Increased Understanding of Supply-side Economics

Anne O Krueger*

It is perhaps fortuitous that the 50th Anniversary of the Reserve Bank of Australia provides an opportunity to reflect on how far the understanding of economics has come over the Bank's 50 years. For, while retrospectives are always instructive, they are especially so at present, when many analysts and commentators seem to believe that economics and economic knowledge have been static and unchanging throughout the post-War period, and that the financial crisis of the noughties indicates a failure of economics. I shall argue in this paper that much has been learned, often through experience and the challenges arising because of changes in economies, and that improved understanding has resulted in better policy-making. However, there will always be new phenomena to understand and problems to resolve as economic growth leads to changes in the structure and responses of our economies.

This paper is divided into four parts. The introduction deals with some preliminaries, including the definition of supply-side economics. In the second, there is a necessarily somewhat stylised sketch of the general mindset of analysts and policy-makers around a half century ago. Focus is on those major themes which drove decision-makers and academics in their thinking about policy. For reasons to be discussed, some differentiation needs to be made between thinking regarding industrial countries' policies and that centring on policy for developing (or as they were then called, 'underdeveloped') countries in that period.

The third section deals with those important changes in policy, and the thinking underlying them, that inform current thought and actions. As far as possible, aspects of monetary and financial policy are dealt with briefly, as they are the subject of other papers delivered at this Symposium. A final section then turns to current changes in the international economy that constitute challenges for understanding and policy in the future.

1. Introductory Considerations

A first task is to define supply-side economics. Google gives many definitions, some of which associate supply-side economics with the proposition that lowering tax rates will raise tax revenue, or with the proposition that lowering tax rates will induce more rapid economic growth. For present purposes, however, these definitions are too narrow. Broader definitions focus on the determinants of aggregate supply. In this light, 'production or supply is the key to economic prosperity'.[1] I shall define supply-side economics to be concerned with the determinants of potential output, or productive capacity, and changes in it over time.

* Professor of International Economics, SAIS, Johns Hopkins University; Senior Fellow at SCID and Ritch Professor Emeritus, Stanford University.

1 'Supply-side economics – Definition' at <http://www.wordiq.com/definition/Supply-side_economics>.

Given that definition, it is quite possible to recognise that output is the outcome of the interaction of aggregate supply and aggregate demand and to recognise that shortfalls in aggregate demand can not only lead to output at a level below potential, but can also deter investment and thus future potential output. Nonetheless, for present purposes, I shall focus on the understanding of determinants of the supply side and changes in thinking about the relative importance of supply and demand factors in determining output and growth. Supply-side analysis then focuses on the determinants of increases in the supply of factors of production and total factor productivity.

A second preliminary observation has to do with the proposition that, as a broad first approximation, the past half century has witnessed the greatest economic success in human history for any comparable period in bringing living standards and the quality of life to levels heretofore not dreamt of. Whether we speak in terms of real per capita income growth or other measures of economic performance, or whether we instead focus upon life expectancies, infant mortality rates, educational attainments and other indicators of the quality of life, there can be no question that the world of 2010 is a different, and in economic terms, better, place than it was a half century ago.

Table 1 gives data on per capita incomes for various regions of the world, in 1990 US dollars, for decades from 1950 to 2000. For the world as a whole, real per capita income rose an estimated 2.85 times while world population was 2.41 times as large in 2000 as it was in 1950. World real GDP rose approximately 6.9 times. Productive capacity had to increase enormously to underpin those achievements and it was almost entirely supply-side factors that enabled the rapid global rate of growth.

Table 1: Per Capita Incomes by Region

1990 international Geary-Khamis dollars[(a)]

	Western Europe	'Western offshoots'[(b)]	Asia	Africa	World
1950	4 579	9 268	712	894	2 111
1960	6 896	10 961	1 029	1 066	2 777
1970	10 195	14 560	1 530	1 357	3 736
1980	13 197	18 066	2 034	1 536	4 520
1990	15 966	22 345	2 771	1 444	5 157
2000	19 002	27 065	3 817	1 464	6 012
	Ratio of income, 2000 relative to 1950				
	4.15	2.92	5.36	1.63	2.85

(a) The Geary-Khamis dollar, also known as the international dollar, is a hypothetical unit of currency that has the same purchasing power that the US dollar had in the United States at a given point in time (1990 for the data in this table).

(b) Australia, Canada, New Zealand and the United States.

Source: Maddison (2003, p 234)

Increases in per capita income were accompanied by increases in other measures of quality of life and wellbeing. Life expectancy, for example, rose by about 10 years for industrial countries and more than 20 years for the then-developing countries, while literacy rates have more than doubled.[2]

The successes of the past half century have, of course, brought with them problems and challenges, which will be addressed in the final section. But it should not be overlooked that there have been major improvements in the quality of life in industrial countries, although changes in developing countries have been even more dramatic. Life expectancies in the developing countries have risen rapidly, literacy is almost universal among the young in most developing countries, some very poor countries (mostly in east Asia) have achieved living standards similar to those of industrial countries, and poverty has been greatly reduced in most middle-income countries and emerging markets.[3] The sad exception, to which I shall return, is the group of countries referred to as 'least developed', which includes most of sub-Saharan Africa and south central Asia. But the successes owe much to what has been learned about supply-side issues, and the failures are attributable, in part, to a lack of acceptance of that learning. Indeed, many of the challenges facing the international economy today are the result of the successes of the past 50 years. These will be addressed in the final section.

