EVALUATION CRITERIA OF COMPETITIVENESS OF NATIONS

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I shall divide my speech into five sections. First, I will give a brief historical view of the concept of comparative advantage. Secondly, I shall discuss the evaluation criterion of comparative competitive advantage of nations by focusing on the concepts of static comparative advantage and dynamic comparative advantage. Thirdly, I will discuss the determinants of competitiveness of a nation. Fourthly, I will focus on the Sri Lankan post-1977 experience of industrialization and highlight the major impediments to achieving competitiveness in the country. Finally, I will provide a summary of the paper.

1. The Evolution of the Concept of Comparative Advantage

The law of comparative advantage is generally ascribed to Ricardo. His formulation is cast in terms of the classical trade model in which two countries produce two types of products using a sole productive factor: labour. It holds that specialization between two countries in the production of the two commodities should take place on the basis of relative rather than absolute labour productivity. The hypothetical "assigning" of Portugal to the production of wine, and England to the production of clothes, serves as a vivid example of the general principle. The classical formulation supports the proposition that under such circumstances an international division of labour takes place, even if one country is more efficient than the other in every line of production. The normative implications of this reasoning are usually expressed as a gains-from-trade argument: if each country specializes in the production and export of that product in which it enjoys comparative advantage, world output of all products will increase. And the "assigning" of countries to products, on the basis of relative labour productivity, is considered optimal under the classical assumptions.

The original formulation stated that homogeneous labour was the only factor of production and the **products' prices** were determined by their labour content. Objections to such oversimplification subsequently led to a reformulation of the law, based on the concept of opportunity costs.[1] This version, which has found more general acceptance, permits determination of the optimal pattern of international specialization, independent of specific aspects of the underlying **production theory.**

Neoclassical economists usually state the law of comparative advantage in terms of autarkic relative prices. By comparing such prices in two countries, the pattern of trade can be predicted. Each country will export that product which is relatively cheaper in aurtarky and import that which is relatively more expensive. To the extent that relative prices reflect opportunity costs, this version parallels the one described above. But what are the factors that determine the above-mentioned price differences? Is it only the opportunity cost of labour? No. One answer is offered by the Heckscher-Ohlin theory of **factor-proportions theory of international trade** the central proposition which is that the interaction between the factor intensity of products and the factor endowments of countries determines trade flows.

The model on which this theory was originally cast, and which has yielded sound, deterministic results, is based on two countries, two products and two factors of production (say, labour and capital). It can be shown that – subject to a number of standard assumptions – each country exports that product which makes intensive use of whatever production factor it has a relative abundance of and imports the other.[2] By virtue of this theory, the problem of identifying the determinants of the pattern of international trade is shifted from the realm of (unobservable) autarkic prices to that of certain (observable) characteristics of the products' production mechanisms and the countries' resource endowments.

Extension of this formulation beyond the confines of the two-countries-two products model has proved remarkably difficult. For example, in the case of a model composed of more products than factors, a proposition of the Heckscher-Ohlin type cannot be upheld.[3] "Weak links in the chain of comparative advantage" are reported to have ben detected in a model based on two factors and many products.[4] These and similar findings indicate that the systematic relationship between country factor endowment, product factor intensity and the pattern of trade breaks down as soon as the simple framework of two countries, two factors, and two products is extended.

Two weak versions of the factor-proportions theory are available in the literature of international economics.[5] Because of the assumptions involved and complexity of these versions, their appeal in explaining the structure of international trade is reduced. Even today, a totally accurate theory that can explain international trade fully is not available. Thus, the general validity of the factor-proportions' theory can be upheld at the expense of a diminution of the corresponding proposition. It represents, in the first instance, a universally applicable conceptual framework for interpreting patterns of international specialization. The principle that relative than absolute efficiency largely determines international comparative advantage is logically incontestable and enjoys em-

pirical support as well. This element of logic is a strong argument for using the pattern of comparative advantage as a natural source of guideline for rational policy making. Policy-makers would be ill advised to ignore the fundamental principle, even if its validity in the real world– i.e. a world of many countries, factor and products – is not as readily apparent as it is when applied to a model world in which two countries manufacture two products, using two factors.

