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<p><b>SIMON BRAND LESING</b> <b>SIMON BRAND LECTURE</b></p>
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*The Simon Brand Lecture was delivered on 18 September 2002 at the 40<sup>th</sup> Annual Conference of the Agricultural Economics Association of South Africa, held in Bloemfontein, South Africa. The theme of the Conference was "Rural Development and Competitiveness: Rethinking Strategies in a Global Economy".*

## **CAN LAGGING COUNTRIES CATCH UP?**

GE Schuh<sup>1</sup>

*I am honoured to be invited to deliver the Simon Brand Lecture at these Annual Meetings of South Africa's Agricultural Economics Association. I especially liked the theme your organizers chose for the Conference.*

*My congratulations on the 40<sup>th</sup> anniversary of the founding of the Association. I participated in the organization of the Brazilian Society of Agricultural Economics, and that too was about 40 years ago. You are a vital and vigorous profession – one that you can all be proud of.*

### **1. INTRODUCTION**

At its roots the question stated in the title of my paper may be one of the most fundamental questions the world currently faces. We are concerned about the poverty of the poor in an absolute sense, and we know that the number of people who are malnourished and hungry because they lack the means to acquire food is large, and continues to grow in an absolute sense. Equally as important, we know that on a global scale the gap between the rich and the poor continues to widen as the per capita incomes of the upper income groups continue to rise at a faster pace than the per capita incomes of the low-income groups.

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There is a hidden dimension to this picture, however, and one that is less well recognized. Both the absolute and relative poverty issues referred to above imply that we are failing to make efficient use of the world's resources. That failure is implicit in the differences in productivity the differences in per capita income reflect. The key to alleviating poverty on a global scale is to raise the productivity of the poor and disadvantaged, for that poverty is truly a reflection of low productivity among the world's still growing masses.

In my remarks today I will paint with a broad brush and with long strokes, largely because neither economic development nor the alleviation of poverty is any longer a local issue. Similarly, it is no longer something that can be approached with a narrow perspective, despite the efforts of development practitioners to do so. The approach I take will eventually touch upon every one of the sub-themes the organizers of this Conference chose for your program.

My remarks are divided into four parts. In the first part I will discuss economic integration as an important means for lagging countries to close the gap between themselves and the more advanced countries. Second, I will discuss rural development and the contributions it has to make in closing the gap. Third, I will discuss the importance of investments in human capital. Finally, I will address the importance of institutional innovation and development - both domestically and internationally. At the end I will have some concluding comments.

To anticipate my conclusions, there is much that the so-called lagging countries can do to close the gap with countries that have much higher levels of per capita incomes. The policy measures required to do so, however, do not in general constitute the conventional policies of today's developing countries. Moreover, there is much the better-developed countries could do to assist the lagging countries, and it would be in their best interests to do so. In that case also, however, it is not conventional policies that will bring success. From my perspective we obviously need to be thinking differently about the world in which we live if the lagging countries are to catch up.

## **2. ECONOMIC INTEGRATION**

Economic integration with other countries is important for a number of reasons. The integration I refer to takes the form primarily of international trade, international financial flows, and cultural exchanges. My remarks focus mainly on international trade and financial flows.

I am struck that most of the analyses of the benefits of international trade and trade liberalization have focused on the static benefits – the gains from analysing the welfare triangles. Those benefits tend to be relatively small. The dynamic benefits from trade liberalization are seldom recognized, and they tend to be large – especially if evaluated in a general equilibrium framework. I will concentrate on the dynamic effects of trade and trade liberalization.

The first reason economic integration is important in helping lagging countries to catch up is because it enables individual countries to realize the benefits from the technological breakthroughs that are driving the worldwide process of globalisation. Those technological breakthroughs, which have occurred in the transportation, communication, and information technology sectors, have dramatically reduced transactions costs among economic agents around the world. That, in turn, has substantially increased the scope of markets.

This reduction in transaction costs increases the benefits from international trade. These benefits are reflected in lower prices for consumers (including private firms), and tend to be widely diffused in the economy. They also tend to be reflected in increased employment opportunities, although the employment benefits tend not to be as widely dispersed in the economy, and may be offset at least in part with employment losses in other sectors.

A second reason economic integration is important in helping lagging countries to catch up is that it enables those countries to realize the benefits of the division of labour and specialization that is associated with international trade. Here I refer not to the division of labour and specialization among members of the labour force, made famous by Adam Smith over 200 years ago, but rather to the sectoral division of labour and specialization articulated by Allyn Young back in 1930. Sectoral specialization occurs, for example, when parts of a product that were once produced integrally as part of that final product are spun off to be produced in a separate sector. The efficiency gains from such specialization will often contribute to other sectors of the economy, thus being a powerful source of economic growth and development.

