

**Globalization and Regionalization**

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**EDUCATIONAL FINANCE
IN WESTERN EUROPE:
SOME EXPERIENCES FROM
A TANGLED WEB****Abstract**

Education is one of the most important services provided by public governments in almost every country worldwide. However, the most important cross-country observations about education – like the PISA report by the OECD or the TIMSS by the IEA – focus only on international benchmarks to compare the knowledge capacity of pupils. This paper provides a general overview of the different forms how education expenditures are financed in ten European countries. We observe the educational system in Austria, Belgium, Denmark, France, Germany, Italy, Spain, Sweden, Switzerland and the United Kingdom and point out the similarities and national distinctions.

Key words:

Intergovernmental transfers, educational finance, Austria, Belgium, Denmark, France, Germany, Italy, Spain, Sweden, Switzerland, United Kingdom.

JEL: H7, H1, I2.

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(Continuation, beginning in the previous issue)

4. The financing of education providers and the different allocation mechanisms

The expenditures for education are not only spent in the educational institutions for recurrent expenses, capital investments, specific purposes and research, because the respective national education ministry and its regional and local administration bodies are also cost-intensive. Additionally, the indirect costs of education like the funding provided to students or their families by means of tax benefits, scholarships and subsidised loans to defray or delay the cost of tuition fees or living costs are also not redundant. However, in this section we only describe the different forms of allocation mechanisms for universities and highlight some similarities and differences for education providers at primary and secondary schools.

The political decision-makers have the following options to finance the universities:

- *Earmarked grant based funding*, the ministry of education shifts earmarked funds to a small number of universities or just even one university for a specific purpose. A handicap of grants for special purposes or earmarked grants is that they excluded per definition some universities and the grant receiving university is limited in its autonomy; because the university is only able to spend the fund on projects with are covered by the goal of the grant. In Italy the central government and the province of Bozen-Southern Tyrol have arranged special treatments for the University of Bozen, because it is a trilingual university and the province is dominated by a German-speaking majority.
- *Block grant based funding*; the ministry of education transfers to each university or to an assembly of all universities a single block grant. A huge advantage of this form of funding is that the universities receive more flexibility and autonomy to launch their «own» funds, but if the amount of the block grant is not determined by a transparent formula but rather by political goals, the danger of political pork barreling is omnipresent. An interesting solution to avoid such political pork barreling exists in England with the Higher Education Funding Council for England (HEFCE). The HEFCE was founded in 1992 and is not part of the central government or one of its departments. Therefore the HEFCE works within a policy framework set by the Secretary of State for Education and Skills, but is not part of the Department for Education and Skills (DfES). After receiving a block grant from the central government the HEFCE distributes by its independent decision the

funds to 87 universities and 45 specialist institutions and general colleges in England.

- *Formula based funding*; the ministry of education allocates the funds to the university based on a general formula. The factors of these formulas can be input-orientated – like the number of enrolled students at the universities, the number of employed staff at the universities or the salary amount of the university staff – or output-orientated, e.g. the number of students who are completing a university degree or the number of research publications in referred journals. In Switzerland, the central government uses input-orientated factors for its formula to determine its basic subsidies to the universities as well as the horizontal, inter-cantonal education equalisation system. The respective formulas mainly consider the number of enrolled students for the legal duration of their studies at each university and weigh the academic disciplines differently, e. g. a PhD student has more weight than a bachelor student and a physics student has more weight than a business administration student. An output-orientated formula based funding can be found in Denmark. In 1994 the taximeter model was used for the university for the first time and the Danish tertiary education institutions do not receive any funds for students who do not take exams or who fail their exams¹. Using such an allocation mechanism, the taximeter model creates such positive incentives for the universities to reduce the duration of study and the dropout rates of the students. But on the other hand, a strict teaching quality control is necessary, because for a faculty or university it is now attractive to lower the work effort or to shift the failed student just to the lowest mark for passing the exam.
- *Contract based funding*; the ministry of education distributes the funds to the universities based on a contract. The contract includes general goals and a very detailed description for the universities and can be input or output-orientated. Moreover, in contracts with a medium or long term duration it is possible to incorporate some penalties if one of the contract parties does not comply with the contract; e.g. the central government can hold back or even cut the funds in a three-year contract, if the university does not uphold the contract. A perennial contract based funding provides the universities with planning reliability and fund autonomy as long as they receive the goals and on the other hand the ministry of education is able to control and, if necessary, to punish the universities. In France the ministry of education accredits all degree programmes of the universities. Since 1989 the universities have had to renew their accreditation every four years and the ministry of education uses this procedure to evaluate the university and

