Economics of Migration

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Outline of the Course
General Topics

- Overview of the relevant concepts for an economic analysis of migration.
- Theoretical analysis of migration. Key questions:

i) Why people migrate? Who are the migrants?

ii) Economic effects in the destination countries, on labor markets (wages, unemployment) and on economic growth, and in countries of origins (remittances).

- Reading the data and testing the predictions of the theory:

i) Main sources of data on migration;

ii) establishing causality.

Outline of the Course
Specific Topics

- Illegal/undocumented immigration:
  i) trafficking and smuggling;
  ii) the structure of traffickers' rings;
  iii) are NGO/search and rescue operations a pull factor in the Mediterranean?
- Immigration and crime:
  i) why should there be a link?
  ii) Do causal links exist?
- Economic Effects of Diversity:
  i) do diverse populations have higher productivity?

Outline of the Course
Specific Topics

- Perception of immigration (attitudes towards migration):
  i) some countries have different perceptions of immigration, why?
  ii) what are the drivers of the perception of immigration?
- Immigration and politics (political economy of immigration):
  i) do exposure to refugees flows increase political extremism/polarization?

Economic Analysis of Migration: Basic Concepts
Overview

- Economics include *Microeconomics*: the analysis of individual agents (e.g. individuals, families, firms, the Government) or markets, and *Macroeconomics*: the analysis of *aggregate* quantities, like the gross domestic product (GDP), unemployment, inflation, etc.

- Economic analysis, especially at *micro* level, focuses on *incentives* of agents facing choices.

- Choices are assumed to be defined by a cost-benefit analysis, and the choice that agents are typically expected to make is the optimal choice, i.e. the best available choice within a set of alternatives.

Economic Analysis of Migration: Basic Concepts
Overview

- What makes a choice optimal, in particular, is its capacity to <u>maximize an objective</u> for the agent such as the <u>utility</u> for the individual or the <u>profits</u> for the firm.
- Economics utilizes <u>models</u>, i.e. abstract representations of reality aimed at highlighting the essential elements of the problem of interest.
- In particular, models are studied at their <u>equilibrium</u>, i.e. in a situation in which no agent has an incentive to modify that situation.
- The reason to study equilibria to isolate what the most important factors that affect, e.g., a market, abstracting from accidental events.

Economic Analysis of Migration: Basic Concepts
Overview

- The construction of models represents the theoretical side of economics.
- Models are then tested agains data. The empirical analysis is mostly carried out by utilizing the tools of econometrics.
- Econometrics aims at verifying whether hypotheses suggested by the theoretical analysis are actually supported by the available empirical evidence.

Economic Analysis of Migration: Basic Concepts
Markets

- A key topic in microeconomics is the study of <u>markets</u>.
- A <u>market</u>, in general, is the place (physical or, nowadays, often virtual) where sellers of a good or a service meet the agents willing to purchase the good or service in order to trade that good or service for a price.
- A <u>competitive market</u> is a market with three characteristics: i) there is a large number of firms and consumers; ii) the good traded in the market is homogeneous; iii) there are no barriers to entry or exit the market.
- A consequence of these characteristics, is that the individual firm or the individual consumer <u>take the price determined in that market as given</u>.

Economic Analysis of Migration: Basic Concepts
Markets

- The price in a competitive market is determined by the supply and the demand.
- The supply represents the quantity of a good that, for a given price, firms are willing to sell.
- The demand represents the quantity of a good that, for a given price, consumers are willing to buy.
- The equilibrium in a competitive market is reached when the supply equals the demand. This determines the equilibrium price, i.e. the price that prevails in that market, and the equilibrium quantity, i.e. the quantity of the good that is actually exchanged.

Economic Analysis of Migration: Basic Concepts

Markets

- The equilibrium in a <u>perfectly competitive market</u> has the following graphical representation:
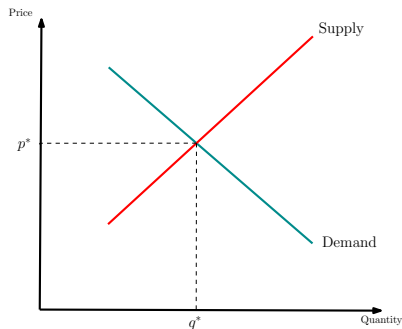

Figure: Equilibrium in a perfectly competitive market

Economic Analysis of Migration: Basic Concepts
Markets

- If the price is above the equilibrium price, there is an <u>excess supply</u>, and the price will tend to fall.

