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## **Economic Models of Higher Education: An International Perspective**

**Summary:** *As other sectors, higher education can be characterized by the combination of market mechanisms and state intervention in its funding and organization. Although higher education systems of developed countries pursue similar goals (provide high-level manpower, meet individual and social demands, etc.) and face similar challenges (massive expansion, internationalization, MOOCs, etc.) their economic models differ significantly. In some countries, universities are public and charge no or very low tuition fees, whereas in other countries, the cost-sharing with parents and students is much more demanding. The paper will try to underscore and explain these differences by drawing on the lessons of economic analysis and on the historical and cultural background of countries.*

**Keywords:** *higher education, public good, market mechanisms, cost sharing*

**Резюме** (Пьер Бруно Руффини: Экономическая модель высшего образования: международная перспектива): *Как и другие секторы, высшее образование может быть отмечено комбинацией рыночных механизмов и участием государства в финансировании и организации. Хотя системы высшего образования индустриальных стран преследует аналогичные цели (они задействуют высококвалифицированных специалистов, выполняют индивидуальные и социальные требования и т. д.) и решают аналогичные задачи (массовая экспансия, интернационализация, МОДК и т. д.), их экономические модели значительно отличаются. В некоторых странах университеты являются государственными учреждениями и предлагают бесплатное обучение или обучение за очень низкую плату, в то время как в других странах участие родителей и студентов в расходах на обучение намного выше. В статье предпринимается попытка выявить и объяснить разницу между данными отличиями, с учетом теорий экономического анализа и исторических, культурных и национальных аспектов.*

**Ключевые слова:** *высшее образование, государственное имущество, рыночные механизмы, участие в расходах*

**Zusammenfassung** (Pierre-Bruno Ruffini: Ökonomische Modelle der Höheren Bildung: Eine internationale Perspektive): *Wie andere Sektoren, so kann auch die Hochschulbildung durch die Kombination der Marktmechanismen und der staatlichen Intervention in der Finanzierung und Organisation gekennzeichnet werden. Obwohl die Hochschulsysteme der Industrieländer ähnliche Ziele verfolgen (sie bieten hochqualifiziertes Personal, erfüllen die individuellen und sozialen Anforderungen, etc.) und stehen vor ähnlichen Herausforderungen (massive Expansion, Internationalisierung, MOOCs, etc.) unterscheiden sich ihre wirtschaftlichen Modelle deutlich. In einigen Ländern sind Universitäten öffentlich und verlangen keine oder nur geringe Studiengebühren, während Kostenbeteiligung der Eltern und Studierenden in anderen Ländern viel anspruchsvoller ist. Der Artikel versucht, diese Unterschiede zu unterstreichen und zu erklären. Dabei werden die Lehren aus der wirtschaftlichen Analyse sowie historische, kulturelle und nationale Hintergründe berücksichtigt.*

**Schlüsselwörter:** *Hochschulbildung, öffentliches Gut, Marktmechanismen, Kostenteilung*

### **Introduction**

Educational innovations, which constitute the core topic of this symposium, depend, among other factors, on the money education institutions can afford to spend on them. In most developed countries, higher education (the so-called “tertiary level”, in the international organizations’ vocabulary)

has experienced dramatic changes in the last forty years: massive expansion of enrollments, internationalization, adaptation to the digital world, etc. The traditional university model has been challenged culturally and economically: economic pressures have gained ground overtime and public subsidies have declined in several countries. In the current economic environment, facing increasing demand for higher education is a major policy challenge.

In this paper, our purpose is twofold: to address higher education both from an economist's point of view and from an international perspective. We would like to answer basic questions such as: What makes higher education something specific, according to economic analysis? How much does money matter in pursuing goals of economic efficiency and social equity? Should higher education be funded preferably by private contributors (students, companies...) or by public subsidies? How do responses differ across countries? Are there typical "national models" of higher education? In the limited format of this paper, our purpose is to try to answer these hotly debated questions in a brief and simple manner that should be easily understood by those who are not familiar with economic analysis.