¹ However, it has to be borne in mind that this feature is only one of the four components of the complete taximeter model.

conclude individual contracts with each university. Indeed the funds of the contracts from the central government are not that important like the salary of university staff or the subsidies for the maintenance of the buildings, but the French universities take these reaccreditations very seriously. In Austria the central government concludes with every university an individual performance agreement (*Leistungsvertrag*) for a term of three years. The university develops the draft of the performance agreement, which can be negotiated between the university and the ministry of education. Compared to France, the Austrian contract funding is very embarrassing, because with the new three year period starting in 2007 nearly 80% of the transfers from the central government to the university are determined by the contract. Furthermore, the Austrian ministry of education has implemented a strict funds reduction if the universities default.

- *Competitive funds (mainly for research expenditure) based funding*, the ministry of education announces a tender of funds and the universities submit their proposal for receiving the funds. The competitive element of this allocative mechanism is that not every proposal of the university can be fulfilled and based on the evaluated ranking – this ranking can be arranged by the ministry of education itself or an independent evaluation institution – only a minority of universities or even one university receive the funds. Competitive funds are mainly used for funds regarding the research of universities in Europe. Since 1951 in Germany the German Research Foundation (DFG – *Deutsche Forschungsgemeinschaft*) has existed and it is funded by the central government and 16 states.² Every university, faculty or even a academic person can submit their proposal for research funding to the DFG and the DFG rejects or approves the proposal. The politicians of the central government and the states are represented in all decision-making bodies, whereas scientists and academics hold the majority on the DFG boards. Fairly similar institutions to the German DFG are the Austrian Science Fund (*FWF*), the Swiss National Science Foundation (*SNF*), the Belgian National Fund for Scientific Research (*FNRS*), the Spanish Office for Science and Technology (*OCYT*), the Italian National Research Council (*CNR*), the French National Scientific Research Centre (*CNRS*), the Danish National Research Foundation (*Grundforskningsfonden*) and the Swedish Research Council (*Vetenskapsrådet*). In the United Kingdom no single institution exists which includes research funding of all relevant scientific disciplines; rather, a number of different public research funding institutions can be found and the most important are the Economic and Social Research Council (*ESRC*), the Engineering and Physical Sciences Research Council (*EPSRC*) and the Medical Research Council (*MRC*).

² In 2007 the DFG has a budget of € 1.7321billion and is funded by 62% by the central government and by 36% by the 16 federal states.

- *Registration fee based funding*; a further option for the ministry of finance is that universities obtain the permission to ask the students for a registration fee or even general tuition fees. In Europe a tuition free study is a «holy cow», because in some countries – namely in France and in the Scandinavian countries – free education access is the goal of the politicians as well the majority of the voters. The supporters of the idea to avoid tuition fees believe that education is a public good and tuition fees will prevent potential students from blue-collar families from embarking on a university career and only students from rich families will be able to go into higher education. It is undoubtedly true that tertiary education has a positive impact on a nation's economy and therefore a complete private university system is not reasonable. However, the policy of banning tuition fees, which was practised in Germany and France over decades, has not generated a higher portion of students from blue-collar families in the universities compared to countries with tuition fees. The United Kingdom introduced tuition fees in 1998 and Austria, Spain and Italy and Portugal have since followed suit. In Germany with the strong position of the 16 states in all education affairs the situation exists that some states have recently introduced tuition fees while the majority of the states still forbid the universities to use such a revenue source from the direct education consumer.

Additionally to the different financing systems of the universities in Europe we present some good samples of the administration and funding of the primary and secondary schools. Since 1814 the right of a seven-year education has existed in Denmark and the institution of a comprehensive school (*Folkeskole*) is therefore even older than the first Danish constitution of 1849. Today the *Folkeskole* is a municipal matter and the central ministry of education fixes only the minimum number of teaching hours per pupil or the general goal of the curriculum and publishes curriculum guidelines for the individual subjects. The published curriculum guidelines are recommendations and as such are not mandatory as long as the general goals of the curriculum are not undermined. For this reason each Danish municipality is responsible for all elements of the *Folkeskole* like planning and the establishment of the school hire and fire of the teachers as well as the school head, the size of a class and the number of teaching hours. The municipalities themselves are able to delegate some of the decisions or even all decisions regarding the local *Folkeskole* to elected school boards (*Skolebestyrelse*). The school boards are elected bodies consisting of the pupil, the parents of the pupils and the school head. The pupils are elected for one school year and the parents, who have the majority of seats of the school board, have a legislative period of four years. The school board decides about the textbooks, the distribution of the school budget funded by a block grant by the municipalities and, if the municipalities have delegated this right, about the class size, number of teaching hours and the teacher selection as well as the teacher salary.