Let me put the factor-proportions theory in a different from, i.e. a country enjoys comparative advantage in those goods that make intensive use of its more abundant factors of production. For example, in a situation where two countries use two factors (e.g. labour and capital) to produce two products, it holds that the capital abundant country would export (import) the capital-intensive (labour-intensive) product, while the labour abundant country would export (import) the labour-intensive (capital-intensive) one.

In the empirical application of this theory, however, difficulties arise which contrast sharply with the smoothness of the original hypothesis. Leontief's paradoxical finding that the ratio of capital to labour in USA exports in 1947 was lower than the corresponding ratio for competing imports has stimulated theoretical and empirical research for over three decades. The various explanations suggested for the finding have touched on the omission of essential variables such as natural resources, the possibility of factor intensity reversals, and the neglect of human capital and technology. Research undertaken as a part of the tests has raised issues that are of interest in themselves, in particular, the role of human capital and technology (in addition to labour and physical capital) as determinants of comparative advantage. Let us now focus on other important determinants of comparative advantage.

2. Evaluation Criteria of Comparative Competitive Advantage

2.1 Determinants of Static Comparative Advantage

How does one measure the static comparative advantage of nations? Because of the hypothetical relationship between trade performance and comparative advantage, a form of 'revealed comparative advantage' (RCA) appear to be most suitable.[6] RCA is defined as "normalized" net exports of a country. Normalization of net export of a given product by a given country refers to normalization with respect to both the value of country's total trade in manufactures and the weight of the product in world trade in manufactures.

i.e. $RCAij = \{Xij - Mij\}/\{Tmj(Tmw)\}$

when X = exports; M = imports; i = products; j= country; m = total manufactures, defined in a broad sense as industrially processed goods and intermediates; w = world; T = (X+M)/2.

In order to assess the impact of resources on static comparative advantage in manufacturing goods, the traditional factors – labour and capital – must first be considered. Also, as mentioned, factor inputs which derive from human or technological resources have also come to be regarded as important co-determinants of comparative advantage. Observations on the association between static comparative advantage and the level of economic development can be expressed more precisely in terms of relationships between RCA and production factor endowments.

A country's production endowment in physical capital is measured in terms of capital per labour. Likewise there are many ways and means of measuring skill and technological endowments (discussed briefly in section 3). Various methods can be employed to relate the distribution of resources among countries to the pattern of static comparative advantage. The best one will involve a regorous econometric analysis carried out on the basis of an appropriately specified model of the determination of comparative advantage. One encounters various data and econometric problems when conducting such an exercise. Thus most often descriptive statistical methods are used. In such instances, the method is called the 'factor orientation of RCA' because it indicates in a geometrically inspired heuristic way the association between resources and trade patterns. Besides, the procedure by which factor orientation indices are derived is related to the more general formulations of factor-proportions theory. Factory orientation may be understood to be a descriptive statistic in the form of a correlation between RCA and factor endowment (physical capital, skills, and technology). These indices give some indication of the relationship between factor abundance and comparative advantage for product groups under study. The studies suggest, that, on average human skills and technology may be more important determinants of comparative advantage than physical capital.

A modified version of the factor-proportions theory has therefore been put forward, i.e. the neo-factor proportion view of international trade. In this case, human skills and technology together with capital are treated as one aggregate. In order to assess countries' relative endowments, this broad resource is compared with labour. In summary, the results of such an analysis may be taken as empirical evidence of the important role of factor intensity and factor endowments play in explaining the structure of static comparative advantage.

