

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

EE473





DIFFERENT APPROACHES TO RAISING AND DISTRIBUTING REVENUES FOR EDUCATION

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

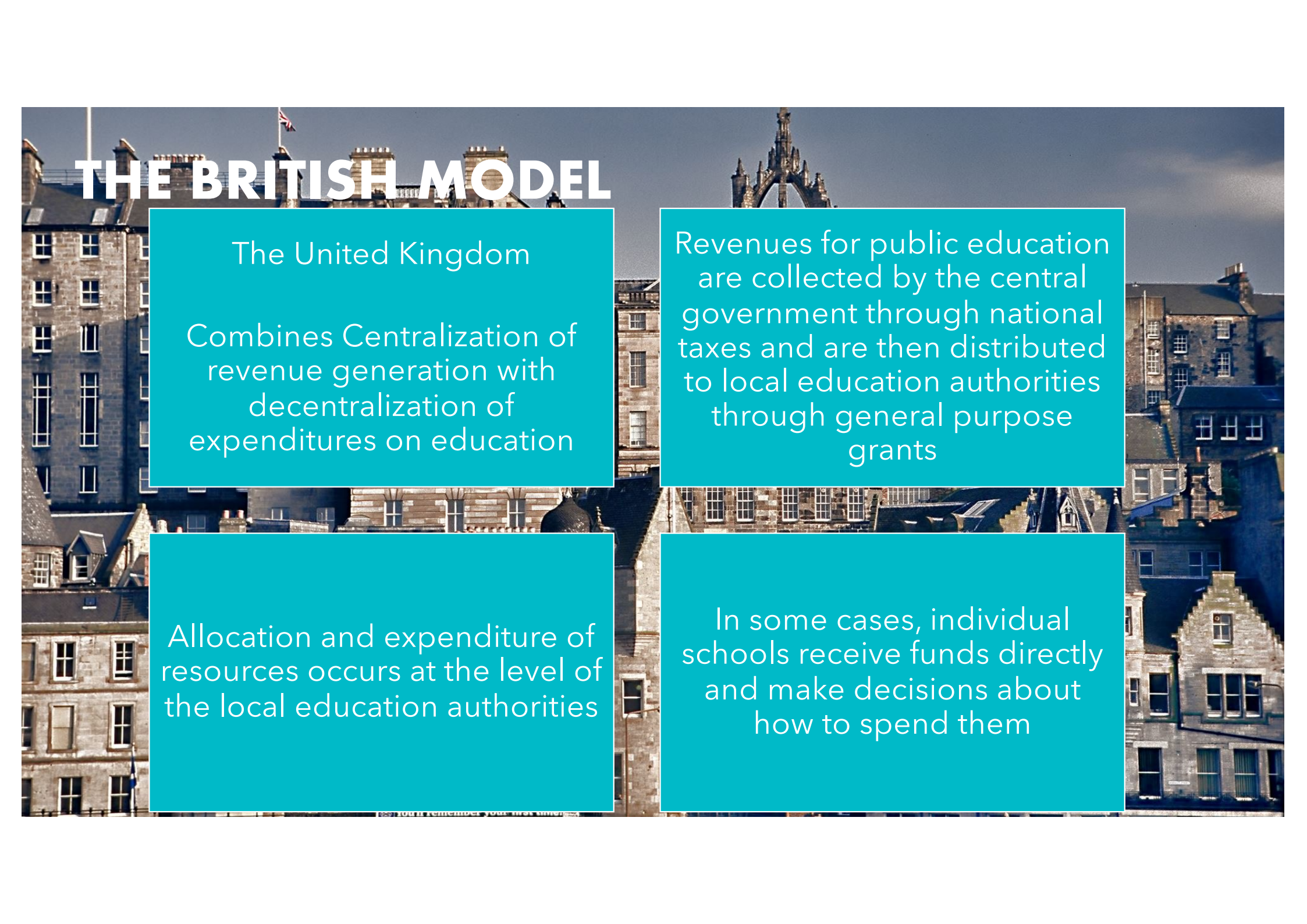
1. The North American Model
2. The British Model
3. The Continental European Centralized Model
4. The Continental European Federal Model



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 background of the slide is a photograph of a historic city street, likely in Edinburgh, Scotland. It features multi-story stone buildings with many windows, a flagpole with the Union Jack, and a Gothic-style archway in the distance under a clear sky.

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.

HOW SHOULD EDUCATION MONIES BE SPENT?