- If the price is below the equilibrium price, there is an <u>excess demand</u>, and the price will tend to rise.

- This is the reason why any price different from p^* is not an equilibrium price: forces set in motion to change that price.

- Migration is typically studied as a topic in <u>labor economics</u>, i.e. the economic analysis of <u>labor markets</u>.

Economic Analysis of Migration: Basic Concepts
Production

- Production is the activity by which factors of production are transformed into output.
- The production function represents the relation between factors of production and output. The factors of production are: i) capital (both physical and human); ii) labor; iii) land (and natural resources).
- In addition, a production function generally includes a parameter indexing the technological level. The technological level affects the productivity of factors: i.e. their capacity to generate by their utilization a certain amount of output.

Economic Analysis of Migration: Basic Concepts
Production

- In general terms, abstracting from land and natural resources, a production function looks like this:

$$Y = F(A, K, L) \tag{1}$$

  where K denotes (physical) capital, L denotes labor and A represents the level of technology.

- In principle, a production function can include different types of labor (i.e. with different skill levels), and different types of capital.

- In studies on migration, migrant workers can be considered for example as contributing to the factors of production in the destination country, with their working capacity and their human capital.

Economic Analysis of Migration: Basic Concepts
Production

- A very common representation of a production function is the Cobb-Douglas, which has the form:

$$Y = AL^{\alpha}K^{1-\alpha} \tag{2}$$

where $0 < \alpha < 1$.

Economic Analysis of Migration: Basic Concepts
Production

- Given a production function, it is possible to define the marginal products of accumulable factors, i.e. capital and labor.

- marginal products represent the variation of output that can be obtained by varying the amount of the factor (typically by one unit), given the level of the other factor(s).

- For example, the marginal product of labor, denoted as MPL, is given by ratio of the variation of output, denoted by ΔY with respect to a variation of labor, denoted by ΔL, i.e.

$$MPL = \Delta Y / \Delta L. \qquad (3)$$

Economic Analysis of Migration: Basic Concepts
Production

- In the same way, it is possible to define the marginal product of capital, as $MPK = \Delta Y / \Delta K$.
- Marginal products are typically <u>decreasing</u>, i.e. increasing the amount of utilization of a factor and keeping constant the other, its marginal product decreases.
- Marginal products are key determinants of the <u>demand for factors</u>: the labor demand and the capital demand.
- They are therefore an essential ingredient to study labor markets, which are important to understand migration.

Economic Analysis of Migration: Basic Concepts
Production

- In order to <u>maximize profits</u> firms choose the level of the production factors, such that their marginal products equal their price, i.e. $MPL = w$ and $MPK = r$.

- In competitive markets firms take the price of labor, i.e. the wage w and the return to capital, which measures the rental price of capital, r, as given.

Economic Analysis of Migration: Basic Concepts
Production

- The choice of, e.g. the <u>optimal quantity of labor</u> for a firm occurs when $MPL = w$, which graphically takes the following representation:
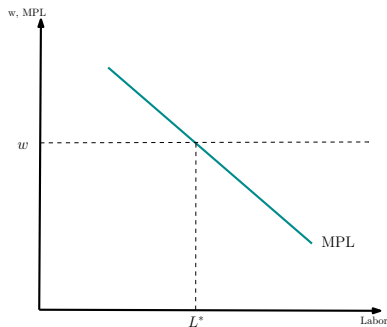

Figure: Firm's optimal choice of labor

Economic Analysis of Migration: Basic Concepts
Production

- Given a production function, inputs have a certain degree of substitutability. This means that a firm can, to some extent, substitute one factor for another and keep the level of production constant.

- In general, factors can be substitutes to some degree, i.e. a factor can be more less "easily" substituted by another, in the sense that one unit of factor can be substituted by a certain amount of another factor to keep production at the same level.

Economic Analysis of Migration: Basic Concepts
Production

- Two factors are <u>perfect substitutes</u> if a firm can indifferently use one unit of a factor or one unit of the other to produce the same amount of output.

- On the other extreme, factors can be <u>perfect complements</u> if they must be used in fixed proportions. For example, one car and one driver can produce one unit of output. With two cars and zero drivers, the same amount of output cannot be produced (actually, the production level is zero). To increase output, say, to two units, it is necessary to utilize two cars and two drivers.

- The degree to which <u>immigrant workers are substitutes or complements to native workers</u> is a key aspect of the economic analysis of migration.

Bibliography

Lieberman, M. and R. Hall (2003), *Economics. Principles and Applications*, South Western Pub.