2. Thinking about Economic Policy in the 1950s

Prior to the end of the Second World War, little thought had been given to the economic conditions in developing countries: most had been, or still were, colonies[4] and it was generally taken for granted that their economies were 'different'. The leadership in almost all developing countries set economic development and rising living standards as a pre-eminent policy goal. When governments in developing countries embarked upon policies formulated to foster economic growth, they based their policies at least partly on a different understanding of supply-side economics than that in developed, or as they were often called, industrial countries.

For ease of exposition, it is simplest to start with developed countries. It will be recalled that memories of the Great Depression were very strong, with many economists believing that there was a tendency for 'secular stagnation' which would reassert itself once the initial post-War recovery was completed.

The intellectual contribution to policy-making of the 1930s had been Keynesian: it was thought that private markets would work fairly well in allocating resources at full employment (with the exceptions to be noted below), but the major challenge to policy-makers was to maintain full employment. It was generally accepted that there was little or no automatic tendency for markets to achieve that outcome. Moreover, there was a widely held view that there was a trade-off between price stability and the level of employment: by the 1960s this had been formalised as

2 Life expectancy and other indicators of health and wellbeing had been rising in the industrial countries, some since the early 1800s and others (such as Japan) from more recent dates. See Clark (2007) for an account.

3 Compare the data, for example, in a text in the 1980s (Gillis *et al* 1987) with recent data from the World Bank (2007).

4 There were, of course, a number of countries (such as those in Latin America, Thailand and Turkey) that had never been colonised. The general views on economic policy in those countries were much the same as in former colonies, as the 'modernising elites' and leadership believed that the developed countries had been sufficiently economically dominant so as to render them 'virtual' colonies.

the Phillips curve, which was deemed to show that higher rates of inflation would be consistent with higher levels of employment.

With regard to macroeconomics, therefore, the focus was largely on aggregate demand and determinants of the level of employment. It seems to have been more or less implicitly assumed that, if full employment were achieved and maintained, economic growth would be the automatic result and that few, if any, growth-oriented policies would be needed. To a significant extent, 'supply-side' issues were downplayed or ignored because of the belief that the major challenge for policy-makers was to sustain aggregate demand along Keynesian lines. Automatic stabilisers (in the forms of unemployment compensation, progressive income tax rates, and other schemes) were advocated and developed, and discretionary policies were advocated to stimulate the economy in times of underemployment and to moderate economic activity in times of overly rapid expansion.

A major consequence of this focus was the neglect, or even the disbelief, in the role of incentives, and to some degree even of prices, in affecting the workings of the economy.[5] Marginal tax rates greater than 80 per cent were not uncommon; replacement rates for the lost wages of the unemployed were often near 100 per cent; and some industries were brought under government ownership. There was even a sizeable academic literature on whether devaluation of a currency might result in an improvement or a deterioration of the trade and current account balances (and no distinction was made between the nominal and the real exchange rate).[6]

The belief in government regulation and/or ownership of economic activities stemmed from three sources: the Pigovian argument that governments should compensate for externalities through taxes or direct interventions; concerns about market failures, especially in the labour market; and widespread belief that the Great Depression had shown that markets 'didn't work'. Many regulatory regimes, such as the U.S. Securities and Exchange Commission, the National Labor Relations Board and the Glass-Steagall Act in the United States, had been established or tightened during the 1930s. Then, and in the first two decades after the War, there was little or no discussion of whether governments *could* regulate or run various economic activities; academic focus was on appropriate criteria for doing so, while policy-makers simply acted.

A significant contributing factor to the acceptance of government ownership was the widely held belief that the USSR had successfully been transformed into an industrial country through central planning, and in some industrial countries, government ownership increased in the early post-War years. This view even more strongly influenced economic policy-makers in many developing countries and often resulted in policies that were detrimental to growth.[7]

Even with respect to international trade, views were schizophrenic. If one examines the proposed charter of the International Trade Organization (ITO), the first half espoused the general principles

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5 At a conference in the 1970s at which I presented a paper, my discussant began and ended his discussion with words to the effect that 'this paper is based on the assumption that prices matter. They do not, and this paper is therefore irrelevant'.

6 A classic paper by Alexander (1952) provides an early effort to bring income-expenditure effects into the analysis.

7 India, for example, adopted a 'socialist pattern of society', delineating industries into three groups: the 'commanding heights' industries which could only be owned and operated by the Government; the 'mixed' industries in which both private and public sector firms could coexist; and industries (generally deemed 'small-scale') that would be reserved for the private sector. Even those that were reserved were heavily regulated, and would lose their tax exemptions and other privileges if they grew 'too large'. See Bhagwati and Srinivasan (1975).

that most free traders would adhere to: there should be open multilateral trade without discrimination among countries; and trade barriers should only be in the form of tariffs, and the lower the better. There were, however, exceptions noted for developing countries to which I return below. But that first half became the articles of the General Agreement on Tariffs and Trade (GATT, now the World Trade Organization, or WTO). The second half of the proposed charter focused on what countries might do whenever they were confronted with less than the level of employment they deemed desirable: they were empowered to take trade protective measures in those circumstances. It was argued at the time, and in my judgment correctly, that the second half of the proposed ITO charter gave countries licence to erect whatever trade barriers they liked in the name of achieving full employment (Krueger 1999).

Fortunately, the ITO never came into being, largely because the US Congress refused to ratify it, with objections based largely on the licence the exceptions gave to countries to adopt whatever levels of protection they chose. Indeed, the conflict between the two halves of the proposed ITO charter has often been noted as puzzling to present-day observers. It seems safe to say that had the ITO charter been ratified, the unprecedented reciprocal lowering of trade barriers among the industrial countries that took place over the next several decades would have been quantitatively much smaller, if indeed reciprocal trade liberalisation would have happened at all.