Recall that Adam Smith realized that the division of labour and specialization among members of the labour force was limited by the extent of the market, with the extent of the market interpreted as the size of the economy. That proposition in effect implied that small economies were doomed to have

limits to their economic growth. In fact, the growth in per capita incomes in the United States was for a long time explained by the size of its economy.

With Allyn Young's sectoral division of labour and specialization, however, there is no such limitation on economic growth as long as a country is willing to specialize. Specialization is not without its costs, of course, but the fact that it opens opportunities for growth and thus eases the constraints on growth for small countries is an enormously uplifting idea. It means that small countries can have hope that they can catch up in per capita incomes with the large countries such as the United States and the European Union, and eventually with India and China – the economic behemoths of the future. The Newly Industrialized Countries (the NICs) of Southeast Asia provide the evidence for this proposition.

There is a third set of benefits from international trade which in effect come as a package. When international trade is opened up because of the liberalization of past protectionist policies, the competition that comes from abroad leads to a drive for efficiency in both the static and dynamic senses. Protected sectors that in the past had little incentive to be efficient in their production practices suddenly find themselves driven to reduce their costs as the means to survive.

Two induced effects usually follow. First, the pressures for increased efficiency provide strong incentives for those firms using obsolete production practices to adopt new production technology – often from abroad. Second, the increased efficiency also provides incentives for increased capital flows into the sector, also often from abroad. In fact, the increased capital flows from abroad often are the means by which new technology is introduced into the local economy.

Finally, economic integration is important because it is such a powerful force for peace. We don't have to look far to see the evidence to support this proposition. The countries of Europe, for example, had fought wars with each other for hundreds of years. Since the creation of the European Economic Community at the end of World War II, however, there has not been a single war among the countries of that economic bloc. We can also look to the Orient for another example. In that case, the nascent economic integration between China and Taiwan appears to be an important reason those two countries haven't gone to war, despite continuing tensions.

Peace among nations can contribute importantly to closing the gap between the developing and less-developed countries. Peace makes it possible to shift resources from fighting wars to investments that promote economic

development. It also makes it possible for international trade to flourish and thus to realize the substantial benefits from specialization. Finally, it creates a less risky and more stable investment climate so savings from both domestic and foreign sources will flow into the lower income developing countries.

### 3. RURAL DEVELOPMENT

Perhaps one of the more significant failures of modern economic history and policy has been the tendency of nation states to neglect their agricultural and rural sectors as they have promoted economic growth and development. As one of my mentors, Professor D Gale Johnson, has often noted, policy makers almost universally tend to under-invest in the education of their agricultural and rural populations, in the physical infrastructure for rural areas, and in agricultural research.

The result of that neglect can be far reaching. For example, it causes the per capita income of the rural population to lag behind the per capita incomes of the urban population, and by substantial margins. That is an important equity issue in almost all societies. However, the equity issue is only part of the larger rural *problematique*. The under-investment in the rural population that these income gaps represent suggests a large wastage of resources in most countries, for the income gap represents lost opportunities for increased productivity that could fuel higher rates of income growth. Sadly, the lower the per capita income of a country the larger the share of its resources that tend to be in the rural sector and the larger the sacrificed income potential. Raising the productivity of the resources in this sector is key to helping these countries catch up to the more advanced countries in overall per capita incomes.

Agriculture has a number of unique features that create special problems for it and its population as the sector is modernized. These special characteristics and problems complicate the rural development challenge.

The first complication is that Engel's Law makes it almost inevitable that labour has to be drained from the agricultural sector as modernization takes place. This is complicated by the fact that natural population growth rates tend to be higher among the rural population than among the rural population.

The second complication is that to obtain alternative employment the population that needs to leave agricultural employment usually needs to migrate geographically. That in itself is a burden on the potential migrant, for

it usually means that they have to leave family and loved ones and go to strange new environments. But of perhaps even more importance, what we know about geographic migration is that it tends to be highly selective. It is the young, the vital, the more well-educated, the healthier, and the more entrepreneurial that leave for employment in distant regions. In effect, out migration drains the human capital from agriculture and from rural areas and gives it to the more well-developed, higher income urban areas as a gift. Note that an important share of the costs of producing that human capital has been borne by low-income families.

In effect, out migration imposes negative externalities on the rural sector by draining out the human capital, leaving very little potential for the further development of the sector. But that is not the end of the story. The out migrants tend to pile up in urban centres, where they create congestion, pollution, and rising costs for the provision of public good and services. It is difficult to imagine a more counter-productive development process than what has just been described, and yet it is the policy that has been pursued almost universally around the world. Moreover, the advanced countries tend to provide large subsidies, implicit and/or explicit, to further promote such counter-productive processes.