ALLOCATION
ACROSS LEVELS



ALLOCATION
ACROSS SCHOOLS



ALLOCATION
ACROSS STUDENTS



ALLOCATION
ACROSS PROGRAMS

- How much funding should be allocated to the various levels of the education system?
- How to distribute each pool of money among the schools within each level?
- Should some schools receive more money than others?
- How monies within a school should be allocated across students?
- Should more money be spent on some students than on others within the same school?
- What specific educational programs and materials should be purchased for use in schools?

ALLOCATION ACROSS LEVELS

- None of these countries spent equal amounts on the three levels.
- The majority of them spent the largest share of their education monies on secondary education with the others (South Africa) targeting primary education with the bulk of their monies.
- Most of these countries allocate less than a quarter of their funds to tertiary education.
- What are some potential justifications for these various allocation decisions?

Education Expenditure by Level as Percent of Total Public Expenditure on Education 2020, by Selected Countries (Percent)

Country	Government expenditure on education as a percentage of GDP
Australia	0.29
Chile	0.82
Finland	0.78
France	0.71
India	0.09
Iran	0.01
Japan	0.14
Poland	0.77
South Africa	0.10
Spain	0.50
Sweden	1.15
United States	0.34

Source: UNESCO

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.

A close-up photograph of a hand holding a blue pencil, poised to write on a document. The document features a table with multiple columns of data, including numerical values and percentages. The background is softly blurred, showing another person's hand and a warm, golden light source, possibly a lamp, creating a focused and professional atmosphere.

**Total government
expenditure on
education as a
percentage of total
government
expenditure (2020), BY
SELECTED COUNTRY
(PERCENT)**

OECD countries	Government expenditure on education as a percentage of GDP		
	Primary, secondary and post-secondary non-tertiary	All tertiary	Primary to tertiary
Australia	0.4	0.6	1.0
Austria	0.3	1.0	1.2
Belgium		1.2	
Canada			
Chile	0.7	2.8	3.5
Colombia	0.0	0.6	0.7
Costa Rica	0.5	0.5	1.0
Czech Republic		1.3	1.3
Denmark	1.0	0.9	1.9
Estonia			2.7
Finland	0.6	1.4	2.0
France		1.1	1.1
Germany	0.7	1.3	2.0

Source: OECD/UIS/Eurostat (2023). For more information see Source section and Education at a Glance 2023 Sources, Methodologies and Technical Notes (<https://doi.org/10.1787/d7f76adc-en>).

OECD countries	Government expenditure on education as a percentage of GDP		
	Primary, secondary and post-secondary non-tertiary	All tertiary	Primary to tertiary
Greece		0.6	
Hungary	0.1	1.3	1.3
Iceland	1.6	2.0	3.6
Ireland			0.4
Israel	0.2	1.9	2.0
Italy		0.8	0.8
Japan		0.3	0.3
Korea		1.2	
Latvia	0.5	2.1	2.6
Lithuania	0.5	2.0	2.4
Luxembourg		1.1	1.1
Mexico			1.7
Netherlands		0.8	0.8

Source: OECD/UIS/Eurostat (2023). For more information see Source section and Education at a Glance 2023 Sources, Methodologies and Technical Notes (<https://doi.org/10.1787/d7f76adc-en>).

OECD countries	Government expenditure on education as a percentage of GDP		
	Primary, secondary and post-secondary non-tertiary	All tertiary	Primary to tertiary
New Zealand	0.6	0.8	1.4
Norway	1.3	1.3	2.7
Poland		1.6	1.6
Portugal		0.8	
Slovak Republic		1.5	1.5
Slovenia	0.6	1.1	1.8
Spain	0.3	1.0	1.3
Sweden	1.1	2.2	3.3
Switzerland		1.2	1.2
Türkiye		0.7	
United Kingdom	0.1	0.4	0.5
United States		0.7	

Source: OECD/UIS/Eurostat (2023). For more information see Source section and Education at a Glance 2023 Sources, Methodologies and Technical Notes (<https://doi.org/10.1787/d7f76adc-en>).

Partner and/or accession countries	Government expenditure on education as a percentage of GDP		
	Primary, secondary and post-secondary non-tertiary	All tertiary	Primary to tertiary
Argentina	3.4	1.1	4.5
Brazil	3.6	1.2	4.8
Bulgaria	2.7	0.8	3.5
China			
Croatia	2.8	1.0	3.8
India	2.6	1.3	3.9
Indonesia			
Peru		0.7	
Romania	2.0	0.8	2.8
Saudi Arabia			
South Africa	4.5	1.1	5.6
EU25 average	3.1	1.2	4.3
G20 average	3.3	1.2	4.5

Source: OECD/UIS/Eurostat (2023). For more information see Source section and Education at a Glance 2023 Sources, Methodologies and Technical Notes (<https://doi.org/10.1787/d7f76adc-en>).