That the 'free trade' GATT articles were adopted (by Presidential decree in the United States in order to begin the process of multilateral tariff negotiations while the American President still had 'fast track' authority) was largely the result of American pressure. The multilateral tariff negotiations that took place under the auspices of the GATT were certainly a significant contributor to the rapid post-War economic recovery and sustained rapid growth among the industrial countries that took place in the 1948–1973 period.[8] The more integrated global trading system and its results were certainly one of the key factors accounting for the greater weight placed on supply-side factors in later years.[9]

In developing countries, Keynesian ideas on macroeconomic policies were similar to those in industrial countries but the policy framework was even more inimical to private markets. The apparent success of the Soviet Union and the disaster of the Great Depression were viewed as having shown the fatal flaws in the capitalist system. In addition, there were two other factors. On one hand, the colonial legacy led many to believe that the West had developed through 'exploitation' of its colonies, and that government support for economic activity thus lent to domestic industry had accelerated growth among the developed countries and thwarted it in the colonies.[10] On the other hand, there was a strong belief that high living standards resulted

8 By most estimates, the average height of tariffs on manufactures prior to the first GATT round (in 1947) was between 40 and 50 per cent in Europe, Japan and North America. The European and Japanese tariffs understate the extent of protection because bilateral trading arrangements and exchange control were used to constrain imports in light of the 'dollar shortage'. The removal of quantitative restrictions on imports and adoption of Article VIII (full convertibility for current account transactions) in the 1950s was important for the speed of reconstruction and the rapid growth of trade in that era. For an account of the successive rounds of multilateral trade negotiations under the GATT/WTO, see Irwin (2002, p 164 *ff*).

9 Transport and communications costs also fell significantly. However, by the middle of the century, they constituted about 20 per cent of the free-on-board prices of exports and were thus less of a barrier than were tariffs and quotas.

10 It was widely accepted that the terms of trade had worsened for primary commodities and would continue to do so. That belief was also used as a rationale for 'import substitution'. See Spraos (1980) on the terms of trade, and the collection of essays in Agarwala and Singh (1964), many of which reflect the attitudes of the time with respect to development. On structuralist inflation, see especially Prebisch (1984), but also the other essays in Meier and Seers (1984).

from having a large manufacturing/industrial base. The modernising elites of most developing countries adhered strongly to the view that their countries must industrialise,[11] and that the head start of the developed countries made it necessary for governments to take the lead in establishing these industries, either in the public sector or through protection of the new infants from imports. The infant industry argument, long noted in economics textbooks as a key exception to the case for free trade, was invoked as justification.

In practice, most developing countries' governments adopted fixed exchange rates but undertook expansionary fiscal and monetary policies in the belief that these would spur investment and therefore accelerate growth.[12] The incremental capital-output ratio was seen as a given, virtually unaffected by economic policies, so that the investment rate (limited by savings and the current account balance) would determine the growth rate.

Policies resulting from these views led to inflation rates that were generally significantly higher than in the United States, at a time when US dollar prices generally were global prices. Since most countries pegged their currencies to the US dollar, there was a strong tendency for real appreciation of developing countries' exchange rates. Real exchange rate appreciation served to discourage exports and of course to lead to greater demand for importable goods.[13]

Development of 'import substitution' industries in the developing countries proved to be import-intensive, and excess demand for imports at the prevailing exchange rates generally led to greater and greater distortions over time. 'Stop-go' cycles were the general rule, with each 'stop' taking place when inability to finance even imports deemed essential resulted in a 'stabilisation' program in which fiscal deficits were reduced and monetary policy tightened, while devaluation adjusted the exchange rate. 'Go' started after export earnings (and foreign exchange received as part of the stabilisation as well as decumulation of speculative holdings of imports and exports) enabled an increase in imports. But each 'stop' cycle was generally longer and more severe than the previous one, while each 'go' was shorter and with a lower average rate of economic growth.

Policies toward international trade were central to this line of thinking. Underlying them was the view that prices had little or no effect on key variables. And after small, primarily agricultural, economies were insulated from world markets because of high tariffs, quantitative restrictions on imports and import prohibitions, governments could, and did, intervene extensively in domestic economic activities. There was generally a strong bias against agriculture because of overvalued exchange rates used for the valuation of exports, the high prices paid by farmers for non-agricultural items, and the suppression of domestic food prices through agricultural

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11 As a stylised fact, industrial countries exported manufactures and imported primary commodities, while developing countries had large sectors producing and exporting primary commodities and imported most of the manufactured goods consumed domestically. This buttressed the belief that growth of industry was the key to rising living standards and economic development.

12 It will be recalled that there was a 'structuralist' school of thought in Latin America which held that 'rigidities' were strong and that relatively high rates of inflation would be desirable to enable the breaking of the resulting bottlenecks.

13 An extreme example is provided by Ghana. In that country, the black market rate rose to 200 times the official rate before policies began being altered in the early 1980s. By that time, farmers had not only stopped replanting cocoa trees, but had even failed to harvest those that were still yielding. But most developing countries used import licensing and import prohibitions for goods that could be domestically produced in an attempt to restrict the value of imports to match the available foreign exchange.

marketing boards and other mechanisms.[14] But since it was believed that peasants were not responsive in any event to incentives, these policies were seen as supportive of industrialisation and growth. Public sector enterprises were established, not only in utilities, transportation and heavy industries, but even in activities such as tourist hotels, textiles and apparel, and food processing.

