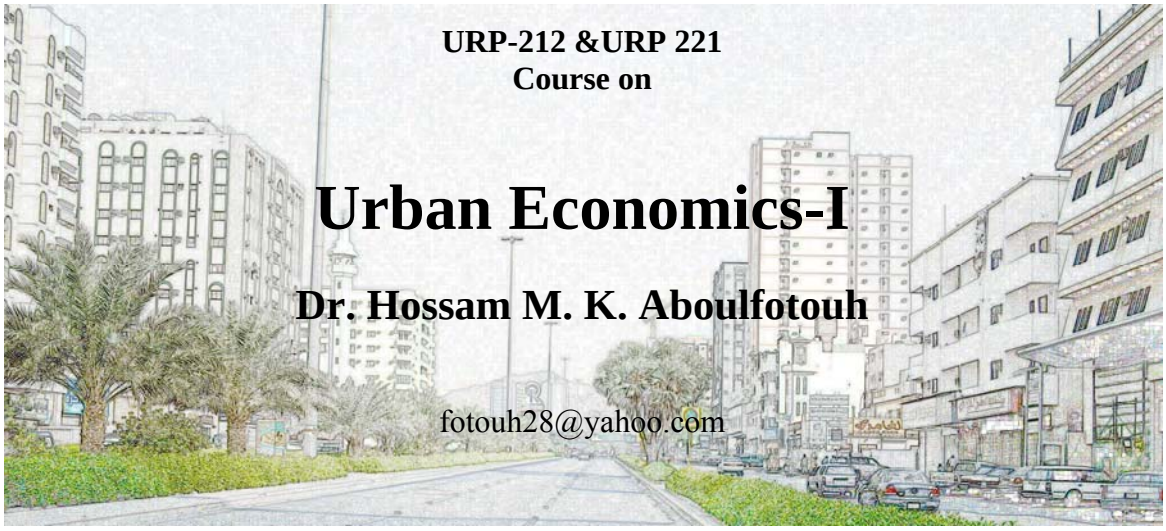
KING ABDULAZIZ UNIVERSITY
Faculty of Environmental Design
Department of Urban & Regional Planning



URP-212 &URP 221
Course on

Urban Economics-I

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Lecture notes#8: Some basic economic concepts.

Review the following economic concepts in the book of Paul Samuelson (2010). Some of these concepts are represented by an equation of a straight-line and the other by an equation of a curve.

See: Samuelson, Paul A. & Nerd Haus; W, Economics, 19e, McGraw Hill, NY, 2010.

- **Budget line:** this diagram models the line of diverse possibilities of allocating a fixed budget (or recourses) for getting diverse quantities of two essential products (urban goods), e.g., houses Q_h and services Q_s, where a unit of each has different price, e.g. P_h and P_s. Thus, the fixed budget $B = Q_h*P_h + Q_s*P_s$, and this is the equation of the budget line. If we plot Q_h on the Y axis and Q_s on the X axis, the slope of the budget line is P_h/P_s. See (Samuelson *et al*, 2010, p.103), and see fig-1.

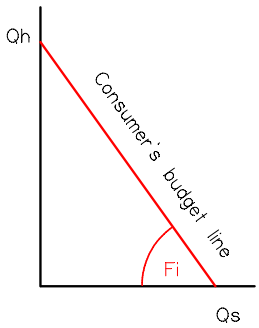

Figure-1: A consumers' budget line; its slope = Tan φ =P_h/P_s.

- **Production possibility frontier**: this diagram models the curve of diverse possibilities of allocating private/public investments and resources for producing diverse quantities of two different (groups of) products, where a unit of each has different production cost. It shows the tradeoff between reducing the quantity of one product(s) in order to increase the quantity of the other product(s) for the benefit of the society/country. See (Samuelson *et al*, 2010, pp.9-12) and see fig. 2.

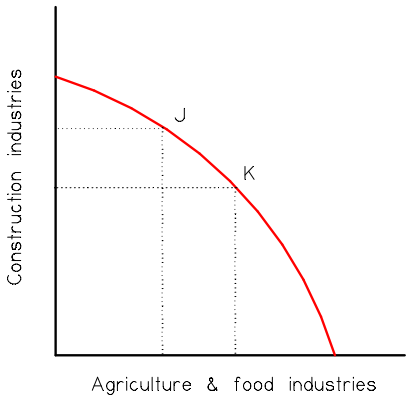

Figure-2: The production possibility frontier, moving from J to K implies reducing the production in the sector of construction industry, and using the saved recourses and labors as inputs to increase the production in the sector of agriculture and food industries, which might add a benefit to the economy.

- **Consumer's indifference curve:** this diagram models the curve of indifference possibilities for buying diverse quantities of two different products (urban goods), where the diminishing slope of the curve represents the buyer's satisfaction (utility) from substituting one unit of such urban good to get one extra unit of the other urban good. See: (Samuelson *et al*, 2010, p.101), and see fig.3.

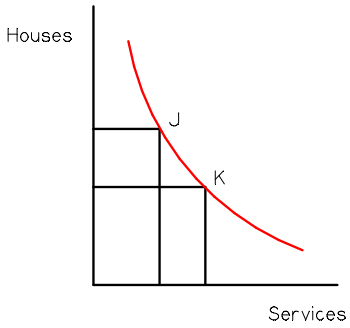

Figure-3: A consumer's indifference curve: it assumes that the consumption possibilities on the curve, e.g., at J and K, are of equal satisfaction to the consumer (society). It is like a contour line in topography, i.e., I stand on the same level of satisfaction.