Furthermore, in Denmark a transparent regulation of funding of primary and secondary private schools exists. Parents are free to decide to send their children instead of a public Folkeskole to a private school and the state will cover 80–85% of the total current expenditure cost of the school and the remaining 15–20% of the current education cost has to be paid by the parents themselves. The private school has to be non-profit orientated and not linked to other private schools. Private schools have to generate their own «starting school budget» and construct their school building without any public financial support and receive the public funds after the first school year. The private schools have to create, like the Folkeskole, school boards on which the parents also have the majority of the seats. The majority of the Danish private schools are Christian religious schools, Rudolf Steiner schools, German minority schools or Muslim³ religious schools.

5. Conclusion

The goal of this paper was to provide a brief overview how the educational costs are considered in the respective transfer and grant system of ten European countries. Moreover, the paper has tried to classify the different conceptions and points out the strengths and weaknesses of the respective education system.

However, the author does not suggest that any of the ten European systems is the «unique golden example» for other industrialised or developing countries at all, because in the area of educational finance it is similar to the principle consulting rule for fiscal federalism reforms that the phrases «one size fits all» is quite redundant. For example, for a developing county the benefits of a detailed expenditure needs equalisation system like in the Nordic countries could be lower if the intensive cost to provide and prepare the necessary statistical data is borne in mind. Also, the reasonable horizontal education equalisation system between the Swiss cantons in University financing to reduce the spillover effect can develop its full successful impact only in a country which has a high subnational tax sovereignty and direct democracy options. Furthermore, a university building planning commission like in Germany needs a political background, which is described by Spahn and Franz quite skilfully as «*Consensus Democracy and Interjurisdictional Fiscal Solidarity*» [28: 122].

Nevertheless, the presented European transfer systems and their impact on the education system can be used as a spin-off for various sectors of fiscal reforms. Therefore, it will be interesting to observe whether fiscal federalism reform tendencies in the mentioned ten European countries will have an impact on education in Europe in the future.

³ The majority of the Moslem immigrants – mainly from Turkey – prefer to attend the public comprehensive schools and the immigrants in Denmark are included in the daily school lives more than in France or Germany.

6. Appendix

Table 1

Survey of some empirical research results of factors which affect the education output

Factor	Empirical result	Literature
<i>Personal situation of the pupil::</i>		
Socio-economic background of the pupil	Pupils with academic parents and high number of available books at home reach better performance than pupils from blue collar families and a lower number of books	Entwistle, Alexander and Olson, 1997; Cameron / Heckmann, 2001; Albouy / Waneck, 2003, Plug, 2004; Schütz, Ursprung and Wößmann, 2008; Schütz / Wößmann, 2005
Pupils from immigrants	Pupil with a migration background poll badly, however the main reason for this circumstance can be found in their socio-economic background	Entorf / Minoiu, 2005
Gender of the pupil	Female pupils have a better reading performance than male pupils, while male pupils in general perform better in Mathematic and Natural Science than female pupils	Fuchs / Wößmann, 2007
<i>Equipment and personal resources of the school</i>		
Total expenditure per pupil	No significant effects on the pupil performance	Hanusek, 2003
Class sizes	No significant effects on the pupil performance	Meuret, 2001; Hanushek, 2003; Wößmann, 2003
Class sizes and teacher salaries as well as teacher qualifications	Positive effects on the pupil performance	Hedges et al, 1994; Sutton and Soderstrom 1999; McNeal, 1997
Ratio of computers per pupil	No significant effects on the pupil performance	Fuchs / Wößmann, 2004
General teaching materials	Textbooks and construction materials have the highest impact of all education utilities on pupils' performance	Pritchett / Filmer, 1999; Fuchs / Wößmann, 2007

Factor	Empirical result	Literature
<i>Institutional environment</i>		
Infantile education / preschool	Positive effect on the pupil performance, especially on pupils with a migration background	Currie, 2001; Cunha, Heckman, Lochner and Masterov, 2005
Ratio of trade union members per total number of teachers	Negative effect on the pupil performance	Hoxby, 1996
Competition between private and public, state run schools	Positive effect on the pupil performance	Neal, 2002; Hoxby, 2003

Source: own illustration.

Table 2.