For activities not in the public sector, in most developing countries (and, in the early post-War years, many developed countries), governments placed low ceilings on interest rates that might be charged by banks, with many instances of negative real interest rates. With credit rationing, governments could, and usually did, direct credit to lines of economic activity (mostly in the 'modern' sector) they wanted to encourage. Price controls, on private economic activity and through loss-making public sector enterprises, were extensively used in efforts to suppress inflation.

All of these policies were effected in developed countries as well, but the degree to which government regulation, control and ownership dominated economic activity was generally much, much greater in developing countries. To the extent that the foreign trade regimes in developing countries were much more highly restrictive than in developed countries, the apparent room for government intervention was considerably greater, while the insulation of the economies from the rest of the world prevented feedback that might have signaled the extent to which these policies were detrimental to the very goals at which they were said to be aimed.

One result was that, until 1973, the average rate of economic growth of developing countries was below that of industrial countries, despite the much greater potential for growth due to the catch-up possibilities. Although developing countries benefited from the rapid expansion of global trade, their share of world trade fell markedly, and for many purposes it was possible to view the world as split into the industrial countries, the developing countries and, of course, the centrally planned economies, of which only the first group seemed significant for analysis of many global issues.[15]

3. Supply-side Economics Today

The contrast between the economic analysis of the noughties and that of a half century ago is stark: while many would accept that there may be a role for macroeconomic stabilisation in the short run, most would hold that economic policies, macro[16] but especially micro, are key determinants of output and the longer-run rate of economic growth, and that sufficiently

14 Agricultural marketing boards typically were the only legal buyers of farm commodities and were often the only legal source of farm inputs. They were used, however, as a means of collection of revenue for governments and as a source of patronage for politicians. As their costs rose, the return to farmers fell. It is estimated that in the late 1970s, there were many countries in which peasants earned less than a third of what they would have had they been able to sell their products and obtain their inputs and consumer goods at international prices. See Jones (1980) for a discussion of agricultural marketing boards and Krueger (1992) for an analysis of the degree of discrimination against agriculture.

15 In 1950, the developing countries' (both oil exporters and others) share of world trade was 36.2 per cent; it fell to 21.8 per cent by 1970, and rose thereafter, reaching 33 per cent by the mid 1990s and 44 per cent by 2005. See IMF (1980, 2006).

16 If one includes exchange rate regimes, controlled interest rates and repressed financial systems among macroeconomic policies, they would be regarded as equally important as microeconomic policies. In addition, as inflation has been tamed and fiscal balances brought under control in many countries, there is increasing acceptance that inflation, fiscal deficits and high public debt/GDP ratios are more detrimental to economic growth than had earlier been supposed.

ill-advised policies can result in economic stagnation, if not decline. Moreover, many of the policies that were regarded as output- and growth-enhancing or neutral would now generally be viewed as detrimental to growth. In addition, the relative emphasis on the short-term and the longer-term aspects of economic policy has changed dramatically.

Here, I attempt to pinpoint some of the key changes in thinking and the factors that led to those changes. Examination of what and why ideas changed is helpful in considering the challenges of the coming decades and the ways in which economic analysis and policy formulation may be influenced.

A key issue underlying many, if not most, of the changes, is how much incentives matter. An answer in the 1950s might have been 'not much', as reflected in the tolerance, if not the advocacy, of high marginal tax rates, in the discrimination against agriculture in many countries, in the belief that the capital-output ratio was a given and not very much affected by policies, in price controls and credit rationing, and so on.

The change was starkest in developing countries, perhaps because the initial policies had become so extremely detrimental. There is now in general much wider recognition of the importance of incentives and the responses likely to occur when market outcomes are suppressed. This appreciation resulted from a number of factors, which can be mentioned only briefly here. In developing countries, failure of agricultural output to grow as expected was one phenomenon that helped. Responses by peasants to incentives came to be recognised as not only existing, but relatively strong. This was pinpointed in the pioneering work of Schultz (1964) and his colleagues (Becker 1964), not only with respect to agriculture, but with respect to human capital formation more generally. They showed that human capital formation was an important source of economic growth,[17] and that rates of return to education mattered greatly in determining individuals' choices as to type and duration of education. Once it is recognised that investment in humans is an important determinant of factor productivity and growth, and that those investments are responsive to the costs and returns associated with them, it is no longer possible to regard the growth rate as a mechanical function of physical capital investment only. But the human capital paradigm was important in developed countries as well as in developing countries.

As import substitution progressed in developing countries, its evident costs became higher and the benefits lower. One might regard the first-round import substitution industries as having been relatively close to low-income countries' comparative advantages. But as domestic demand for these unskilled labour-intensive products (footwear, apparel, matches, simple assembly industries, and so on) was satisfied (given the relatively high prices of the domestically produced goods behind high walls of protection), further import substitution investments necessarily entailed starting industries using physical and human capital more intensively, many of which had fairly large minimum efficient sizes of plant, while catering to small domestic markets. Few of the highly protected 'infant industries' developed into export industries, both because they

17 In the early post-War years, it was often assumed that developing countries were poor because, and only because, they lacked physical capital. The incremental capital-output ratio was taken as a technological given, and policy prescriptions centred on raising the rate of capital formation. The human capital literature showed both that incentives mattered and that investment in human capital was an important source of economic growth.

were high-cost relative to international standards and because it was generally more profitable to develop a new domestic monopolistic position by producing an imported item and thus removing it from the list of eligible imports. Foreign exchange 'shortages' persisted and worsened even with periodic stabilisation programs, and infant industries became 'senescent' without ever growing up. When, after 20 or more years, industries were still high-cost and insisted upon the need for continuing high levels of protection, if not import prohibitions, some began questioning the efficacy of the import substitution strategy. While the primary lesson was in developing countries, difficulties with state-owned enterprises and weak incentives came to be recognised in developed countries as well.