2.2 Dynamic Comparative Advantage and Competitiveness

The above analysis inevitably lead to questions concerning; (1) changes over time in trade patterns, (2) changes in resource distribution, and (3) the relationship between (1) and (2). Given the lack of genuinely dynamic trade theory, empirical work on changes over time in trade patterns is usually based on intuitively stated, rather than rigorously derived, hypotheses. The approach often found in literature uses the static commodity composition of trade as the reference pattern to gauge anticipated changes in comparative advantage on the basis of changes in countries' factor endowment. As a result, the changing composition of a country's trade in manufactured goods is taken to reflect the country's movement through **successive stages of comparative advantage** in the course of its economic development? Other approaches –

based on, for example, the **technological gap therory**[8] or the **product cycle model**[9] of international trade – emphasize more the intrinsically dynamic characteristics of trade patterns. The technology gap theory emphasizes the importance of technological innovation as a driving force behind changes in comparative advantage. The product cycle relates those changes to the sequence of phases in industries' life cycles.

A basic empirical question is whether the various measures and indicators described in section 2.1 to characterize static situations can be usefully employed to describe changes in comparative advantage. As far as the overall factor orientation of RCA is concerned, the answer is positive.[10] The RCA index permits comparison of the general resource bias of an industry's comparative advantage over different periods of time. Empirical assessment of changes in the factor orientation of RCA thus poses no serious technical problems (although the interpretation of those changes is not quite so straightforward).

Changes of factor orientation of RCA are normally the result of several dynamic processes. What must be examined in this context is the way in which the different components of the change over time of RCA's factor orientation (physical capital, skill, and advantage. Taking as a starting point, the simple case for stable resource distribution across countries, changes in a given product's overall factor orientation of RCA could be interpreted in the spirit of product-cycle dynamics in trade patterns. If, for example, the human skill factor is singled out for consideration, the product's transition from the "new" to the "maturing" phase and further, to the "standardize" phase, [11] is likely to be accompanied by a decrease in the skill orientation indes. [12] According to the product cycle model of international trade, this should be the case, because the successive stages in a product's life cycle are characterized by – among other features – a decrease in skill intensity and thus a shift of comparative advantage to the countries that are less abundant in skills. Such commodity-specific dynamic processes help to explain pure forms of change in factor orientation association with invariant distribution of resource supplies.

A second component of the dynamics of factor orientation is associated with the concept of stages of comparative advantage in the course of a country's economic development. This concept simply expresses the idea that the commodity structure of a country's comparative advantage alters over time – the result of accumulation of material capital, the formation of human capital, and increased technological sophistication and related processes. Accordingly, as time passes, a country may be expected to increase its comparative advantage in more capital-intensive, more skill-intensive and technoligically more sophisticated goods. This demonstrates that stages of comparative advantage – although they normally apply to an individual country's trade pattern – are indirectly reflected by changes in the industry specific factor orientation of RCA.

Table 1

Total Factor Orientation of RCA, by Industry, 1963, 1971 and 1980

		Total Capital Orientation		
SITC	*Industry*	*1963*	*1971*	*1980*
633	Cork manufactures	– 0.199 (81)	–0.182 (75)	–0.176 (71)
641	Paper and paperboard	0.362 (26)	0.363 (33)	0.365 (23)
642	Articles of pulp. paper or paperboard	0.394 (21)	0.317 (38)	0.068 (50)
651	Textile yarn and thread	0.194 (55)	–0.067 (68)	–0.173 (72)
652	Cotton fabrics. woven	–0.122 (77)	–0.408 (88)	–0.406 (35)
653	Textile fabrics, woven, other than cotton	–0.101 (75)	–0.120 (73)	–0.109 (69)
654	Tulle, lace. embroidery, ribbons, etc.	0.105 (62)	0.202 (49)	0.073 (49)
655	Special textile fabrics and related products	0.125 (59)	0.138 (54)	0.034 (54)

Table 1 gives an impression of the dynamics of international comparative advantage in industry. They show all over the past two decades shifts in comparative advantage among countries were registered in number of industries. In order to understand the nature of these shifts. however, it is first necessary to ascertain to what extent empirical facts align with hypothetical expectations. Through interpretation of past changes in the structure of international comparative advantage, some idea of future developments can be gained.

