

## PRODUCTIVITY FOR COMPETITIVENESS AND INTEGRATION WITH WORLD ECONOMY

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### Abstract

The essay focuses on two related aspects of theme, *Productivity and Economic Transformation*. Firstly, the phenomena of productivity and economic transformation are analyzed to show that they are dynamically linked. The existence of this dynamic relationship implies that it should be strengthened. This has direct implications on the policy approach that should be adopted by the governments. Secondly, the importance of human capital investment in supporting exports to facilitate the productivity-economic transformation process is singled out. Human capital is now widely recognized to be a key factor in economic development, although the precise nature of its contribution is often unclear. Another reason for highlighting human capital investment is that many of the lessons gleaned are widely applicable across the countries.

### Productivity and Economic Growth

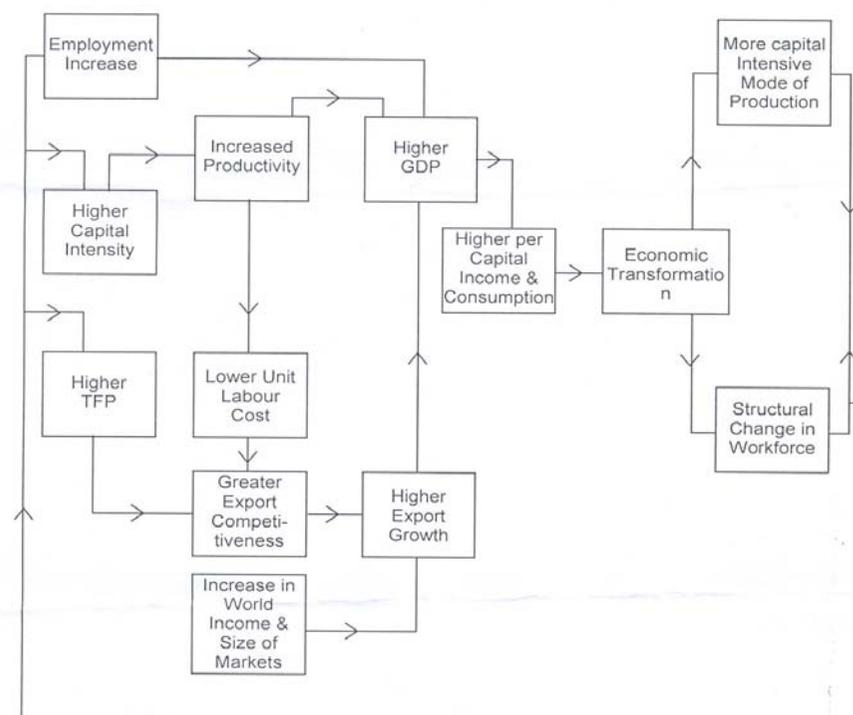
Among the most significant manifestations of economic growth is the transformation of an economy as its per capital income rises. This transformation takes several forms; movement of production methods towards more advanced mechanization; changes in input-output relations between raw materials and end-products, development of new products and services; changes in the shares of exports and imports in the output of domestic industry; and finally a redistribution of manpower among different industries and occupations. Over time, the transformation is most clearly seen in the changing employment shares of the various economic sectors.

### Dynamic Relationship between Productivity and Economic Transformation

Similar trends in productivity growth and economic transformation during a country's development suggest that they may be related. Whether this is actually so, goes beyond academic interests, as it has direct implications on the policy approach that should be adopted by the governments. Figure-1 puts forward a framework conceptualizing how productivity is dynamically linked to economic transformation.

The proximate determinants of productivity growth are the total factor productivity (TFP) and the capital intensity of production. Higher TFP is the combined result of qualitative factors such as a more educated and well trained workforce, better quality of capital investments and management system.

Figure - 1



### Sources of TFP

It is possible to extend the growth accounting methodology to estimate the sources of TFP growth. TFP growth and ultimately competitiveness depend largely on the rise in the educational and skills profile of the workforce.

Technical progress is the second major contributor to TFP growth. This reflects innovation, better knowledge and work attitudes, and other qualitative advances. The gains derived from changes or transformation of organizational structures in companies are also reflected as technical progress. Recent studies have concluded that organizational restructuring, more fashionably known as business reengineering, is another major source of TFP growth. A survey of 2,000 small and medium-sized businesses in the Great Lakes region of the USA was conducted recently by Richard Florida of Carnegie Mellon University. Sixty percent of the businesses surveyed reported improved returns from restructuring their business activities.

Investments in infrastructure including the construction of the mass rapid transit system, air and sea ports expansion, the laying of optical fibre telecommunication lines, and the building of new highways, schools, training centres, and high-tech factor increase the “proportion of construction and works relative to machinery and equipment in the total capital stock of the economy. Given the long time lag to realize productivity gains from infrastructural investments, this shift in capital composition reduced marginally its contribution to TFP growth.

Inter-industry employment shifts, a measure of the effect of industrial restructuring which leads to the exit of unproductive companies and the entrance or increase of productive ones, pulled down TFP growth as there was a net movement of labour to the less productive domestic sectors. One of the reasons for this phenomenon is the slower rate of increase in labour requirement in the key sectors of the economy such as manufacturing, financial and business services, and transport

and communications, which together accounted for majority of overall productivity growth.

Another significant reason is the relative ease of entry and exit of firms engaged in domestic trade activities. This attracts many businessmen with short-term profit motives to set up small businesses with no long-term business development plans.

