



The Global Voice of Business

FACT SHEET

UNDERSTANDING, DRIVING & MEASURING PRODUCTIVITY



What is productivity?

PRODUCTIVITY IS A MEASURE OF THE EFFECTIVENESS AND EFFICIENCY OF AN ORGANISATION OR ECONOMY IN GENERATING OUTPUT WITH THE RESOURCES AVAILABLE.

Improving productivity is not about working longer or harder but about working smarter and finding more **efficient** and **effective** ways to produce more goods and services with the same amount of effort. It is also about producing higher value-added products and services.

Why does productivity matter?

PRODUCTIVITY IS CRITICAL FOR LONG-TERM COMPETITIVENESS AND GROWTH.

For countries experiencing an ageing population, employers urgently need to enhance productivity since it is not possible to rely on increasing manpower to sustain business growth.

For countries with large workforces, enhancing productivity is nonetheless needed to ensure that companies move up the value chain and stay competitive to maintain profitability, especially since competition based on low labour cost is not sustainable in an open global economy. Indeed, the only viable way to increase profits sustainably is to increase the economic pie or value added through higher productivity. This can be done with closer involvement of employees, higher investment in capital and optimal use of capital.

Why understanding productivity measurement is fundamental

PRODUCTIVITY MEASUREMENT IS ESSENTIALLY THE IDENTIFICATION AND ESTIMATION OF APPROPRIATE OUTPUT AND INPUT.

Measurement is crucial for productivity management; it helps to determine progress and provides information on how effectively and efficiently an organisation manages its resources. Without productivity measurement, it is difficult for businesses to make an informed decision regarding its sustainable growth.

Some reports such as the ILO [Global Wage Report](#) cite a widening gap between productivity and wages. Such sources infer that the wage-productivity gap shows that workers are not being rewarded fairly for their contributions to economic outputs. Understanding productivity and its measurement is hence crucial for employers to assess how best to integrate productivity into wage policies, to assist them in motivating employees and cultivating a workplace with healthy labour-management relations.

Some of the most common productivity measures are **multi-factor productivity, capital productivity and labour productivity**. There are diverse ways to measure each of these, and the outcomes vary depending on the measures deployed. It is hence important for businesses to understand how productivity can be measured so that the measures meet their needs and operations and accurately reflect what they are doing.

Common drivers of productivity

PRODUCTIVITY IS ENHANCED IN AN ENVIRONMENT WITH SUPPORTIVE POLICIES, A CULTURE OF INNOVATION AND WHERE HEALTHY COMPETITION IS FOSTERED.

Five important drivers of productivity are:

#1: Innovation / Technological Change

A 1% increase in domestic business R&D is estimated to increase multi-factor productivity growth by 0.13 percentage points. In particular, the performance of productivity growth during the last two decades was largely attributed to the acceleration in information and communications technology.

#2: Institutions and policies

Institutions and policies are likely to have an impact on labour productivity either by influencing investment in physical capital and human capital, or by directly affecting efficiency and technological change. For example, anti-competitive product market regulation appears to hinder multi-factor productivity growth.

#3: Investment in physical capital

About half of aggregate output growth in the last four decades of the 20th century has been attributed to physical capital accumulation.

#4: Management practices

Research has shown that management practices impact productivity significantly – a single point improvement in management practices is associated with the same increase in output as a 25% increase in labour force or 65% increase in invested capital.

#5: Human capital development

Studies estimate that a 10% increase in the stock of human capital due to job-related training leads to an increase in multi-factor productivity of between 0.5% and 1.5%. Human capital development can also be achieved through on-the-job learning to acquire soft competencies such as communication skills.

Measuring labour productivity at country level

AS PRODUCTIVITY IS DEFINED AS THE RATIO OF OUTPUT TO INPUT, IT IS IMPORTANT TO DETERMINE WHAT DATA SHOULD BE USED TO PROXY THE OUTPUT AND THE INPUT MEASURES.

The common volume measure of output at the country level is the **Gross Domestic Product (GDP)** or **Gross Value Added (GVA)**, which excludes taxes.

Most analyses of input use the number of persons employed. This is not ideal, due to lack of data on hours worked, as well as the difficulty in doing cross-country comparisons. A simple headcount of employed persons can mask changes in average hours worked, caused by the evolution of part-time work or the effect of variations in overtime, absence from work or shift in normal hours. The distortion can be significant in the modern world of work where a person can have multiple employers. It is therefore important for employers to establish productivity measurements that better reflect reality, and to have accurate assessment of their productivity to inform their work plan and strategies for competitiveness.