Gross Enrollment Ratios by Level 2020, by Selected Countries (Percent)

Country	Primary	Secondary	Primary to tertiary
Australia	99.90	137.49	121.45
Chile	99.70	103.69	100.90
Finland	99.82	143.12	117.54
France	102.73	104.43	93.86
India	101.29	75.11	70.18
Iran	104.48	87.07	
Japan	102.74	102.84	89.62
Poland	82.21	112.58	96.22
South Africa	99.74	110.02	84.38
Spain	103.41	117.37	106.95
Sweden	119.50	138.69	117.47
Thailand	99.43	103.30	85.84
United States	100.31	101.19	96.96

Source: UNESCO

- An investment's rate of return is essentially a measure of its profitability and provides valuable insight into investment behavior.
- Higher rates of return attract investment while low rates of return discourage investment.
- Public education expenditure ought to be guided, at least in part, by the rates of return, both social and private.
- Societal benefits feature prominently in the allocation decision-making process.
- Maximizing the societal returns from education is frequently cited as a justification for publicly-funded education.
- Given that monies are raised through public taxation, there is the expectation that public monies will be spent in ways that maximize societal benefits.

- The pattern of spending more per student at the level with the highest social returns does not hold for most of these countries.
- Per student spending at the tertiary level is almost twice that at the secondary level in Sweden.

- Educational expenditures are often used by governments to combat such inequality.
- E.g. many governments operate loan and grant programs to help students from disadvantaged backgrounds pay for tertiary education.
- By reducing the costs education, it is hoped that these programs will increase enrollment levels among these groups, enabling these individuals to realize the private returns.
- A desire to reduce inequality may be contributing to the higher per student expenditures at the tertiary level in countries such as Sweden.

- Educational expenditures can also, either intentionally or unintentionally contribute to societal inequalities.
- E.g. if only individuals from privileged backgrounds attend university, all the private benefits from spending at this level will be accumulated by them.
- Educational expenditures are maintaining inequality rather than reducing it – Brazil and South Africa.

- Inequality in the distribution of social returns can also be exacerbated by how education monies are distributed.
- Assume that educational attainment varies across segments of a society and that these segments of society are segregated in their residential and employment patterns.
- The social returns will accrue to the same individuals who received the private returns.
- Communities with high educational attainment will have higher incomes, fewer health problems, and lower crime than the communities with lower educational attainment.

ALLOCATION ACROSS SCHOOLS

A country's allocation of educational monies across schools within a level is influenced by at least two goals:

- **Expanding access** -helps increase the proportion of society to whom the returns to education accrue.
- **Improving quality** - can increase the returns themselves.
- How do these goals influence the allocation decision-making process?

EXPANDING ACCESS

The desire to meet the existing demand.

- Schools serving communities with low demand could receive additional monies for student outreach activities.

The preference to increase the current demand.

- New schools could be built in these underserved communities.

Allocating monies for this purpose is related to the desire of many governments to reduce societal inequalities.

IMPROVING QUALITY

- Due to differences across schools in the inputs used in the education production process, the quality of the educational output produced varies from school to school.
- Schools in certain neighborhoods have access to higher quality inputs simply as a result of the characteristics of the community it serves.
- Schools in communities serving students with higher socioeconomic backgrounds and those located in communities with higher employment rates, low crime rates and high levels of community support for education - are better equipped to produce a high quality education.

Given the heterogeneity across communities and the fact these inputs are outside the decision-making authority of educational leaders, many argue government educational expenditures should be targeted at school serving underprivileged populations.

- If these schools get more money, how should it be spent? -Teacher salary?
- All schools do not face the same per-student costs.