In both developed and developing countries, peoples' evasions of government regulations also came to be recognised as a likely response to significant disparities between official prices and market-clearing prices. There was significant rent seeking, corruption, smuggling and unanticipated behaviour within public sector enterprises. Sometimes the behaviour was legal, although uneconomic (Krueger 1974). It was demonstrated that 'rate of return regulation' for public utilities led to overinvestment in many circumstances (for example, Averch and Johnson 1962). Cost-plus pricing was seen to be wasteful in many government contracts. When regulations (including high marginal tax rates, bureaucratic delays in obtaining necessary permissions, and price controls) surrounding the conduct of private sector enterprises became sufficiently onerous, 'informal sector' economic activity developed. Small-scale enterprises sprang up beneath the radar screen of government officials. In India and other countries where regulations were put in place to cover activities larger than a specified minimum, a large number of enterprises below that minimum, owned by relatives in the same family, would spring up in the same building, with each unit in a separate room or rooms. With high marginal tax rates, taxes were avoided, labour market regulations ineffective and the small firms escaped oversight by the authorities. The costs, however, were generally significant as productivity in these informal sector firms was estimated to be one-quarter or less that of larger firms in the formal sector. Meanwhile, even if the activities were unskilled-intensive, exporting was not feasible, as that would have required paperwork and official permissions only attainable by firms with large staffs.

But illegal activity also flourished and was more widespread the more restrictive the regulations, as there was greater scope for profit. Smuggling, black markets, tax evasion, over- and under-invoicing of imports and exports, bribery of officials, misallocation of government procurement from low-cost sources to those bribing the most, and a host of other activities reduced tax revenues, raised procurement costs and thwarted the stated intent of government regulations.

The scale of these activities increased over time and was, in many instances, breathtaking. While some of this also occurred in developed countries, it was usually on a smaller scale, both because the disparity between regulations and individual incentives was generally smaller and because institutional mechanisms for enforcement of government edicts were further developed.

These developments, the stop-go cycles already mentioned and failure of growth rates to accelerate, would undoubtedly over time have led to some degree of rethinking in developing countries as to the degree to which the policies undertaken were supportive of the stated objectives. But at the same time as growth rates were failing to accelerate, if not decelerate, a

small group of economies were rejecting the entire set of policies that had been adopted, and turning to policies much more closely identified with those that economists would have said were conducive to economic growth. The pioneers were in east Asia: Hong Kong, Singapore, South Korea and Taiwan.[18] Because Hong Kong and Singapore were city-states, their experience was largely ignored and rejected by development economists and policy-makers.

But South Korea and Taiwan were not so easy to ignore. Initially, they had very low per capita incomes in the 1950s and the ills generally associated with developing countries: heavy dependence on primary commodity exports; reliance on imports to supply most manufactured goods; an abundance of unskilled labour; relatively high rates of inflation; and chaotic public finances. They had also relied heavily on import licensing and exchange controls to encourage domestic import substitution.

But starting in the mid 1950s in Taiwan and around 1960 in South Korea, economic policies were reformed dramatically. Trade policy was shifted from a focus on restraining imports and encouraging domestic production of substitutes to an outer-oriented trade strategy. This entailed moving to relatively balanced incentives for sale on the home market and abroad: quantitative restrictions and import licensing were eliminated within a decade and tariff levels were greatly reduced. The exchange rate was brought to more realistic levels.[19]

Although changes in the trade regime were perhaps the most visible and dramatic, reforms in these economies were more far-reaching. Price controls were abandoned, the tax structures reformed and fiscal deficits greatly reduced, nominal interest rates were permitted to rise to levels that made real interest rates positive (with unexpectedly large effects on the domestic savings rate – which had been negative in South Korea in 1960) although credit rationing did not entirely cease, to name just some of the major reforms. At the same time, government activities focused on the provision of infrastructure (a real challenge when real growth rates reached double-digit figures as they did for well over a decade), education and the creation of business-friendly environments, while public sector enterprises' shares of new investment and economic activity fell, with much greater reliance on the private sector.

The spectacular results in each of the Asian 'tigers' were well beyond expectations. In South Korea, for example, real wages and per capita incomes increased seven-fold between 1960 and 1995, while the unemployment rate fell from 25 per cent to less than 5 per cent. Exports grew at an average annual rate of 40 per cent for the first decade of the new policies, and rose from 3 per cent of GDP (in 1960) to 38 per cent by the mid 1980s. Living standards and economic structure were transformed from those of poor developing countries to those of industrial countries.[20]

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18 On Taiwan, see Ranis (1999); on South Korea, see Frank, Kim and Westphal (1975).

19 In South Korea's case, uniform export 'incentives' were provided on the basis of the value of export earnings, with incentives initially in the form of preferential access to (subsidised) credit, tax breaks and import privileges, but these were largely offsets to the remaining protection accorded to import-competing production. By 1973, these 'incentives' had been eliminated and tariffs reduced, as the exchange rate became the main mechanism for inducing exportable production.

20 By one estimate, South Korea's per capita income was about the same as that of Ghana in the late 1950s, and 22 times Ghana's by the turn of the century. Indeed, South Korean incomes were estimated to be lower than those of many sub-Saharan African countries in the late 1950s. See Maddison (2003) for estimates.