For lagging countries that want to catch up with the more advanced countries this is an opportunity to gain an edge. They can begin by redressing the discriminatory policies referred to by Gale Johnson. Rural populations should receive the same educational and training opportunities received by the urban population. Investments in rural infrastructure should also be comparable to such investments in urban areas. And investments in agricultural research should be moved closer to their social optimal. I will address this latter issue in the next section.

More generally, the subsidies that induce economic development to accumulate in urban centres should be stopped or at least turned back. Whatever economies to agglomeration there are will still be there in the absence of the subsidies. Moreover, they usually do not require subsidies to assure that they occur.

The net result of the above policies will be a more decentralized economy. More importantly, there will be a more efficient allocation of the nation's resources, and a broad-based growth in productivity, in contrast to the economic wastage that is associated with just letting the market forces work themselves out.

Finally, South Africa has a special problem in addressing its rural development problems. An important part of the poverty problem in rural South Africa has a strong racial dimension to it. Again, the poverty of the Blacks is associated with the low productivity of those population groups. Making the investments to raise the productivity of those population groups will do a lot to reduce their poverty.

Gary Becker's analysis of racial discrimination is helpful in thinking about this problem. He shows that racial discrimination results in inefficient resource use. Thus, we are faced again with a situation in which making the appropriate investments have multiple effects. Investing in the education and health of the rural population will raise the productivity of the sector. However, raising the productivity of these populations will also increase overall resource efficiency, and in turn the productivity of the sector. These are very important productivity gains, and will do much to close the gap between the upper and lower income groups, and thus to close the productivity gap between the lagging and advanced countries.

#### **4. INVESTING IN HUMAN CAPITAL**

The dimensions of human capital are by now well known, as is the importance of investing in human capital as the basis of economic growth. However, it seems worth emphasizing at least three dimensions of this form of capital as we address the issue of whether the lagging countries can catch up to the more advanced. The first of these is agricultural research. The second is the complementarity among the various forms of human capital. The third is the devastating losses in human capital being experienced as a consequence of AIDS. Let me make a few brief remarks about each.

Agricultural research is a high-payoff investment in almost every case in which it has been evaluated. Moreover, it isn't just marginally higher rates of return that result, but rates that go as high as 80 to 100%. But there are other important features of this form of human capital as well. For example, new production technology for the food staples causes the prices of these commodities to decline, thus distributing the benefits of such technology widely in the society. The significance of agriculture in the development process is that everybody consumes food. Thus, technological progress in this sector results in widely distributed benefits (Schuh, 2001).

In addition, poor people benefit in a relative sense from technological progress in the food staples, since they spend a larger share of their budget on food than do middle and upper income groups. It is difficult to find a sector of



the economy in which the production of new technology for the sector will have more widely distributed benefits, with the benefits distributed in favour of the poor. It is difficult to understand why policy makers do not make larger investments in these high payoff activities, especially in light of their favourable income distribution consequences.

An additional benefit of agricultural research is that it helps raise the productivity of resources on a massive scale in the developing countries. Those countries are characterized by massive low productivity among their rural populations. The new production technology that results from investments in agricultural research helps to alleviate that massive low productivity.

New production technology for the trade sectors of agriculture plays still another important role in the development process. It makes the agricultural sector more competitive in the international economy, thus earning more foreign exchange and helping to service foreign debt and to finance a higher rate of economic growth. These benefits will also tend to be distributed rather widely in society, and to the extent the export crops tend to be labour-intensive, there will also be a progressive dimension to the distribution of income that results.

Finally, agricultural research has two additional implications for international trade. First, the modernization of the food staple sector can play an important role in making the nation as a whole more competitive in international trade. Food is a wage good. If the price of food products can be lowered by investing in agricultural research, the nominal wage rate and thus the cost of labour can be kept at competitive levels while the real wage continues to increase.

The second trade implication of agricultural research is that it is the means by which a nation's comparative advantage can be changed. This is another significantly uplifting idea, for in the past development economists have tended to think that countries were stuck with their endowment of physical resources and could do nothing about it. The ability to influence the comparative advantage of a nation significantly increases its potential for closing the gap with the developed countries.

The second dimension of the human capital issue is the complementarity that exists among the various forms of human capital. The connection is a familiar one, but one that is seldom recognized by policy makers. We know, for example, that improved nutrition leads to improved health, and that improved health improves the ability to absorb cognitive skills, and that

cognitive skills are necessary if farmers and rural workers are to decode and adopt the new technology produced by agricultural research. The connections and the complementarity are impressive. Certainly, countries trying to catch up can and should take advantage of such complementarities. Few do, however.

Third, there is the issue of AIDS. The large number of deaths associated with AIDS constitutes an enormous loss of human capital. I sometimes wonder if policy makers and political leaders appreciate the devastating losses of human capital associated with this disease. I keep thinking that if something were to wipe out a similar volume of physical capital we would all be scrambling to find the means to reduce these losses. At a minimum we agricultural economists should be estimating the value in terms of the stock of human capital represented by these losses.

