be micro, but the consequences of failing to permit cost recovery in pricing were clearly macroeconomic in nature.

More recently, the experience of the Asian financial crisis dramatically illustrated the macroeconomic consequences of an inefficient allocation of resources by the financial sector. Many had tended to regard the financial sector as another sphere of economic activity, not unlike construction, wholesale and retail trade, or power. But as the Asian crisis unfolded, the links between lending to firms to keep them afloat with consequent low real rates of return and slowing overall growth, became evident.
A third general lesson is the importance of administrative capacity as a constraint on the execution of policy. Large informal sectors in many developing countries attest to the extent of economic activity which is not directly affected by labor legislation, VATs, safety standards, and other measures. But informality comes at costs: not only does it raise the tax burden on other activities, but it effectively precludes entry into international trade – no matter how great the comparative advantage of informal sector activities in unskilled-labor-intensive activities, export regulations are always such that unregistered firms cannot legally export.

But there is, within the government sector, a lack of sufficient experience and competence to develop and enforce complex regulations: when inspectors try to decide which of 30,000 categories a particular import falls into, they delay importation; if, instead, they are influenced by the importer – as is often the case – corruption can result. Developing and administering a system that enables rapid clearance of formalities is challenging in all circumstances. Expecting relatively new administrations to administer complex tariff codes or even quantitative restrictions is a path for disillusionment: simplicity is desirable not only because it promotes transparency – a goal in itself – but also because it is essential if the authorities are to carry out the intended functions. Quite aside from the extent to which there are delays and bottlenecks imposed by complex systems, the credibility of these systems breaks down rapidly.

A fourth lesson is that most regulations that interfere with market-determined outcomes bring forth a group or groups of individuals and activities that benefit from those regulations. It is far more difficult to dismantle a control regime than it is to establish it. Th
doesn’t mean that it shouldn’t be done, but it does urge caution prior to starting down what may be a slippery and difficult to reverse slope.

To sum up, development economics is “applied, applied”. Learning to apply is difficult enough, but learning to apply in a development context requires attention to the entire range of constraints and incentives surrounding decision-makers. It is not enough to learn the regulations governing an exchange-rate regime: the ways exchange rates affect decision makers are strongly influenced by other parts of the economy. Nor is it enough to examine the tariff structure to evaluate the restrictiveness of the trade regime; much more is involved.

Much has been learned about development. Economists now recognize that people do respond to incentives; that the macroeconomic framework is critical; and that the institutions and legal framework surrounding the operation of individual markets are important. But there is still a long way to go: policy makers are forever finding new interventions and controls that require analysis and recognition of their interaction with other facets of policy; major challenges remain in understanding the political economy of policy reform; and identifying processes that place a smaller burden on administrative capacity is a challenge.