FINANCING EDUCATION: HOW TO RAISE THE MONEY TO PAY FOR SCHOOLING AND WHO SHOULD CONTROL SPENDING IT?

EE473

INTRODUCTION

Educational finance can be defined as a series of public choices:

- How much money in the form of taxes should a society collect for spending on education?
- Who is to pay for the education?
- How should the money collected be spent to deliver education most effectively and equitably?

OBJECTIVES

1. Understand and explain alternative means of financing education and the advantages and disadvantages of each mode of financing
2. Identify and be able to analyze the level of a country's or region's educational effort
3. Understand the determinants of an efficient allocation of resources to different levels of education and to different inputs in education
4. Understand the advantages and disadvantages of educational decentralization
5. Understand the differences between financing and spending for educational efficiency versus financing and spending for educational equity

EDUCATIONAL EFFORT

- The amount of public resources a society devotes to education as a percentage of the society's economic product
- The figures varies from about 2% to more than 8% of GDP
- Some Asian countries considered as having excellent education systems, such as Japan, spend a relatively low proportion of their economic product on education
- Spain spends less on public education than most other European countries, and less than the United States – Is this because Spain is more efficient in using its public resources in education, or because the Spanish population has a lower preference for education than in most other European countries

PUBLIC EXPENDITURES ON EDUCATION AS A PERCENTAGE OF GDP, 1998/1999 AND 2001/2002, BY SELECTED COUNTRY (PERCENT)

Country	Public Spending on Education as % of GDP, 1998/1999	Public Spending on Education as % of GDP, 2001/2002
Australia	4.8	4.9
Brazil	5.2	4.3
Canada	5.8	5.3
Chile	3.8	4.0
China	2.0	N.A.
Cuba	6.7	9.0
Denmark	8.3	8.4
Ethiopia	4.3	4.8
Finland	6.2	6.3
France	5.9	5.7
Germany	4.7	4.6
India	3.2	4.1
Indonesia	1.2	1.3
Iran	4.6	5.0

Source: UNESCO, Statistical Yearbook, 2004.

PUBLIC EXPENDITURES ON EDUCATION AS A PERCENTAGE OF GDP, 1998/1999 AND 2001/2002, BY SELECTED COUNTRY (PERCENT)

Country	Public Spending on Education as % of GDP, 1998/1999	Public Spending on Education as % of GDP, 2001/2002
Japan	3.5	3.5
Kenya	6.6	6.2
Korea	4.1	4.9
Mexico	4.2	5.1
Morocco	2.5	N.A.
Peru	3.2	2.9
Philippines	4.2	3.2
Poland	5.4	5.6
Russian Federation	3.5	3.1
South Africa	6.1	N.A.
Spain	4.5	4.4
Sweden	8.0	7.6
Tunisia	7.6	6.8
Turkey	3.0	3.7
United States	5.4	5.7

Source: UNESCO, Statistical Yearbook, 2004.

FACTORS DETERMINING HOW MUCH MONEY A SOCIETY COLLECTS FOR EDUCATION

- What factors influence how much people are willing to spend on education?
- The amount of spending on education – private and public
- Private direct spending on education consists of tuition and fees families pay for their children's schooling, spending on books and school supplies, and any uniforms and other extra costs families bear directly
- Public spending comes from taxes and voluntary contributions

❖How much of the education should a society publicly fund and how high should the level of public funding per student be?

Public effort is a function of a number of factors:

- The demographic makeup of the population
- The public perception of education or the taste of the public for education
- The perceived economic and social benefits of education
- The perceived view of public versus private education
- Greater educational choice
- Greater parent participation in school decision-making

WHO SHOULD PAY FOR EDUCATION?

WHO BENEFITS FROM EDUCATION?

- Everyone benefits from investments in education
- Individuals receive private returns to education investments in the form of increased salaries, occupational opportunities, and greater knowledge
- Society benefits from investments in education if these investments result in economic growth, increased civic participation and social stability, reduced crime, or a richer cultural life

CAPITAL MARKET IMPERFECTIONS: EXTERNALITIES AND PUBLIC GOODS

Externalities – occurs when the activity of one entity affects another entity in a way that is not accounted for by the market

E.g. the agricultural university La Molina in Lima, Peru

Engineers trained at this university have generated innovations that other farmers who were not trained at La Molina have benefited from – positive externality – the training at La Molina was paid for by the original engineers but the benefits have accrued to many others who have not paid directly for the La Molina training

- A positive externality benefits society as a whole – a pure public good
  - A Public good is one that (1) cannot be denied from the general public and (2) can be consumed by many people without decreasing the benefit to each
  - A Public good is "non-excludable" and "non-rival" (Rosen, 2002)
  - Free riders problem

- Education is not a pure public good because a child can easily be excluded from a classroom, and adding children to any given classroom is likely to detract from the learning of the class as a whole
- The benefits of education, in terms of increased economic productivity, social cohesion, and safety, are closer to a pure public good – no one can exclude an individual from enjoying these social benefits – the enjoyment of one individual does not diminish the enjoyment of another
- What would happen if we tried to charge individual from enjoyment?
  - Free rider problem
  - An inefficient allocation of society's resources toward education
  - Society would be likely to under-invest in educational services for its young people

  The potential underinvestment is one of the reasons that governments invest in public education, rather than leaving educational investment to individual parents and children

- Imagine a society in which there was no public funding of education – individuals would be entirely responsible for paying both direct and indirect costs of their education
- Who would be most likely to receive education?