## **5. INSTITUTIONAL INNOVATION AND STRENGTHENING**

Institutional arrangements are an important form of human capital. Moreover, they may ultimately be the most important form of human capital, for they tend to be pervasive, and their effects to be even more pervasive. After all, economic policy tends to be imbedded in institutional arrangements. Moreover, my colleague Professor Vernon Ruttan draws the analogy between new production technology as the output of the biological and natural scientists and institutional arrangements as the output of the social scientists.

Ruttan has also developed the concept of induced institutional change, which stresses the significance of institutional arrangements that change with changing economic conditions. North preceded Ruttan in stressing the importance of institutional arrangements that adapted to and responded to changing political, economic, and social arrangements. Ruttan developed a theory to explain how the institutional arrangements would change under changing economic and technological conditions.

The failure to design and develop appropriate institutional arrangements may be one of the most important factors in keeping lagging countries from catching up to the advanced countries. The list is long: vigorous agricultural research systems, vital educational institutions, modern health facilities to serve the rural sector, labour market institutions that facilitate the adjustment of labour from one sector to another, and efficient trade and exchange rate policies that create trade opportunities for agricultural producers.

These domestic institutional arrangements are critical elements if the lagging countries are to catch up with the more advanced countries. However, there is

another set of institutional arrangements that may be even more important, and that set includes the arrangements that govern the arrangements in the international arena. If international trade and commerce are to grow, public goods are needed to make it possible to have efficient and equitable markets. The problem, however, is that public goods tend to be provided by governments at all levels, but at the international level there is still no formal government.

Kindleberger suggests that classically two ways have been used to provide the public goods for the international economy under these circumstances. The first is that the hegemonic power provides them, as Great Britain did for over a hundred years, and as the United States has done in the monetary and other areas since the end of World War II. The second is for groups of countries to agree on a set of rules they can mutually abide by. Since the end of World War II the world has done a reasonable job of creating such multiple-country institutional arrangements. For example, the European Economic Community was created as a group of six countries, evolved to include 12 countries, and eventually became the European Union with a complete integration of their respective economies and agreement on a single currency to help further unify their economies.

Another example is the General Agreement on Trade and Tariffs (the GATT), which started as an agreement among the then industrialized countries to lower tariffs on manufactured products, but which eventually evolved to include a much larger number of countries, and a much larger trade agenda, including agricultural commodities. Eventually, the GATT evolved into the World Trade Organization (the WTO), with a much more effective negotiating structure and potentially the ability to resolve a much larger set of issues.

What is remarkable about both the EEC/EU and the GATT/WTO is that they made important contributions without having a military to enforce any of their decisions. The cooperation in each case has been voluntary, based on decisions mutually reached. This provides optimism that collectively the nations of the world can come together to provide the public goods we need to have an orderly process of economic growth and development.

## **6. CONCLUDING COMMENTS**

As noted early in my remarks, I am optimistic that the lagging countries can close the gap with the now advanced countries. However, it should be clear at this point that the development agenda I propose is not the conventional agenda. To the contrary, it is a rather unconventional one – one that includes increased reliance on international specialization and division of labour, on

the development of the rural sector, on substantially increased investments in human capital, and on significantly greater efforts to design new institutional arrangements and to strengthen old ones.

It is in this context that I would like to make a few remarks about NEPAD – the New Partnership for Africa’s Development. This is an exciting attempt at breaking new ground in policy reform with a new institutional arrangement. The goal is to create the conditions under which the countries of Africa can cooperate with each other. This is a significant step in moving ahead. It recognizes one of the primary lessons we should have learned from past development experience – that the bulk of resources to promote economic development must come from domestic sources. From that perspective, pooling domestic resources and cooperating locally can contribute to a more rapid process of economic development. My concern in moving ahead is the design of the institutional mechanisms that will be used to bring about this cooperation. My fear is that the devil will be in the details.

There is an important corollary to this proposition, however. The United States and other developed countries can also contribute to the development efforts of the developing countries by means of economic cooperation. One form of such cooperation would be to stop dumping our agricultural surpluses in international markets. Another form would be to open our markets to imports of shoes, textiles, and agricultural products from the developing countries.

Finally, there is much the developed countries could do by collaborating in research, education, health, and other forms of human capital. This collaboration or cooperation should replace the foreign aid programs of the past, with their demeaning features for both the donors and the recipients. It will provide the basis for a sustainable development process among both the advanced and developing countries.

Such collaboration and cooperation requires efforts on both sides of the relationship. We should get on with defining and developing the new international relationships that will define our world of the future, while at the same time addressing the domestic policy challenges each of our respective countries face.