One can look at the dynamic features of patterns of comparative advantage from a country perspective also employing the concept of overall factor orientation of RCA on a coutnry rather than an industry basis. The difference between the index value for the beginning and the end of the period is a measure of the overall change in the factor orientation of each country's manufactured exports. On the average, for the 41 countries given in Table 2, this change was slightly negative (an unweighted mean in differences is about -0.019). The most pronounced downturns were recorded by Tunisia, Hong Kong, Portugal and Pakistan, while marked upturns were recorded by Japan, Ireland, Israel, and Spain[13]. For a number of developing countries, therefore, the composition of exports have clearly altered in favour of industries in which economics that are modestly endowed with capital usually have a comparative advantage.

It is obvious by now that dynamic comparative advantage comes about with the positive changes in overall factor endowments: physical capital, skills, and technology. These changes in factor endowments are the main determinants of **competitiveness** of a nation.

Thus dynamic comparative advantage is equivalent to **comparative competitive advantage**. So the comparative competitive advantage of a nation could be best measure din a dynamic framework by the behaviour of the RCA index in two points in time. One can see it country-wise for various products. The example of Argentina is given in Table 3. For a particular product the change in RCA can be compared with that of a another country to give a judgement of

the current status in regard to comparative competitive advantage.

The law of comparative advantage implies that in a trading world no country can expect to be internationally competitive in every industry or product, group, and gaining of comparative advantage in a given industry by one country or country group is usually accompanied by a loss of competitive strength in that industry by another country or group. Here it is the sequence of industries or industrial interest to industrialists. Thus an analysis of the overall international setup using tables of the kind 1, 2, and 3 is required to give a more accurate judgement on competitiveness.

Table 2
Total/Factor Irientation of country exports, 1963 and 1980

Country or area	Total capital orientation of exports 1963	1980	Change in total-capital orientation of exports Total change
Hong Kong	–0.086 (41)	–0.235 (30)	–0.149
Ireland	0.022 (31)	0.102 (20)	0.080
Japan	0.167 (12)	0.258 (4)	0.091
Pakistan	–0.061 (39)	–0.179 (40)	–0.118
Portugal	0.051 (22)	–0.079 (35)	–0.130
Spain	0.073 (20)	0.143 (16)	0.070
Tunisia	0.043 (23)	–0.114 (39)	–0.157

Source: UN Data Base
Total Capital orientatin is defined as physical capital, skilled technology per labour = Total (Overall) factor orientation.

3. The Determinants of Competitiveness

Advocates of a wider role for the law of comparative advantage in economic policy-making usually refers to trade liberalization as the main tool of creating international competitiveness. Can the free play of market forces that comes about with trade liberalization automatically invigorate the static comparative advanatge of a nation? The answer is clear – no. This is because there are widespread market imperfections in the factor, product, and technology markets. Thus shaping comparative advantage (via an industrial strategy) through modifying the operation of market forces according to the comparative cost law is required. Only then can comptetitive comparative advantage be achieved. The state has the potential to influence, directly or indirectly, international competitiveness in certain industries. A rationale for the corresponding economic policies can be found in the observations on the world trade which suggests that comparative advantage is malleable, to a certain degree. Theoretical results can also be presented, however, which expressly allow for "arbitrariness" of comparative advantage.[14] According to the general version of factor-proportions theory, trade patterns reflect the interaction between country factor endowments and product factor intensity only in approximate terms. Thus, a country's comparative advantage in a certain industry is not unequivocally determined by its relative resource endowments, but hinges on a number of other factors. Among such factors, those associated with government policies usually have a considerable impact on the structure of international competitiveness. Theoretical support for the view that "comparative advantage is made, not given"[15] (at least to some extent) reinforces policy aspirations for shaping it.

