

# Productivity

Productivity can be measured as the level of output achieved against a fixed input. Labour is often used as the fixed input. So we see measures of productivity such as output per man hour, or output per employee per year (used by automobile manufactures).

Labour productivity is defined as "the ratio of a volume measure of output to a volume measure of input". (OECD).

The fixed input does not have to be labour, it could instead be a measure of capital invested, or a quantity of land (yield per acre).

## Determinants of Productivity.

The factors that determine productivity improvement can be summarised as resulting from a combination of four factors:

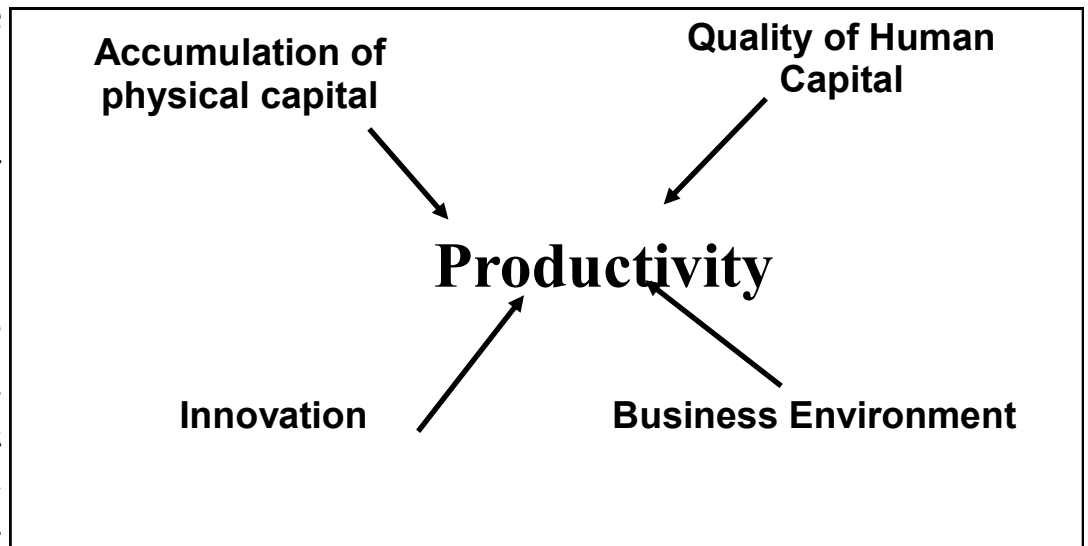
### Quality of Human Capital

Human resources are the key to productivity enhancement. In addition to developing the right attitude, they must also have the right skills and knowledge base. They need to be entrepreneurial, to be able to seize opportunities, to innovate and add value continuously. While much of the basic skills and knowledge needed by the human input into productivity improvement are imparted in the formal education and training system, entrepreneurial skills depend more upon the devel-

opment of team working, leadership, creativity and innovation skills.

### Innovation

For sustained competitiveness it is important that a nation is innovative, i.e. it should be continuously exploring new ways of doing things.



Countries and firms should be looking to take advantage of new sources of competitive advantage. Innovation depends upon investment into high quality further and higher education, as the foundation of new products and technologies. Firms must put time and money into research and development, as much to improving existing processes, products, as to develop new products and methods..

### Investment in physical capital—machinery, buildings, infrastructure.

The most obvious and universally accepted factor influencing productivity is accumulation of capital. But it is often overlooked that capital only adds value by being combined with other factors. Hence, investment in technology alone will not ensure productivity gains. A skilled workforce may be needed, there has to

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be entrepreneurial skills to take advantage of the opportunities offered by availability of capital. Also large-scale investment in capital only makes sense if there is market large enough to reap the benefits of economies of scale.

## **Business Environment**

Firms need a stable macroeconomic environment, low inflation, steady growth, predictable exchange rates and so on. The microeconomic environment is also crucial in determining the level of productivity growth. The levels of business regulation, restrictions on enterprise, levels of employment law, the effectiveness of the finance and banking systems, plus the strength of contract law, and the effectiveness support institutions, all have a major impact on productivity growth.