Two keys of understanding, one analytical, the other historical, must be put forward before entering the discussion. First, the distinction between "market" and "state" is an essential prism through which higher education as an "industry" (or economic sector) can be scrutinized. Contrary to other industries such as automobile or pharmaceuticals, which in most developed (capitalist) countries are entirely run by private companies competing on open markets, higher education generally features a combination of market mechanisms and state intervention in its funding and provision, and we will explain why below. Suffice here to point out that market and state act as primary colors, with a general and normative question: where should the cursor be placed between market and state in the higher education industry?

The other key of understanding is historical. Over the last forty years or so, the cursor has moved. The historical trend is that market mechanisms have gained ground in higher education systems of most developed countries. A major indicator is the increase in the share of private funding in the higher education expenditure of most OECD countries, although public funding still represents a large part. This trend is generally explained by the growing demand for higher education observed during the last thirty or forty years, in a context of shortage of public funds. This shift in the balance of public and private funding will be documented below. This market-oriented evolution is being manifested in several forms: introduction or rise in tuition fees, extension of student loans, development of self-financed or profit-making private universities, emergence of foreign providers of higher education under the auspices of the World Trade Organization and the General Agreement on Trade in Services, etc.

For these reasons, the debate is very topical between those who believe that public support to students should be significantly increased, and those who advocate a larger place of private funding in the "cost sharing" of higher education. In this debate, ethical principles and philosophical preferences about the organization of society intimately intermingle with economic arguments.

Keeping in mind this change of the paradigm of higher education, we will organize our reflection as follows. We will first present the basic concepts of the economics of higher education (II). We will then explore the diversity of national situations (III) and discuss the combination of public and private commitment in higher education (IV) before concluding (V).

## **Basic concepts of economics of higher education: a brief review**

### *Analytical background: the market and the state*

In our modern societies, the market and the state are the two poles of economic organization, that is, the two basic ways by which the allocation of economic resources (goods and services, factors of production such as labor and capital) is achieved.

When market mechanisms are at work, allocation is driven by selling and buying decisions made by millions of economic agents on free markets. Suppliers of goods and services are private profit-seeking companies. Prices tend to reflect production costs. Economists generally argue that, provided that competition is fair, such a market-driven organization ensures that economic resources are directed to their most efficient use.

Besides its sovereign function in setting the regulatory framework of economic activity, the state can commit itself in the production of goods and services through public companies and administration. The economic model is then specific: such public services are available to consumers for free or at a fee that covers only a small part of the cost. Providers of public services fund their expenses from government subsidies. Social goals, such as correcting income and wealth inequalities and improving equity, are pursued through the state-funded provision of such services.

In today's economies, no one objects to the commitment of the government in the economic sphere. But some (liberals) argue that the state should limit its role to guaranteeing the optimal working of market mechanisms, in order to ensure fair and effective competition, while some others think that the state should exert a larger control on the economy, through fiscal and monetary policies (in order to ensure macroeconomic stability) and through the provision of public services. Any country can be looked into through this prism: what are the respective roles played by the state and by market mechanisms in the working of the national economy?

Within national economies, the same question can be raised at the industry (sector) level: in a given industry (oil, automobile, banking...), what is the respective importance of market mechanisms and of state intervention? The answer depends on the sector which is considered. On the market/state axis, some sectors are closer to the "state pole" than others for social (healthcare) or national security (defense) reasons. This is also the case for higher education. Although sharp differences exist across countries, higher education in developed (OECD) countries stands on average closer to the "state pole" than to the "market pole".