Foreign observers could not help but note the transformation of the east Asian economies. It changed thinking regarding feasible growth rates[21] and altered the economic geography of the world as east Asians became major international traders and could no longer be viewed as 'similar' to low-income developing countries. South-east Asian economies also altered their economic policies starting in the late 1960s and the 1970s, with accompanying acceleration of growth rates. By 1980, China also began pursuing an outer-oriented trade strategy, with accompanying domestic reforms. Those results were as dramatic over the next two decades as South Korea's and Taiwan's had been earlier, and rapid growth has proceeded, and even accelerated, more recently. India, which had had a highly restrictive trade regime and heavy government involvement in economic life in the entire post-War period, began major policy reforms in the early 1990s[22] and also experienced sharp acceleration in economic growth. Many other developing countries began dismantling their trade barriers and reducing the role of the public sector in directing economic activity by the 1990s,[23] although the reforms in the trade regimes and domestic economic policies were frequently less far-reaching than they had been in the east Asian tigers and later the other rapidly growing economies.[24]

Although the shift in thinking was more dramatic in developing countries than in the industrial world, significant changes took place there as well. Disillusionment with public sector enterprises led to privatisation; financial markets were considerably deregulated; tax structures were reformed so that marginal tax rates (on both corporate and personal incomes) did not greatly damage incentives; and monetary and fiscal policies were altered so that inflation rates dropped sharply. There was also considerable deregulation of domestic economic activity.[25] In almost all industrial countries, trade had been liberalised and tariff barriers (in manufactures) reduced to low single digits. Those among the industrial countries where reforms began earliest and were most far-reaching (Australia, New Zealand and the United Kingdom among them) were the earliest to experience improved economic performance.

Much has been learned. The costs of inflation are considerably higher than was generally thought 50 years ago, while the benefits are much lower. Fiscal policy is evaluated in terms

21 As late as the mid 1960s, most development economists regarded average annual growth of 5 or 6 per cent as the maximum sustainable rate. Hollis Chenery, the chief economist of the World Bank, used that number to model development prospects. See Chenery and Strout (1966).

22 The slowdown in growth rates in many developing countries also led many to reject their countries' earlier strategies for economic development. In India, for example, it was the foreign exchange crisis of 1991, combined with the contrast between India's continuing difficulties and Chinese and east Asian successes, that induced the policy changes. The fall of the Soviet Union reduced the credibility of those still advocating a heavy role for the state in directing all economic activity.

23 The aftermath of the oil price increases of the 1970s and the debt crisis of the early 1980s served to reinforce the lessons from east Asia. In particular, the Asian tigers were able to adjust economic policies and sustain economic growth in both decades, while many other developing countries were experiencing sharp slowdowns in economic activity and growth.

24 Among countries undertaking major reforms, Chile should be noted. Starting in the mid 1980s, protection was dismantled and other reforms were undertaken that made the Chilean economic experience much more satisfactory than that of other Latin American countries. See Bosworth, Dornbusch and Labán (1994). The focus on the Asian economies is largely because of their much greater size and economic importance to the global economy today.

25 Deregulation of the airline industry in the United States was a watershed in the movement toward deregulation. Despite forecasts of loss of service for small cities and other major problems, the cost of air travel fell sharply and service in fact improved to small cities as small aircraft came to be used.

of sustainability,[26] and few would question the negative consequences of high personal and corporate marginal tax rates.[27] Replacement rates for unemployment compensation, publicly funded disability payments and other facets of the social safety net are scrutinised and evaluated in terms of their incentives for labour force participation in a way that would have been unthinkable a half century ago. Rigidities in the labour market more generally are subject to scrutiny, with issues such as portability of pension rights (to enable mobility) coming to the fore.

In general, the appreciation of the degree to which markets and individuals respond to incentives, including those arising out of uncertainty, is greatly increased. Part of this enhanced appreciation may result from the fact that the world is increasingly globalised. With that comes the recognition that capital and skilled labour can move across borders, and that ill-advised regulation, be it of phytosanitary standards, financial sector activities, labour markets or other, can be costly to the economy of the country imposing it. To name but a few of the highly visible examples, the interest equalisation tax is regarded as having shifted the financial capital of the world from New York to London; the *Sarbanes-Oxley Act 2002* is thought to be responsible for the shifting of a significant number of corporate headquarters away from the United States; and the US imposition of anti-dumping duties on DRAM (dynamic random access memory) chips led to the wholesale shift of computer assembly operations offshore.

4. Challenges for the Future

While unprecedented rates of economic growth for the world economy and associated successes have certainly led to greater understanding and appreciation of the importance of supply-side determinants of output and growth, the world economy itself has changed markedly and, as a result, new problems have arisen. Some of these are the outcome of success itself; some result from the failure of the accepted policies to deliver the anticipated results; and yet others result from reactions to the greater constraints that this understanding has imposed on some aspects of traditional economic policy formulation. To a considerable degree, the challenges are interrelated, and can only briefly be addressed here.

Among the challenges posed by success must be counted the rapidly increased importance of large new emerging markets (which would not be such a challenge by definition if these countries were growing only at the rates they achieved in the 1950s and 1960s), which in turn means that the international decision-making processes for the world economy must appropriately reflect the voices of the emerging markets.

Challenges arising because of the inability to solve fully past problems concern mainly the very-low-income countries. The low-income countries have not succeeded in generating rising living standards and improved wellbeing. Many have living standards below those of a half century ago.

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26 The evaluation of fiscal policy in terms of sustainability has certainly been learned in the policy community. However, most industrial countries and all but a few emerging market and low-income countries were running fiscal deficits in the boom years of the mid-noughties. During 2008 it became evident that the room for fiscal manoeuvre was much greater in those countries that had relatively low levels of public debt and had incurred surpluses or relatively small deficits.

27 Especially in the case of the corporate income tax, the increasing importance of international private capital flows, and their responsiveness to tax and interest rate differentials, was a major factor in the rejection of high marginal rates.