Recent research on industrialization has shown that successful industrialization at a national level is the outcome of interplay between incentives and supply-related factors.[16] This theory recognizes that there can be widespread market failures on the supply-side, i.e. factor, product and technology market, so that, in addition to 'correct' price incentives, selective intervention is required to rectify these failures. Accordingly, it is through such a strategy that dynamic comparative advantage can be achieved for successful international competition. Supply side factors consist of capabilities and institutions. Capabilities broadly comprise the entire complex of human skills: technological, entrepreneurial, and managerial, while institutions may be defined as bodies setup to overcome specific market failures in the development of industrial capabilities. Let me elaborate upon this view further.

Incentive mean 'getting prices right' by exchange rate, tariff, and subsidy manipulations so as to maintain internati onal competitiveness. Price signals and

Table 3
ARGENTINA

SITC	Product Group	Product. Composition of Exports (Percentage Share) 1970-1972	1981-1983	Product Composition of Imports (Percentage Shares) 1970-1972	1981-1983	Revealed. Comparative Advatage (Index) 1970-1972	1981-1983
011-013	Meat and Meat Preparations	46.17	17.53	0.00	0.22	12.12	9.72
022-024	Dairy Products	1.33	0.96	0.18	0.21	0.88	0.63
032	Fish Preparation	0.02	0.03	0.01	0.07	0.00	0.23
0422	Rice, Glazed or Polished	0.40	0.29	...	...	...	1.20
046	Meal and Flour of Wheat or Meslin	0.73	0.14	0.00	0.00	6.65	1.39
048	Cereal Preparation and Starch	0.36	0.24	0.00	0.07	1.09	0.51
052	Dried Fruit	0.36	0.23	0.03	0.02	2.90	2.48
053	Fruit, Preserved and Fruit Preparations	1.03	1.09	0.14	0.13	1.76	2.39
055	Vegetables,Roots and tubers, preserved or prepared	0.48	0.43	0.01	0.10	1.27	1.14

Source: UN Data Base

competition are very important inducement to healthy industrial growth. However, it must be noted that incentives are a necessary but not a sufficient condition for industrial development. "Correct" incentives may, moreover, well deviate from prices thrown up by free markets, and incentives by themselves may not produce the supply side factors needed for competition. Competition at the country level is determined by the interaction between incentives, capabilities, and institutions. Appropriate industrial policies are those that take into account of potential market failures in each set of factors and in their interaction.

It is vital to note that this is the approach adopted explicitly or implicitly in explaining differences in industrial performance, productivity growth, and competitiveness in the advanced industrial countries.[17] Since incentive structures differ relatively little among OECD countries, and all are export-oriented, open market economies, persistent difference in competitiveness are explained with reference to "supply side" factors related to capabilities and institutions. Particular note should be taken to work by Nelson and Winter (1982) and the recent commission headed, among others, by Solow (Dertouzos et al., 1989), which traces the decline in U. S. competitiveness to such factors. Until recently developing countries ignored supply-side considerations in favour of incentive factors when assessing industrial policies.The presence of dynamic learning sequences, externalities, and underdeveloped skills and support systems in developing countries lead to many market failures. Also supply-side factors differ much more among developing countries than among developed countries. Thus it is relevant to look at not only incentives but also these supply-side factors, in particular, capabilities and institutions.

The most important aspects of **capabilities** are human capital and technological effort. Let me first consider human capital. The standard measures of human capital are: (1) number of students in engineering as a percentage of population, and (2) number of students enrolled in vocational training as a percentage of the population. Higher level of education, from secondary schooling to vocational training and university level technical/managerial education, become progressively imnportant as the technical complexity of industry rises. Needless to say, the quality of training and its **content** are as important as its quantity. Star industrial competitors, the East Asia NICs have generally higher human capital base than other developing countries. The state in these countries have intervened selectively to develop the base suitable for maintaining competitiveness.