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- **Lorenz curve:** this diagram models the deviation from the state of absolute equality (line) in distributing, e.g., the national income of such country among its citizens (or groups of citizens). This diagram shows the relation between the accumulated percent of income I_p on the Y axis and the accumulated percent of the number of households H_p on the X axis. See (Samuelson *et al*, 2010, p.325), and see fig.4.

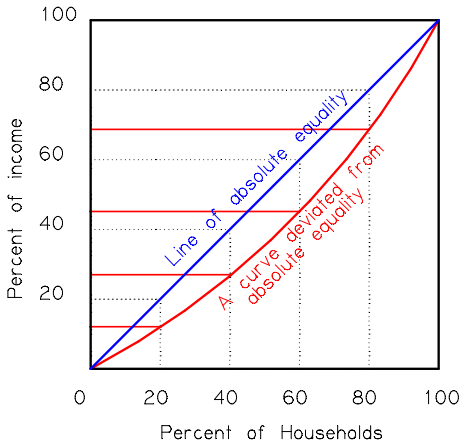

Figure-4: Lorenz curve of income distribution among households;
the amount of deviation form the blue line represents the degree of inequality.

- **National Income:**

a- Growth domestic product–GDP is the total market value of the final goods and services produced within (inside) a country during a given year. (Samuelson *et al*, 2010, p.386).

GDP= C+ I+ G+ X

Where,
C is private consumption,
I is gross investment,
G is government expenditure in goods, and services, and
X is net exports.
All values are in monetary term during a given year.

b- Gross national product –GNP is the total output (final goods and services) produced with labor or capital owned by a county within a given year (Samuelson et al, 2010, p.397).

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- **Using the economic concepts and models:** the model here below combines budget lines, indifference curves, GDP components, and the fiscal functions of Musgrave, R. A. *et al*, (1982). See Aboulfotouh, H., MA thesis, EUR, the Netherlands, 1993.

Then, when local economic condition reaches its expected economic growth, government can increase taxes (i.e., intergovernmental equity).

The plans that create further stress on one component will be resisted by the keyactors. In Fatimide Cairo, the plan that is, e.g.: fully financed by the government, reduces governmental subsidy without cross subsidy for the poor, increases unemployment in the informal sector, increases prices, reduces wages, increases marginality, reallocates poor citizens without fair and soon compensation, increases housing rents without increasing the private incomes, don't preserve heritage, or don't create profits for the ministry of endowment and private investors will meet problematic resistance by the affected actors to stop their implementation. More quantitative analysis for measuring the balance between the GAP components are shown in appendix - 4.

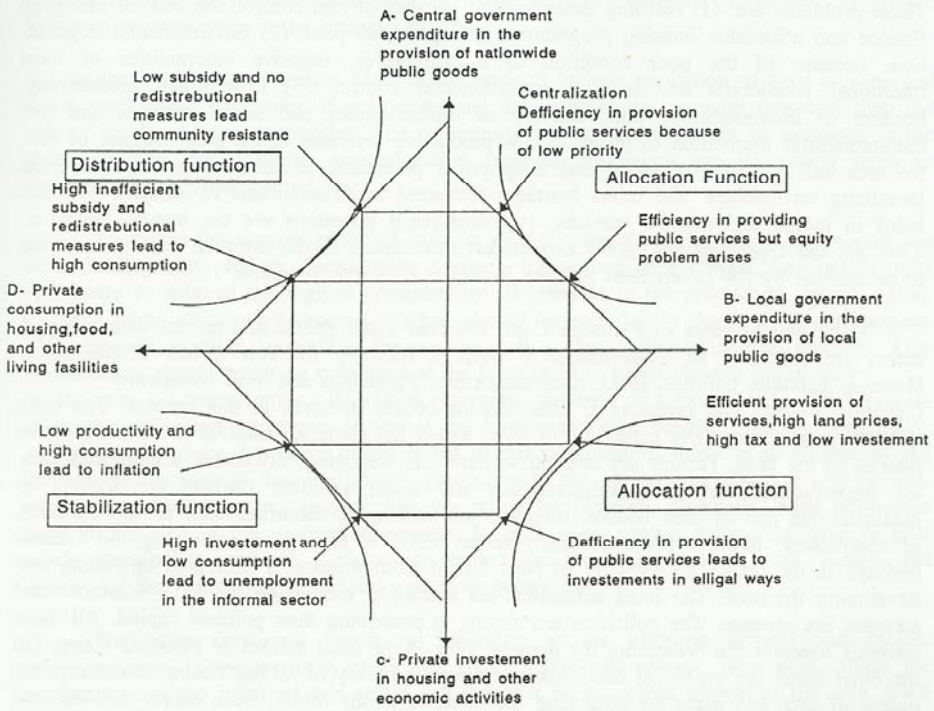

Fig. (20) Productivity model

Hossam M. K. Aboulfotouh, Socio-Economic Development in Fatimide Cairo, Feasibility in Planning Implementation, MA thesis, IHS, Erasmus University Rotterdam, the Netherlands, 1992.

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