Turning first to the fruits of success, the emergence of China and India, especially, but also of a number of other countries,[28] has led to the need for their greater contributions to, and participation in, international economic policy formulation and execution. Fifty years ago, a few countries accounted for such a large share of world economic activity that they could consult each other informally or take a lead in international organisations, and in effect reach decisions for the global economy.[29] Today, the weight of many emerging economies in the world economy is large enough so that they must participate in the process. Moreover, interdependence was considerably less than it is today, further challenging international governance.

Although the IMF was generally consulted throughout the past 50 years about exchange rate changes, most of its authority came from its ability to lend funds to countries in severe economic difficulties, and these were mostly developing countries. Efforts to coordinate international macroeconomic policy were generally left to the large industrial countries, as for example in the Plaza and Louvre Accords. An effort in the mid-noughties to induce the major economies, the United States, China, the euro area, Japan, the United Kingdom and Saudi Arabia, to agree to simultaneous policy measures that could address global imbalances ended with agreement that action should be taken but without agreement on who should take it. Large countries were not willing to adjust their macroeconomic policies because of international ramifications. Current account surplus and deficit countries each believed that adjustments should be taken by the other side. While willingness to adjust in coordination with other countries may be somewhat increased by the experience of 2007–2009 (and was agreed by the G-20 with a process of peer review intended to achieve that result), there is still a gaping hole in international economic policy formulation when each large economy believes the others should adjust.[30] Without agreement on a credible process to enforce needed adjustments, it will be of interest to see whether peer pressure can achieve the desired outcome.

But the issue is not only one of macroeconomic coordination. At the GATT/WTO negotiations until the Doha Round, developed countries engaged in multilateral tariff negotiations and reductions, with the developing countries claiming 'special and differential' treatment and essentially being free riders, benefiting from the tariff cuts of industrial countries but offering few of their own. Even in the past two decades, when there have been large reductions in protectionist measures in emerging markets, those reductions have generally been undertaken unilaterally (see Hoekman and Kostecki 2001, Chapter 12).

International trade was certainly an engine of growth. Whereas world real GDP grew by a factor of almost 7, international trade in goods and services grew by a factor of 22 from 1950 to 2000.[31]

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28 Brazil and Russia are often lumped with China and India as 'the BRICs', but there are a number of other economies, some such as Indonesia that are fairly large, and others much smaller, but which collectively are increasing their share of world output and trade.

29 The United States and the United Kingdom together held 52 per cent of the votes in the IMF and the World Bank at the inception of those institutions. The 'quad' of the United States, Japan, Europe and Canada constituted a 'core' group in the GATT. The G3, then G5, and then G7 of industrial countries was often the forum in which problems requiring international coordination were addressed.

30 Appreciation of the importance of coordination was enhanced by a number of events during the financial crisis, including issues regarding the supervision of banks, deposit insurance guarantees, bailouts for industrial firms and 'buy local' provisions in stimulus packages, to name just a few.

31 See IMF (1980, 2006) for the data.

Some of that increase was attributable to the fall in costs of transport and communications; some was attributable to growth in the international economy; but much was the result of trade liberalisation through the GATT/WTO, and surely growth of trade stimulated growth of real GDP as well as *vice versa*.

However, the increased importance of the emerging markets in the international economy implies that increased participation of those countries will be needed to enable the system to foster further integration of the global economy. Yet, to date, the emerging markets are still largely claiming their earlier place as developing countries without acknowledging their interest in the rapid and healthy growth of international trade in goods and services.[32] Achieving increased participation by the emerging markets and their support for multilateral decision-making processes has begun, but the challenge remains, and will even increase, as emerging markets sustain their rapid growth.

The open multilateral trading system is challenged in a number of other ways. The WTO's procedures, with a requirement of 'consensus' (the full membership make most decisions) is cumbersome, and has become more so as membership has enlarged. And, while the GATT/WTO has been successful in the removal of quantitative restrictions and reductions in tariffs on trade in manufactured goods, there has been little success to date in achieving comparable disciplines over agriculture, trade in services and capital flows. For the international economy as a whole, bringing agriculture, services and capital flows under WTO disciplines would do much to enable achievement of growth rates at or above those achieved in the past half century.

The final major challenge for the international trading system relates to the proliferation of preferential trading arrangements (PTAs). Those arrangements have, on some occasions, resulted in freer, welfare-improving trade for member countries. But they have also permitted the rise of protectionist pressures and reduced the support for multilateral trade. Finding ways to make PTAs more consistent with an open multilateral system is urgently needed.[33]

The functioning of the WTO is important. But however that issue is resolved, there will be the challenge associated with the increasing share of rapidly growing countries in world markets. The entry of newcomers always engenders protectionist pressures, as was seen *vis-à-vis* Japan in the 1980s. With the rapid ascent of India and even more of China, the temptation to resort to protectionist measures in the 'old' countries must be recognised. A well-functioning and legitimate WTO is the best bulwark against such pressure, but achieving it (or otherwise thwarting those pressures) will be difficult. Of course, completion of the Doha Round would be a major step forward, while failure to do so weakens the WTO at a time when its value to the international economy could be extremely high.[34]

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32 There is also a major lacuna in the international system when it comes to international capital flows. At present, there is no international agreement to prevent discriminatory treatment of these flows, and indeed some preferential trading agreements have contained clauses that could result in discrimination against third countries.