ALLOCATION ACROSS STUDENTS

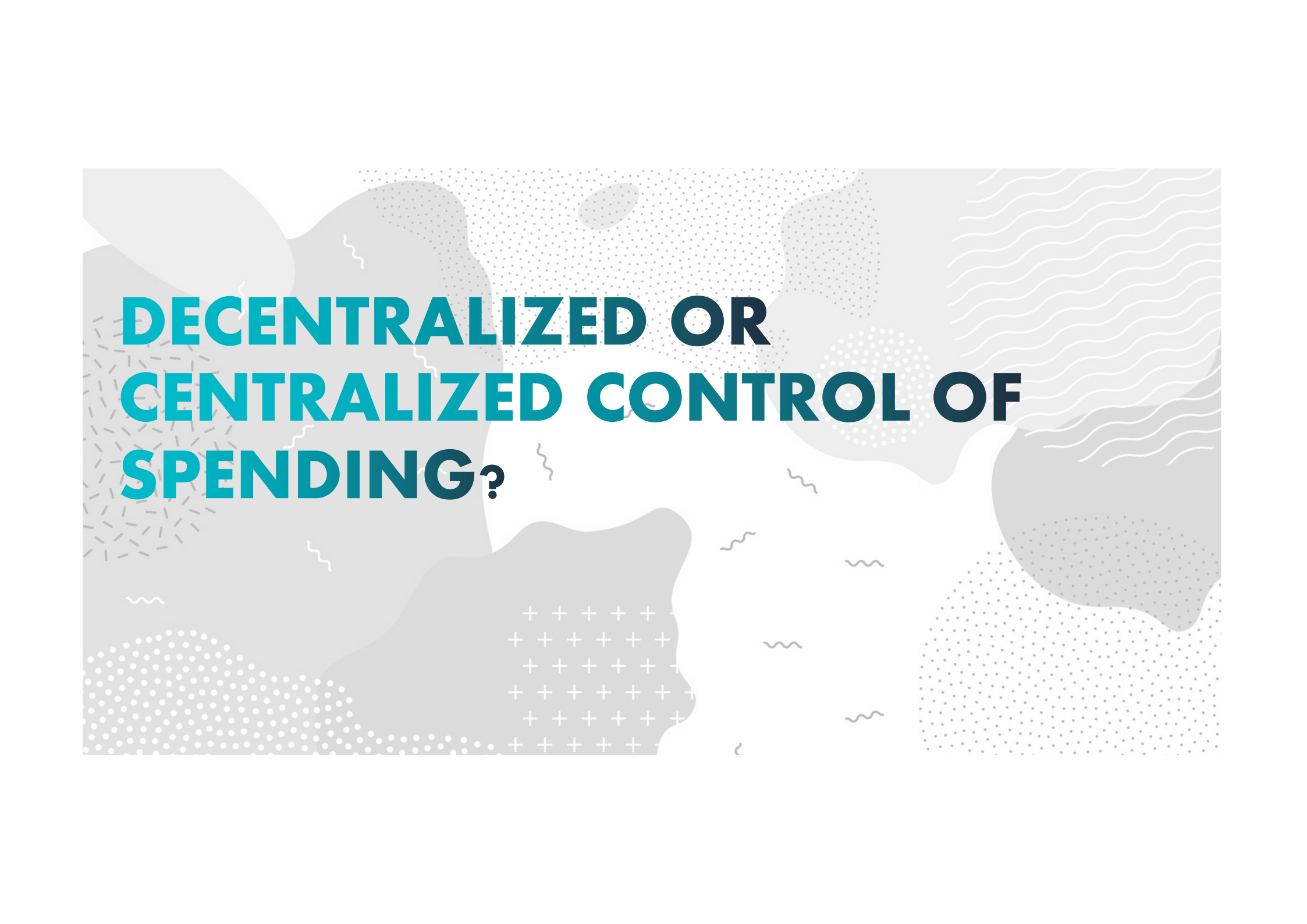
- All students within a school do not receive the exact same education and thus, the school does not spend the same amount on each student.
- E.g. Schools hire educational aides to work with those students with special educational needs.
- A school must pay more to equip laboratories for the teaching of science than classrooms for the teaching of history.
- Acknowledging inherent differences in cost, how should schools allocate their educational monies among their students? What criteria should schools use?

ALLOCATION ACROSS PROGRAMS

- When deciding which education programs to implement in schools, decision-makers are faced with a daunting array of choices.
- How do they choose which programs to use? – the usefulness of cost benefit and cost-effectiveness analytic techniques in these decisions.

Class activities:

- What are two goals that influence a country's allocation across schools within a level?
- Assume a school offers a gifted and talented program for its advanced students. The program provides students with an enriched curriculum including additional instructional materials and field trips as well as teachers with additional training. Provide a justification the school might make for why it spends more money on its advanced students relative to student performing at grade level.



DECENTRALIZED OR CENTRALIZED CONTROL OF SPENDING?

DECENTRALIZED OR CENTRALIZED CONTROL OF SPENDING?

- Control of school finances usually depends on the kinds of taxes used to finance education.
- E.g., if income taxes or national sale taxes (or value added taxes) are used to finance schooling, the central ministry generally controls teacher payroll and may control textbook purchases, administrative payrolls, and building maintenance.
- This leaves few or no financial decisions to local schools or local officials.