However, as already noticed, the picture has changed overtime and market mechanisms in developed countries play a greater role than half a century ago. Nevertheless, such changes have not been so critical so far that they could eliminate the distinction between the two canonical national models of higher education: the "social-democratic model" – that is, a welfare-state-inspired model where funds for higher education are largely collected from the tax payer and transformed through redistributive schemes into subsidies to universities and financial aid to students; and the "neo-liberal model" (Meyer, John, Chankseliani & Uribe [2013]), where private funding dominates in the budgets of higher education institutions, and where bank loans play an important role in financial support available for students.

## *Higher education is a public good that generates important positive externalities*

We must first recognize that education is an economic good. The production of education services entails economic costs, and those who consume it have to face a dedicated monetary spending. It is thus relevant to consider higher education as an economic activity and as an economic sector, and therefore to analyze its production and consumption with the help of economic tools.

There is no country where higher education is fully ruled by market mechanisms and private suppliers. On the contrary, and we will illustrate this below, the public sector of higher education is dominant in most countries, and exclusive in some of them. The common pattern is that government plays a direct role in the provision of higher education. But the public/private or state/market mix is quite variable across countries.

Why is higher education not a 100% private business, and why is higher education by tradition thought to belong to the “public sector”? Economic analysis gives two answers to these questions.

The first answer is that higher education is a public good. The starting point is that higher education provides knowledge, and knowledge is a public good. For more than half a century, economic theory has identified public goods in general by the two properties of “non rivalry” and “non excludability”: being consumed by one individual does not reduce the availability of the public good to others and no one can in principle be excluded from its consumption. National security or street lighting are among the most often examples of public goods quoted in textbooks.

However, one may question that higher education fulfills both characteristics of a “pure” public good. In most countries, access to higher education is restricted by specific requirements, and this means that the non excludability property is not satisfied, as it is possible to exclude some individuals from consuming it. In that sense, higher education should rather be seen as a “partial” (excludable) public good.

The second answer is that higher education generates positive externalities. A positive externality is a positive spill-over effect which arises when an economic agent produces or consumes an economic good. Spill-over effects take the form of benefits of higher education for the society as a whole, and not only for the individuals having followed university curricula. In other words, “positive externalities” is a technical naming for these public or social benefits arising from individuals having received university education.

Engaging in a tertiary degree curriculum is not compulsory. It expresses a personal choice of the student (and of his/her family, which most often will have to cover the costs). This choice is made from a cost/benefit analysis, which is not an easy exercise as costs are immediate and certain, whereas benefits occur in the longer term and are uncertain. Among the many private (personal) benefits accruing from higher education are better opportunities on the labor market, higher earnings, higher savings, higher social status, etc. Economists are interested in calculating the rate of return of higher education, and surveys show that higher education graduates benefit from wage premiums against individuals with only secondary education (see Sanyal / Martin, 2006).

As a public good, higher education brings benefits not only to the individuals, but also to the whole society. Private benefits accruing to those who have graduated at higher education institutions must be compared to the benefits that the society will reap from investing in higher education. The core idea is that, although private benefits may be high, social benefits (monetary and non-monetary) are

even higher: here lie the positive externalities, which are diverse and numerous (see: Tilak, 2008).

Three sources of positive externalities can be distinguished. Firstly, research and teaching at universities are a major source of production and dissemination of knowledge. Scientific results, new ideas and innovations irrigate the whole social body. Knowledge is a public good, with an open access, and when embedded by entrepreneurs in new investments, it increases the quantity and quality of goods and services (including public services) offered to all. Endogenous growth theory, which has been developed since the 1980s (Romer, 1994), explains the crucial contribution of R&D and of human capital to economic growth. Thus, higher education is a major input of a knowledge-based economy.

Secondly, higher education feeds the labor market and the society with highly skilled manpower, which allows for increases in workforce productivity and favors professional mobility. The positive impact of education and human skills on economic growth and development is a widely recognized externality. Thirdly, universities contribute to the building of student's personality, they assist in transmitting moral and social values to individuals and inculcate core virtues. They play a role in the formation of a nation-state spirit and by educating people, they enhance the participation in debates on societal issues. By favoring equality of opportunity between individuals, they also play for social harmony.