What is technological effort? Trained labour becomes productive in industry only when it is combined with technological effort and learning to master and improve on imported technologies. The ideal **measure** of indegenous technological efforts would include information on a wide variety of technical, engineering, production, design and experimental work. Unfortunately, no data exist on such effort: the only variable measures available relate to formal R & D (Research and Development) expenditures, which is a small, if significant, part of the total. Formal R & D is important for industrial efficiency and competitiveness at higher levels of industrialization, even for countries relying on imports for basic innovation. However, for measuring technological efforts, the R & D in productive sector and financed by productive enterprises are more relevant. For example, South Korea has industry financed R & D ratios over three times that of Taiwan, 19 times that of Brazil or India, and nearly 50 times that of Thailand.[18] The rigours of international competition do seem to call forth greater technological efforts by South Korea. State has also intervened in the R & D process itself by providing tax incentives, institutional support, funding and direct guidance.

International technology market is subject to a spectrum of failures caused by asymmetric information, opportunism, missing markets and so on, and in competitive nations the government have adopted a variety of measures to overcome such failures and help national enterprises to purchase technology in fair terms. Both Korea and Taiwan have extensive promotion programmes for industrial R & D. The state in these countries have intervened selectively by investing in specific technologies, setting up research establishments in chosen activities, sponsoring particular research projects, and so on.

Now I come to **Institutions.** Here I refer to bodies setup to overcome specific market failures in the development of industrial capabilities. Capability development can suffer from a variety of market failures in developing countries.[19] For example, market failure can arise from the "public good" nature of certain inputs (infrastructure, education, industrial standards, etc.). They can arise from externalities in private activity (on the negative side, for example, pollution on the positive side, spillovers from training or research). They can also arise from the imperfection in information markets. Unequal access to information by two sides in technology contracts, absence of technology brokers, lack of information in the provision of credit, can hamper or raise the cost of investments, importing technology or diffusing technology within the economy. The "lumpiness" (large initial capital cost) of certain facilities like testing quality control, some kind of basic R & D, may prevent their being set up by private agents unless there are institutional machanisms to provide them or bring firms together on a cooperative basis. Or the unpredictability of dynamic learning sequences can lead private firms to underinvest in technological activity.

As development proceeds, countries tend to acquire solutions to many market failures. In some cases, specialized commercial intermediaries may appear in response to market needs; in others, manufacturers themselves may grow in size to "internalize" deficient markets. In other cases, however, market driven solutions of this sort may take too long to develop, or may fail to appear at all. Government intervention is then used by countries to provide remedies. Intervention may directly address the market failure or the state may proceed by setting up specialized institutions to deal with specific problems.

Scattered evidence suggests the East Asian NICs in particular Korea, Taiwan, and Singapore, were the most assiduous and systematic in building institutions to support industrial development. They had advanced standards, quality assurance, training, information collection, technology diffusion, testing and research support institutes. They involved private industry in many such institutions, in particular, those geared to penetrate foreign markets and importing and generating technology. Korea differed from other NICs in that it deliberately fostered the growth of giant **conglomerates** to overcome various market failures in capital, technology, and information markets.[20]

So now I have given a picture of capabilities and institutions which are the crucial aspects of the supply-side that determines the competitiveness of a nation. As mentioned, in most developing countries these supply-side factors are simply not called into being by the mere operation of market forces. Thus industrial policies that are used to develop the supply side of a nation's manufacturing sector has to be carefully investigated when giving a judgement of that nation's competitiveness. Of course, one should note that industrial strategies of developing countries are usually characterized in terms of the position these countries take in respect to the international economy.