Measuring labour productivity at enterprise level

THE ENTERPRISE EQUIVALENT OF GVA IS VALUE-ADDED (VA).

VA is calculated as the difference between sales and the cost of goods and services purchased to generate the sales; or the sum of labour cost to employees, interest to lenders of money, depreciation for reinvestment in machinery and equipment, profits retained by the organisation and other distributed costs such as taxes.

On the input side, labour productivity can be measured by number of hours worked, number of workers engaged (part-timers converted into their full-time equivalent) and cost of labour. Productivity measurement goes beyond a single indicator given that various dimensions of an organisation's operations collectively affect overall performance. Enterprises should identify a set of productivity measures relevant to their objectives and operations¹.

¹ **Productivity SA** recommends 5 ways to increase productivity: increasing output by using fewer inputs; increasing output by using the same quantity of input; maintaining the same output with fewer inputs; producing a smaller output with even fewer inputs and producing a larger output with more input.

General criteria for integrated productivity measurement

PRODUCTIVITY MEASURES SHOULD BE FLEXIBLE AND CATER TO DIFFERENT ORGANISATIONS, BUSINESSES, INDUSTRIES AND COUNTRIES.

As such, enterprises should identify their own productivity measures, referencing the industry and economy-wide measures wherever useful.

Productivity is highly cyclical. Thus, the measurements used should not be tied to short-term fluctuations of business cycles.

Here are general guidelines in choosing productivity measures at the enterprise level:

- I Measure only elements that have **significant impact** on the specific organisation's performance and its key productivity levers;
- II Measures should be **relevant** to specific organisations' objectives and operations, be able to explain the pattern of performance and signal a course of action;
- III Measures should be **easily understood** by employees;
- IV Measures should ideally emulate those used by the industry or benchmarked organisations to facilitate **peer comparisons** in order to assess improvements needed;
- V Measures should demand only **data that are practical to obtain, reliable and consistent** in order to provide an accurate reflection of what they are supposed to measure.

For more Information and Answers to your Questions

For the technical references used in this paper please consult the annex overleaf, and for further details or if you have any questions on measuring productivity, please contact IOE Adviser, Ms Thannaletchimy Thanagopal: thanagopal@ioe-emp.org/ or call +41 22 929 00 08.

Technical Annex

Productivity

Productivity is commonly defined as a ratio of a volume measure of output to a measure of input. (OECD Research, 2001)

Efficient

Being efficient is about performing in the best possible manner with the least waste of time and effort.

Effective

Being effective is about being able to produce the intended objectives and/or results.

Competitiveness

Competitiveness is a comparative concept determined by an enterprise or nation's ability to satisfy its customers' needs better, faster and cheaper than its competitors (Productivity SA, 2015).

Multifactor productivity

Multifactor productivity measures the changes in output per unit of combined input such as capital, labour and intermediate inputs.

Gross Domestic Product

Gross Domestic Product (GDP) is the monetary value of all the finished goods and services produced within a country's borders in a specific time period, usually one year.

$$\text{GDP} = \text{GVA} + \text{taxes on products} - \text{subsidies on products}$$

Gross Value Added

Gross Value Added or GVA is a measure of the value of goods and services produced in an area, industry or sector of an economy minus taxes plus subsidies. Over-simplistically, GVA is the grand total of all revenues.

Guideline I Example

In a labour-intensive manufacturing company, labour productivity is key to the company's performance. Here, two elements will have significant impacts: sales per employee and value added-to-sales ratio.

Guideline II Example

A company that is labour intensive will need to look at its labour productivity and a company that is capital-intensive will need to look at its capital productivity. Otherwise, it might be difficult to establish the relationship between what it measures and the outcomes, which will not contribute to strategic planning. Also, to be more action-oriented, companies can specify a particular goal such as to increase sales volume by 1 percent, so that the objectives are clear.

Bibliography

A Guide to Productivity Measurement, SPRING Singapore, 2011, http://www.spring.gov.sg/resources/documents/guidebook_productivity_measurement.pdf

Measuring Productivity, OECD Manual, 2001, <http://www.oecd.org/std/productivity-stats/2352458.pdf>

Productivity SA, Corporate Profile South Africa, 2015

The International Organisation of Employers is the largest network of the private sector in the world. With more than 150 business and employer organisation members around the world, it is the global voice of business in labour and social policy debate at the international level.