TYPES OF TAXES

- Assuming that governments assume part of the burden of providing educational services, these governments must determine the best way to generate revenues
- Governments generate revenue through taxation
  - General taxes and targeted taxes
  - Tax equity: progressive, regressive, and proportional taxes
  - Value-added taxes

GENERAL TAXES AND TARGETED TAXES

General taxes

- Apply to the general populations without a specific target for the revenues they generate
- Income taxes
- Sales taxes levies the same tax rate on the purchase of all commodities, with the exception of commodities that have been exempted for equity or other reasons

Targeted taxes

- Devote to raise revenues for a particular public project
- E.g. the real estate tax is collected by local government – a large proportion of these taxes is dedicated to local spending on public education
- Excise tax – is imposed on different commodities at different rates – in the United States, people who smoke pay high excise taxes on the purchase of tobacco product – these higher taxes are meant to discourage people from smoking, and the revenues from these taxes are often used for public health purposes such as campaigns to discourage young people from smoking

TAX EQUITY
PROGRESSIVE, REGRESSIVE, AND PROPORTIONAL TAXES

- The relationship of the tax rate to an individual's income or ability to pay

A progressive tax

- The tax rate increases with the individual's ability to pay
- E.g. if I earn $100,000 a year in income, under a progressive tax system, I would pay a higher percentage of my income toward taxes than an individual who earned $50,000 a year
- I would not only pay a higher total amount in taxes, but I would also pay a greater proportion of my salary in taxes

A regressive tax

- The tax rate decreases with an individual's ability to pay
- A sales tax to be a regressive tax because poor people generally spend a greater proportion of their income on consumption than the wealthy
- For this reason, countries that use sale taxes often exempt basic subsistence items such as food and clothing from these taxes

A proportional tax

- is paid equally by all individuals, regardless of their ability to pay
- Pay the same rate
- The flat tax – which has spread in popularity in eastern Europe

VALUE-ADDED TAXES

- To tax various stages of the production process of a good at which value is added to the good
- Why are retailers more likely to comply with a value-added tax than with a retail sales tax?
  - Invoice method – each firm bases its payment on the invoices of its suppliers
  - Each firm can reduce its total tax liability by the amount of tax that its supplier has paid

LEVEL OF TAXATION

- Individuals can be taxed at the local, state, and national levels
- If the benefits of educational services accrue largely to individual states or regions – that is if individuals educated in one state remain in the state and contribute to economic growth and tax revenue there – then one can argue that state taxes should finance educational services
- If there is a great deal of mobility of educated professionals within a country, then the educational investment made in one state may generate returns in another state or in the nation as a whole – it makes more sense for educational services to be financed by national taxes

DIFFERENT APPROACHES TO RAISING AND DISTRIBUTING REVENUES FOR EDUCATION

Barro (1996) categorizes education finance systems into 4 general models:

1. The North American Model
2. The British Model
3. The Continental European Centralized Model
4. The Continental European Federal Model

THE NORTH AMERICAN MODEL

- The United States and Canada
- Decentralized – revenues for public education are generated largely by local taxes, usually property taxes
- The central government plays a small role in generating and allocating resources for public education
- States or provinces contribute general or categorical grants to local education authorities

THE BRITISH MODEL

- The United Kingdom
- Combines Centralization of revenue generation with decentralization of expenditures on education
- Revenues for public education are collected by the central government through national taxes and are then distributed to local education authorities through general purpose grants
- Allocation and expenditure of resources occurs at the level of the local education authorities
- In some cases, individual schools receive funds directly and make decisions about how to spend them

THE CONTINENTAL EUROPEAN CENTRALIZED MODEL

- French system, Belgium, the Netherlands, and some Nordic countries
- The central government plays a dominant role in both generating and allocating funds for public education
- National tax – to generate revenues for education
- The Central government pays for those function related to instruction – teacher salaries and textbooks
- Local authorities are responsible for constructing and maintaining school facilities

THE CONTINENTAL EUROPEAN FEDERAL MODEL

- Germany, Austria, and Spain
- Regional governments are responsible for generating funds for education through regionally based taxes
- Central governments allocate general block grants to regional authorities, but these grants are generally not earmarked for education
- Regional authorities fund major instructional functions while local authorities are responsible for school facilities and other operations