Distribution of the tax revenues in Austria between the Bund, states and municipalities in 2001 and 2005

	2001				2005			
	Bund	States	Municipalities	€ billion	Bund	States	Municipalities	€ billion
Tobacco tax	100%	–	–	1.234	73.204%	15.191%	11.605%	1.337
Insurance tax	100%	–	–	0.814	73.204%	15.191%	11.605%	1.135
Payroll tax	100%	–	–	3.876	73.204%	15.191%	11.605%	2.071
CIT	71.891%	14.941%	13.168%	6.235	73.204%	15.191%	11.605%	4.418
PIT	71.891%	14.941%	13.68%	3.814	73.204%	15.191%	11.605%	2.235
Wage tax	71.891%	14.941%	13.168%	15.154	73.204%	15.191%	11.605%	16.414
VAT	67.437%	18.341%	14.222%	16.48	73.204%	15.191%	11.605%	17.94
Tax on mineral oil	91.91%	6.75%	2.394%	2.880	73.204%	15.191%	11.605%	3.565
Property tax	–	–	100%	0.479	–	–	100%	0.523*
«Local tax»	–	–	100%	1.797	–	–	100%	1.946*
Petty taxes	–	–	100%	0.734	–	–	100%	0.734*

* tax revenues in 2004.

Source: Werner, 2008, page 179.

Table 3.

Tax revenues assignments between the central government, the federal states and the municipalities in 2006

	Central Government	Federal States	Communities	Revenues in 2006
Consumption taxes	100%			€ 72.938 billion
Inheritance tax		100%		€ 3.763 billion
Property tax			100%	€ 10.398 billion
Personal income tax	42.5%	42.5%	15%	€ 152.082 billion
Value added tax	51.4%	46.4%	2.2%	€ 146.688 billion
Corporate income tax	50%	50%		€ 22.808 billion
Interest rebate	44%	44%	12%	€ 7.633 billion
Trade tax	14.8%	7.7%	77.5%	€ 38.369 billion

Джерело: Werner, 2008, с. 102.

Table 4.

Fixed portion from tax-sharing for the five Italian Special Statute Regions (SSR)⁴

	Valle d'Aosta	Trentino-Alto Adige	Sicily	Sardinia	Friuli-Venezia Giulia
PIT	90%	90%	100%	70%	40%
CIT	90%	90%	100%	70%	40%
Interest rebate	90%	90%	90%	–	–
Stamp tax	90%	90%	90%	90%	–
TV tax	–	90%	100%	–	–
Motor vehicle tax	90%	90%	100%	–	–
Inheritance tax	90%	90%	100%	50%	–
Alcohol tax	90%	90%	100%	90%	–
Beer tax	90%	90%	90%	90%	–
Tax on mineral oil	90%	90%	100%	90%	–
Electricity tax	90%	100%	90%	90%	100%
Tobacco tax	90%	90%	100%	90%	–

Source: Brosio, 2004, page 19.

⁴ In Italy the 20 regions are divided into 15 Ordinary Statute Regions (*a statuto ordinario*, OSR) and five Special Statute Regions (*a statuto straordinario*, SSR). Similar to the two Spanish «foral» Autonomous communities, the five SSR receive a higher tax-sharing portion than the 15 OSR, but on the other hand they are not included in the equalisation system and receive only vertical grants from the central government.

Table 5.

Distribution of the tax revenues in Spain between the central government (CG), the regions and the municipalities for 2002-2006

	«Foral» regions and CG			15 regions and CG		
	CG	Region	Municipalities	CG	Region	Municipalities ⁵
Personal income tax	–	100%	–	67%	33%	–
Corporate income tax	–	100%	–	100%	–	–
Value added tax	–	100%	–	65%	35%	–
Tax on mineral oil	–	100%	–	60%	40%	–
Tobacco tax	–	100%	–	60%	40%	–
Alcohol tax	–	100%	–	60%	40%	–
Property tax	–	–	100%	–	–	100%
Insurance tax	–	100%	–	100%	–	–
Local trade tax	–	100%	–	–	–	100%
Tax on vehicles	–	–	100%	–	–	100%
Tax on vehicle accreditation	–	100%	–	–	100%	–
Tax on electricity	–	100%	–	–	100%	–

Source: author's own illustration.

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⁵ Since 2004, cities with more than 50,000 inhabitants and capitals of provinces have received 1.6975 % of the PIT, 1.7897 % of the VAT and 2.0454 % of the consumption taxes. Moreover, cities with a population between 20,000 and 75,000 and with a high number of tourist received also a fixed portion from the tax on mineral oil and the tobacco tax. Furthermore, the provinces participated at the tax sharing at the PIT, VAT the consumption taxes since 2004. Due to this new introduced tax sharing between local authorities and the central government a huge number of vertical grants were abolished.

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