

## Glossary

### Asymptotically unbiased

An estimator, such as the coefficient in a regression equation, is said to be asymptotically unbiased if the probability that the estimator is different from the true value of the parameter it purports to assess approaches zero as the size of the sample approaches infinity.

### Average capital-output ratio

The capital stock of a firm, industry or economy over a time period, divided by the output produced during that period.

### Average employment-value added ratio

For a given time period, the quantity of labour employed, divided by the valued added produced.

### Average labour productivity

The level of output per unit of labour input, usually measured as value added per man-hour or man-year.

### Cobb-Douglas production function

A mathematical expression describing a relationship between a measure of output and two or more inputs (such as employed labour and capital). The function is multiplicative in the natural numbers and linear when transformed into logarithms.

### Coefficient of determination, $R^2$

The measure of the goodness of fit of a regression equation, which denotes the proportion of the variance in the dependent variable associated with independent variable(s) included in the regression. The coefficient may lie between 0 and 1: when it is close to 0, it suggests a weak relationship; when it is close to 1, a strong one.

### De jure population

A population enumerated on the basis of normal residence, excluding temporary visitors and including residents temporarily absent.

### Demand for labour

The quantity of labour that users of labour services desire to purchase at prevailing wages and salaries.

### Diminishing returns

A situation where if one factor of production is increased by small, constant amounts, all other factor quantities being held constant, then after some point the resulting increases in output become smaller and smaller.

**Disembodied technical change**

A type of technical change that influences output through shifts in the level of the production function rather than via factors of production.

**Dropout rate**

The proportion of students entering a given grade who withdraw from school before completing the grade.

**Durbin-Watson statistic**

The statistic, developed by J. Durbin and G. S. Watson as a weighted ratio of the sum of squared differences in successive residuals, which is used to test for autocorrelation of residuals.

**Elasticity of employment with respect to value added**

For a given time period, the proportionate change in the quantity of labour employed, divided by the proportionate change in the value added.

**Elasticity parameter**

A parameter indicating the extent to which value added changes during a specified period of time (usually a year) in response to a given change in the amount of labour of capital used.

**Employment function**

A mathematical expression describing a relationship between employment and other variables, typically a measure of output and other inputs, in which employment is the dependent variable and the other variables are independent. The inverse of a Cobb-Douglas production function in which employment is the dependent variable would be an employment function.

**Enrolment ratio**

The number of students attending school, divided by the number of persons of appropriate years of age. The ratio may refer to the entire educational system or to a given school level.

**Excess demand for labour**

The amount by which the quantity of labour demanded exceeds the quantity of labour available at the prevailing level of wages and salaries.

**Excess supply of labour**

The amount by which the quantity of labour available exceeds the quantity of labour demanded at the prevailing level of wages and salaries.

**Factor substitution**

The process by which one factor of production (e.g. labour) is replaced in production by some other factor of production (e.g. capital).

**Human capital**

Productive investments embodied in human persons. These include skills, abilities, ideals, health etc., that result from expenditures on education, on-the-job-training and medical care.

**Incremental capital-output ratio**

The increase in the capital stock of a firm, industry or economy over a time period, divided by the increase in output over that period.

**Labour force participation rate**

The number of persons in the labour force of a given age, sex and/or level of education, divided by the corresponding total number of persons with the same characteristics.

**Labour market**

The market in which labour services are bought and sold through a process that determines the number of persons employed as well as wages and salaries.

**Level-specific enrolment ratio**

The number of students attending schools at a given school level, divided by the number of persons of the years of age assumed to correspond to that school level.

**Marginal employment-value added ratio**

For a given time period, the change in the quantity of labour employed, divided by the change in the value added.

**Primary sector**

The part of the economy that specializes in the production of agricultural products and the extraction of raw materials. Major industries in the sector generally include: agriculture, forestry, fishing and mining.

**Promotion rate**

The proportion of students entering a given grade who upon completing it, enter the subsequent grade.

**Random disturbance term**

The term added to a regression equation as an average relationship between dependent and independent variables, which ensures equality between the left and the right hand side of the equation for each

observation. The disturbance or error term may represent random disturbances in an observation or it may reflect errors of measurement.

**Repetition rate**

The proportion of students entering a given grade who fail to complete it and then repeat the grade.

**School-age population**

The population of the school-age period, conventionally defined as ages 5 through 24 years, inclusive.

**Secondary sector**

The part of the economy that uses raw materials and intermediate products to produce final goods and other intermediate products. Major industries comprising the sector generally include: manufacturing, construction and utilities.

**Serially correlated**

Disturbance terms of a regression equation fitted to time series data are said to be serially correlated if there is a degree of stochastic dependence between those terms. Serial correlation occurs when effects due to particular chance disturbances or omitted variables tend to persist through several periods or years. It could also be occasioned by methods of data collecting or reporting that incorporate elements of smoothing and interpolation which average the "true" disturbances over adjacent periods.

**Sex ratio of labour force**

The number of males in the labour force, divided by the corresponding number of females and conventionally multiplied by a hundred.

**Sex ratio of students**

The number of male students for each female student, conventionally multiplied by 100.

**Simultaneous equation bias**

A bias arising in statistical estimation when the dependent variable has a causal effect on the independent variables, rather than vice versa.

**Sprague interpolation**

A type of non-linear interpolation.

**Statistically significant**

An estimate of a particular statistic, such as a partial regression coefficient, is said to be statistically significant if the probability that it could have occurred by chance is less than, say, 5 per cent.

**Supply of labour**

The quantity of labour that owners of labour services desire to sell at prevailing wages and salaries.

**t-statistic**

In regression analysis, a statistic calculated for each partial coefficient which makes it possible for the analyst to determine whether or not the coefficient is statistically significant.

**Technical progress**

The application of new scientific knowledge in the form of inventions and innovations to capital, both physical and human, usually leading to lower costs or increased output.

**Tertiary sector**

The part of the economy that provides various services to businesses and households. Major industries of the sector generally include: banking and insurance, public administration, health and education.

**Value added**

For a firm or farm, the difference between its total revenue and the cost of raw materials, services and components used in production over a specified time period; for the economy as a whole or any of its industries, the aggregate of value added of different firms or farms of which the economy or industry is composed.

**Vintage capital models**

A class of economic models in which the aggregate capital stock consists of capital of different years of production (vintages).

**Working-age population**

The population in the working ages, conventionally defined as 15 to 59 years or 15 to 64 years.