The negative contribution of demand intensity reflects the fact that in a small, open economy, changes in international demand could have a significant influence over productivity and TFP growth in the short run. In particular, slowdown in demand would result in a slackening of capacity utilization of the existing stock of machinery and equipment.

### Productivity-Competitiveness Enhancement Strategy

In this present age of competitiveness, skills development is a particularly critical factor in determining the rise and fall of companies and countries in the international marketplace. This has been eloquently described by Lester Thurow of the Massachusetts Institute of Technology. In his book *Head to Head*, he wrote:

“The skills of the labour force are going to be the key competitive weapon in the 21st century. Brainpower will create new technologies, but skilled labour will be the arms and legs that allow one to employ the new produce and process technologies that are being generated.”

The key strategies that could be employed are:

- 1) focusing on small local companies, which from the majority of business establishments in the manufacturing sector and the economy;
- 2) upgrading workers aged 40 years and above so that their skills will continue to be relevant as technology changes;

- 3) promoting on-the-job-training to facilitate training by employers; and
- 4) developing and designing training programmes to deepen skills of workers in specific industries.

These strategies are part of the wider national effort to increase the educational and skill attainment of the workforce. Tertiary institutions and vocational institutes have to increase their annual intakes. The education budget has to be increased to at least 6% of GDP, with the aim of increasing the proportion of each primary one cohort entering tertiary institutions to 60% to 70% in the short-run.

### **Productivity and Industrial Activity**

Productivity is defined in many ways but the following definition proposed by the European Productivity Agency (EPA) in 1958 is perhaps the best.

1. *Productivity is the degree of effective utilization of each element of production*
2. *Productivity is, above all, an attitude of mind. It is based on the conviction that one can do things better today than yesterday, and better tomorrow than today. It requires never-ending efforts to adapt economic activities to changing conditions, and apply new theories and methods. It is a firm belief in the progress of human beings.*

The first paragraph refers to the utilization of production elements, while the second paragraph explains the social effects of productivity. Although the product is the main output of an enterprise, other tasks such as designing and selling products, and calculating wages are also closely linked to productivity. Therefore, productivity is defined as being concerned with all elements of management, not just production. Then, the effectiveness of management elements should not only be examined from the economic view of the enterprise, but also from the social perspective as the firm impacts the local

community and the lives of its employees. Productivity can be conceptualized in any kind of business activity. Activity consists of output, the conversion process, and input. Although productivity is computed upon the basis of input and output, the main function is how input is converted into output. Productivity therefore indicates the effectiveness of the activities at this point of conversion. The conversion process can be located in all areas of business activity from sales and corporate planning to calculating wages. Managing productivity requires an ongoing effort to do things better each and every day, and this requires in turn a firm belief in the ability of human beings to progress.

Firms today also assess their activity in terms of their influence and effect upon social and environmental conditions. The activity of the firm is not assessed only from a closed system viewpoint involving internal activity and immediate external environments” but also from an open system viewpoint, including social requirements and responsibilities. This means that the firm must be responsible for all its outputs, including contaminated outputs such as industrial waste, vibration and noise. The firm must control these waste outputs, too. These harmful outputs could be measured in terms of the expenses incurred in removing them, or in the amount of compensation needed to be paid out, or the investment necessary for environment protection. Since these are considered to be negative outputs, output is computed here as a cost and investment. However all these negative outputs should be controlled by firms determining the rate with positive output (sales).

### **New Concept Productivity**

It is commonly held that product (output) is produced only by the physical system. Today, however, the role of the conceptual system is more significant than ever. The output from the conceptual system contributes a great deal towards generating profit and satisfying customer needs and requirements. The functional contribution of the conceptual system is entirely determined by the extent to which human resources are able to take positive action. The quality of conceptual output contributes

significant extra value to physical output value. Timely and excellent after-sales service or quick responses to customer complaints are examples of outputs from the conceptual system. GE established a special telephone line for customer service to receive complaints or requests 24 hours a day, 365 days a year. On average GE receives more than 300 million calls in a year. While GE has to take action on the complaints, these calls were also a valuable source of information about the market. Physical goods are not the only source of value for consumers; conceptual output is able to add more value to physical output.

### **Conclusions**

Ultimately, it is productivity that determines competitiveness. To be productive, companies must be able to produce efficiently and effectively. To do this, companies, must invest in skills upgrading and focus on “lean” strategies that involve customers, retailers, distributors, and manufacturers to reduce cost and improve quality. While companies get their employees to use their heads and apply information instead of performing rote tasks, they must also have structures that move in tune with the changes in the marketplace. In this age of competitiveness, the present and the future will belong to those who can do both to achieve high productivity.

### **Bibliography**

Baumol, W.J, and McLennan, K. (eds.) *Productivity Growth and U.S. Competitiveness*, New York: Oxford University Press, 1985.

Durand, M. and Giorno, C. Indicators of international competitiveness: Conceptual aspects and evaluation, OECD Economic Studies.

International competitiveness of Japanese companies towards the 21st century, Keidanren Review on Japanese Economy. Tokyo; Keidanren, Special Issue, 1993.

Porter, M.E. *The Competitive Advantage of Nations*. London: MacMillan Press, 1990.

President's Commission on Industrial Competitiveness, *Global Competition: The New Reality*, United States 1985.

Reich, R.B. *The Work of Nations*. New York: Vintage Books, 1992. Singapore National Productivity Board. *The First 10 Years of the Productivity Movement in Singapore*, 1991.

Singapore National Productivity Board. *Singapore's Experience in Sustaining Productivity Growth: Lessons for Small, Open Economies*, Unpublished, 1992',