It should be clear by now that when RCA indexes are not available for two points in time (for recent years) it would be essential to analyze not only the concerned country's price incentives but also the specific industrial policies (and implementation) that are used to rectify market failures of the supply side. Even when RCA indexes are available for a particular country it would be prudent to combine the behaviour of these indexes with an analysis of industrial policies to give a judgement on the competitiveness or that country.[21]

4. Impediments to Achieving Competitiveness in Sri Lanka

Let me now take a country example to illustrate this point concerning the supply side. Let us take the Sri Lankan experience of which we are all familiar with. After economic liberalization in 1977 President Jayawardena wanted to see Sri Lanka becoming a Singapore after a couple of years. He in fact once said "we export or perish". Has Sri Lanka become a Singapore after 14 years of export-oriented open economy? The answer is clear – no. What were the major impediments that worked against our exports becoming competitive in the world market. Till about the mid-eighties exchange rate appreciation appeared to be the major problem. Of course, to compensate exchange rate appreciation the Export Development Board (EDB) provided tax concessions and export subsidies. But these involved bureaucratic delays and cumbersome procedures and they did not prove to be that effective owing to the lagged effect of tax/subsidy policy.[22] However, after the mid-eighties exchange rate apreciation was more or less rectified, but then more impediments to export growth were identified.

What were these impediments? These impediments were highlighted in EDB (1989). Prominent among them were: (1) inadequate research effort; (2) poor information of marketing; (3) inadequate attention paid to quality, design, and packaging (4) poor negotiating skills with potential buyers; (5) lack of cooperation with one another in production; (6) poor record of reliability and promptness in supply; (7) underdeveloped capital markets; (8) high freight charges and lack of cargo space; (9) the lack of a dynamic industrial class which could dedicate itself to industralization; (10) legal constraints. Let me just deal with two of these factors, viz, poor market information and legal impediments.

Poor market information and a lack of continued and regular contract with markets were perhaps two of the most severe drawbacks to developing exports. There was no private sector organization or a conglomerate in a major market for any kind of promotion and feedback to producers. Government officials performed trade promotion activities through foreign embassies with very few links with private sectors producers and exporters. And most these officials were not competent in advertising and other trade promotion activities. Limited attention was paid to developing 'trading houses' along Japanese lines. It was only very recently (i.e. in 1991) that the EDB started pushing ahead this concept of 'trading houses'. Also, recently (i.e. in 1991) a number of Sri Lankan missions abroad have set up under the recently established Bilateral Cooperation Unit (BCU) of the Ministry of Foreign Affairs.

Let me now turn to legal impediments. It is claimed by many industrialists that there are far too many labour laws in the country that work against the profit motive and above all competition. Most industrialists find it difficult to determine which labour law would apply to the decisions they have to take with regard to the management of labour. According to them the most serious obstacle to rationalize business activites is the Termination of Employment of Workmen (Special Provision) Act of 1977, which requires an employer who wishes to terminate the services of an employee to obtain either the prior written consent of the workman or the prior approval of the commissioner of labour. The Employers' Federation of Ceylon writing on this states; "employers have been driven to the brink of liquidation because of the inability to take speedy action to recognize and rationalize their business in situations of acute redundancy and/or losses. The effect of the act is to preclude the immediate pruning down of business in such circumstances, without following its procedure, and redundant employees must continued to be paid until the conclusion of inquiries".

Regarding the effect of labour laws on competitiveness, the Federation states: "The overprotection afforded to them [laborers] by the [law] enables them to be non-productive with impunity. The regular absentees sees that it would take considerable amount of time for an employer to terminate his services and to justify it before a court and also in the case of the malingerer. The system does not reward the efficient and productive but inadvetently protects the inefficient and non-productive employee. In consequence, productivity suffers. as also business profit and profit margins."

Finally, let me briefly touch on some other legal impediments which I think are quite serious. I already mentioned about the cumbersome procedures and bureaucratic delays involved with export tax/subsidies. Such procedures were not confined to tax/subsidies alone. For example, exporters complain bitterly about multiplicity of procedures and documentation required for various investments, importations, and exporting. Most of these procedures emanate from laws such as Customs Ordianance, Import-Export Control Act, the Inland Revenue Act, and other legisaltion introduced to regulate imports and exports. The main complaint made by the exporters is that outside the Free Trade Zone there are too many agencies to be contacted with regard to their business, and that some of the procedural requirements and documentations are quite unnecessary. Sri Lanka Trade Facilitation Committee and the S. K. Wickremasinghe Committee suggested ways and means of minimizing these procedures but the exporters continue to complain.