- If property taxes or local income and sales taxes form the main base of school finance, or if much of school funding is provided by private tuition, there would be much greater local control over school finances.
- Local financial control might be in the hands of a local school board, local government officials, a school director, or a parent council at the school.
- Even if taxes for education are collected at the national level, the central government may choose to distribute **“block grants”** to local municipalities to pay for education and other services.
- In such a case, the central government passes responsibility for how to spend resources on education to local government.

Example

- In the 1990s, the Swedish government decided to give block grants for social services to municipal governments, and those governments then decided how much to spend on education, negotiated their own contracts with the teachers' union, and decided how much to allocate to different types of spending within the education sector.
- Mexico, Argentina, and Spain give block grants to states/ provinces/ regions for education, passing financial responsibility to those sub-national areas for allocating resources to education.

- Either by choosing a taxation scheme that places local responsibility for financing education directly in the hands of local government or by the central government's "devolving" responsibility to local governments by giving them block grants, nations can decentralize financial decision-making in education to local political entities.
- Decentralization of the control over educational resource and technical decisions can therefore be decentralized by:
 - The way governments organize the public finance of social services; or
 - Through decentralizing the management of public spending on social services.

TYPES OF EDUCATIONAL SYSTEMS CHARACTERIZED BY CONCENTRATION OF EDUCATIONAL FINANCE AND MANAGEMENT

Educational Finance	Educational Management	
	Local (district school board, school parent council, school director)	Central (Ministry of Education)
Local (property taxes, local sales taxes, tuition)	Decentralized	Regulated
Centralized (income taxes, wealth taxes, national sales taxes, excise taxes)	Devolved	Centralized

THE BENEFITS OF DECENTRALIZATION

- The closer educational spending and management of school decision-making is to local communities, the more those decisions would reflect parents' and children's educational needs.
- Schools would operate more efficiently, and parents would feel greater ownership and loyalty to the school or the local school system.
- Parents would therefore be more likely to invest time, effort, and money in their children's achievement, and children would do better in school.

A voucher plan

- Each school gets to manage its spending and how it delivers education.
- The public sector can finance individual public schools with a certain amount per student enrolled, or the government can go farther and provide the same amount per pupil whether the school is public or private.
- Each school is given a fixed amount of public subsidy per pupil enrolled.
- If a school is well run and produces a high quality of education, it will attract more pupils and get more money.
- If the school is not very effective, it will lose pupils and get less money.

**The main promised
benefits of
educational
decentralization are**

Greater local control over schools

Greater parent participation

Greater teacher accountability

More competition among schools for pupils

POSSIBLE NEGATIVE EFFECTS OF DECENTRALIZATION

The promised benefits of decentralization **assume that all regions, municipalities, school districts, and schools have a reasonably high capacity to allocate resources efficiently.** This assumption is likely not to be valid in practice.

- Administrative capacity varies among local communities, particularly in less developed countries.
- Neither is there any guarantee that local communities are so democratic and participative that decentralizing education produces more equal and equitable treatment of all groups in the community.

- One possible negative effect of decentralizing educational management (devolution) or decentralizing both management and financing (decentralization) is that education becomes much more unequal without necessarily becoming more effective even for the better off students.
- Parents and teachers may make educational decisions that are not in the best interest of the children affected by these decisions. Information access, especially about a difficult to assess product such as teaching and learning, may be very unequal across social class groups.

EXAMPLES

- The relative impact of decentralization and privatization on overall student performance in countries such as Chile, Mexico, and Argentina.
- The evidence suggests that decentralization has had relatively little impact on overall educational “effort” in terms of investment in education or on student performance.

ARE CENTRALIZED EDUCATIONAL SYSTEMS REALLY MORE INEFFICIENT?

- Centralized educational systems are those that are financed nationally or regionally and heavily regulated by a centralized administration.
- In centralized systems, school directors have as their main task to implement the rules and regulations of the central administration. Curriculum and teacher hiring and supervision are also controlled from the center, usually by a certification/testing system and an inspectorate that visits schools periodically to insure that the centrally mandated curriculum is being properly taught.

- Centralized educational systems are therefore not inherently inefficient, as many claim. They tend to be inefficient if the bureaucracy that runs them is inefficient (or corrupt).
- If the central bureaucracy is inefficient, it is very likely that local bureaucracies would be inefficient.
- Decentralization would only transfer inefficiency to the provinces or municipalities.

Efficient centralized systems



have the advantage of providing more equal conditions of education for different groups and even compensatory education for the poor.



are much more likely to be able to control the quality of education across various social class groups, both by providing equal (or compensatory) funding per student and by developing programs targeted at low-income or otherwise disadvantaged groups.



can assure that teachers of equal quality serve in schools with different populations.