33 See Schott (2004).

34 Much of the discussion of the challenge of emerging markets has been framed in terms of 'voting rights' at the international institutions. The chief issue, of course, is that those members whose relative weight has diminished are reluctant, if not entirely unwilling, to surrender any of their shares. Although there has been some reallocation of shares toward emerging markets, allocation of shares at present fails to reflect economic realities. There is also confusion about the 'representation' of non-governmental organisations (NGOs) in international organisations. Presumably, NGO members have their voices within individual countries and are already represented. Their demand for a 'voice at the table' has confused a number of discussions.

Success has also resulted in bringing environmental issues to the fore. Obviously, the rapid growth of the world economy and the emergence of the BRICs have resulted in greater urgency than would have occurred had growth been slower. But no-one can defend the view that emerging markets' growth should be severely restrained because of environmental concerns. Finding a multilateral regime in which the 'public good' of the environment can be protected with an agreed-upon mechanism for allocating the burdens of reducing negative externalities, while simultaneously enabling the sustained growth of emerging markets and enabling other poor countries to develop more rapidly, is challenging, as witnessed by the Copenhagen outcome. There is also a danger that environmental concerns can motivate calls for protectionist measures if producers believe that they must compete with imports not subject to the same costs imposed by environmental protection in particular countries.

The other major challenge arises because a number of countries have as yet failed to adopt policy reforms that achieved rapid growth. By and large these considerations are centred on the low-income countries. At the extreme, there are the failed states which either have not undertaken reform or where the state itself is so weak that reforms cannot be implemented even if decision-makers attempt to adopt them. The challenge of failed states is huge: they have failed in part because the existing economic framework has led to stagnant or deteriorating standards of living, as can be seen in Table I. There has been civil war in some cases, but whether civil war resulted in deteriorating living standards or *vice versa* is an open question. The inability of key groups within those countries to agree has led to political conflict that has prevented meaningful changes in the framework.

But, in an important sense, the problems of failed states are the problems of low-income countries (and, to a lesser extent, other countries) writ large. The absence of strong institutions, such as the judiciary, discredits the law at the same time as it reduces the efficiency of the economy. Without an enforceable and meaningful commercial code, the scope for efficient organisation of production and exchange is greatly reduced. When the state cannot enforce the law because civil servants use their posts for immediate personal profit, the burden on the economic system can prevent any significant increase in output and even result in decline. Per capita incomes in many sub-Saharan African countries fell in the 20 years after independence. In some of them, civil war was the triggering factor, but in others, ill-advised economic policies and rapacious politicians and civil servants were among the chief culprits.

Addressing the issues surrounding low-income countries and bringing them into the international community of more successful countries is clearly desirable on humanitarian grounds. In addition, the fact that the failed states among them are believed to be major locations for terrorist activity makes the task urgent. To date, however, there have been few successes in reversing the declines. Research attempting to diagnose the problems has led to a focus on what is called the 'institutional framework' within which economic actions (both policies and response to incentives) are undertaken. The challenges of failed states, as well as those of countries where reform outcomes have fallen far short of desired (and believed to be realistic) outcomes are a major issue that must be addressed.

A final challenge lies in the political economy of economic policy formulation. Resistance to reforms and political pressures in support of special interests (agriculture, protection, etc) are

facts of life in all economies, especially in failed states. Indeed, there is some evidence that a crisis, bringing about the 'suspension of politics as usual', may be the best hope for achieving major policy reforms. One of the great improvements in the understanding of economic policy formulation in the past half century has been the increased understanding and awareness of political economy issues. It was earlier assumed that ignorance of good economics, such as the superiority of free trade and the efficiency of competitive markets, was the problem and could be addressed by better education. The role of interest groups, and their influence on policy-making, is an issue of concern, especially with respect to trade policy, but also in addressing almost all economic and financial issues.

More generally, one of the big improvements in the understanding of economic policies over the past 50 years has been to recognise and analyse the political pressures that arise and surround economic policy formulation, including economic policy reform. In many instances, potential winners from reforms are unaware that they might benefit, while many individuals believe that they are at risk of losing when in fact only a relatively small fraction of them will. But efforts to compensate potential losers fully have sufficiently negative incentive effects that it is difficult to formulate policies to reduce resistance to reforms. In addition, pressures for policy reforms typically arise when economic conditions are close to, or at, the crisis stage. At that point, the crisis generally mandates reductions in fiscal deficits, so that compensation is in any event infeasible.

In many poor countries, those most threatened by possible reforms are often not the very poor, but those in urban areas, and especially the capital, where demonstrations can put great pressure on politicians even if those participating represent a small fraction of the entire populace. Some observers have claimed that strong teachers' unions in some developing countries are one of the biggest obstacles to progress. Achieving a consensus as to the appropriate role for interest groups relative to other influences on public policy is a major challenge for the years ahead.

Fifty years ago, it was thought that per capita incomes in 'underdeveloped countries', as they were then called, could 'never' catch up with those in advanced countries (see Morawetz 1977). But some have. That South Korea could be transformed from the third-poorest country in Asia to an industrial country in the space of 35 years would have been regarded as wildly unrealistic. Had anyone been told that tariffs on manufactured goods would fall from an average level of 40–50 per cent in industrial countries to 3–4 per cent, while quantitative restrictions would disappear, they would have reacted with total scepticism. Indeed, in the early post-War years, it was assumed that the key economic challenge was to prevent the world from sinking back to another great depression.

Over the past 50 years, a great deal has been learned about poverty and the choice of effective policies for poverty reduction. The result has been progress beyond what most analysts believed was possible over the half century. If learning and implementation can be sustained at the same rate over the next half century, one can expect that the conference celebrating the 100th Anniversary of the Reserve Bank of Australia will look back on great progress in, if not total resolution of, the poverty problems of today, and enumerate a new set of issues that would then dominate the future policy agenda.

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