So it appears that till about the late eighties the Sri Lanka policy makers were pre-occupied whith devaluations, tariff adjustments and increasing subsidies (all price measures) and overlooked the above-mentioned impediments to achieving competitiveness in exports. These impediments to achieving export competitiveness are nothing but constraints on the supply side – inadequate skills, inadequate training, inadequate research, lack of institutions, insufficient enterpreneurial development, etc. In other words, these impediments are simply market failures of the supply side. In fact, the government did not have an industrial strategy to rectifying market failures for nearly a decade after economic liberalization. It was only in 1987 that an industrial strategy.[24] In 1989, the government formulated a modified version of the 1987 industrial stragety.[25] To what extent this strategy would contribute to increase the competitiveness of Sri Lanka remains to be seen. The point made here is that shortcomings in industrial strategy are factors that our competitors can easily exploit. So it is vital to note that the industrial strategy of a country is a vital determinant of its competitiveness in the global scale.

5. Summary and Conclusion

A brief account on the evolution of the concept of competitive advantage was discussed in section 1. I pointed out that there is no standard trade theory as such but the factor-proportions theory (or Heckscher-Ohlin theory) still provides the backbome to our understanding of static international comparative advantage using the Revealed Comparative Advantage (RCA) index. Then I discussed the relationship between this measure and a country's factor endownments, in particular, skill endowments, in order to highlight the importance of this factor. Thereafter I extended the analysis to a dynamic framework. The behaviour of the global RCA index for a given period for industries was explained in terms of stage of comparative advantage in nations and product cycle theory. Moeover, the behaviour of RCA index for a given period for countries was explained in terms of changing resource endowments in contries concerned. This analysis was then extended to individual countries in order to evaluate the comparative competitive advantage of a country.

In secton 3 we dealt with competition and highlighted the role of supply side factors in shaping the competitiveness of a country. Only when the element of competitiveness exist will static comparative advantage become a dynamic force. To achieve this an industrial strategy is required. Those countries that use an industrial strategy to rectify market failures can achieve competitiveness much faster than those other countries where the industrial strategies are weak or where there is no industrial strategy. I took the Sri Lankan example to illustrate the importance of an industrial strategy in dertermining the competitiveness of a nation. All in all, the evaluation criteria of comparative competitive advantage of a nation must involve an analysis of the RCA index over two points in time and also the nation's industrial strategy that is used to improve the supply-side of the economy.

Footnotes

1. See Haberler (1936).
2. For details of these assumptions, see, for instance, Sodersten (1977).
3. See Melvin (1968).
4. See Deardorff (1979).
5. See, For instance Sodersten op.cit.
6. See Balassa (1965). Also see, Ballance (1988).
7. See Balassa (1977).
8. See Posner (1961).
9. See Vernon (1966).
10. ...e overall factor orientation is a weighted average of physical capital orientation of RCA and skill-cum-technology orientation of RCA
11. See Vernon, op.cit.
12. See Hirch (1974).
13. All countries listed in descending order of absolute size of changes in index.
14. See Cline (1982).
15. See Cline op. cit.
16. See, for instance, Pack and Westphal (1986).
17. See OECD (1987).
18. Data for R & D is available in UNESCO (1989).
19. See Stiglitz (1989).
20. The Korean case is lucidly discussed in Rhee et al. (1984).
21. A study of this natrure, because of its general character, cannot offer specific policy guidelines for, say, the development of a particular industry in a given country. Nor can it present sweeping policy conclusions regarding optimal strategies of industrialization. But it certainly adds more pieces to the mosaic of policy-relevant information on industrial development.
22. See Kelegama and Wignaraja (1990).
23. See Ministry of Fiance and Planning (1987).
24. For details, see Kelegama and Wignaraja, op.cit.
25. See Ministry of Industries (1980).

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