### *Involvement of the state in the supply of higher education*

Having recognized that higher education is a public good that generates positive externalities and serves the public interest, the next step is to understand why this entails state funding and support. The main reason explaining why higher education is a matter for governments is that the social benefits of higher education are higher than individual benefits. In the absence of the state (pure market situation), higher education would be under-produced and under-consumed.

In a pure market situation, there would be an underproduction of higher education. Universities would be private companies that would only take into account the private benefits of their activity regardless of the external benefits accruing to the society, for which they would not receive any monetary return. In a pure market situation, private providers of higher education would lack incentives to push their production up to the socially optimal level. This is the reason why, as a public good, higher education, at least for a part of it, has to be financed by the state.

In a pure market situation, there would be an under-consumption of higher education. Using the vocabulary of economists, higher education is a "merit good", according to the denomination introduced by Richard Musgrave. A merit good produces social benefits that are higher than private benefits. When consuming higher education, students (and their families) only take into account the private benefits they expect from it. But they do not take into account (or undervalue) the external benefits accruing to the society. In other words, in a pure market situation their spontaneous consumption of higher education would reach a sub-optimal level, depriving the society of an abundant harvest of social benefits. Because of this gap, a merit good would be under-consumed and thus under-produced. In order to reduce the gap, the government policy consists in offering the good for free or at a very low cost, in order to push upwards its consumption. In some sense, the society – represented here by the state – is supposed to be more forward looking than the individuals and to know better than them what they need to consume. This argument explains why higher education, which is not compulsory, is made accessible to the greatest number of people through various incentives which reduce its monetary cost for students and their families.

In sum, the divergence between individual and social benefits of higher education explains why it

cannot be provided on markets by individual gain-seeking actors in a manner that satisfies social demand. Adding to this basic argument resulting from economic analysis, equity considerations play a role: without a strong public policy dedicated to mitigate social disadvantages, students with lower social backgrounds might not be able to enter higher education institutions.

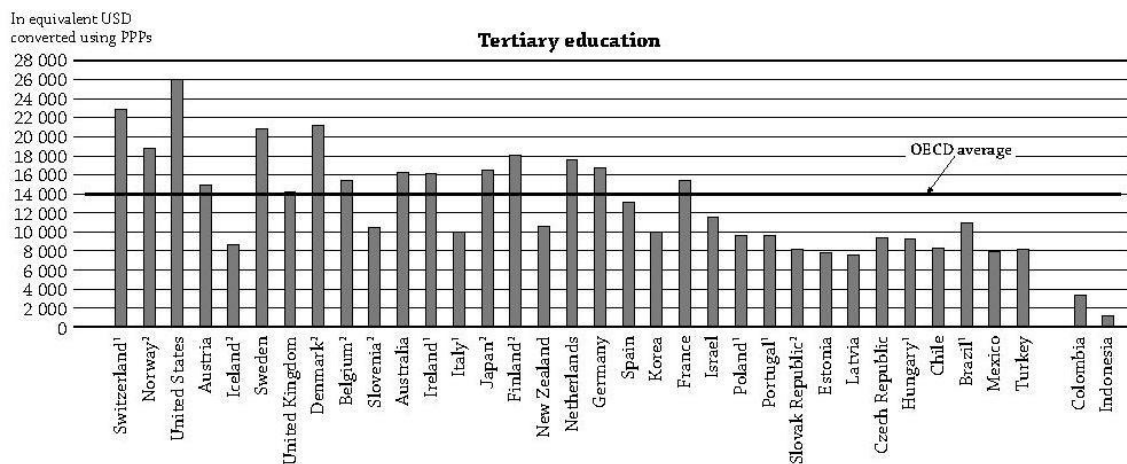
## An international outlook of the higher education sector: the diversity of national situations

In order to carry out this comparative analysis, we draw here on data gathered by the OECD (OECD, 2014) in the frame of the Indicators of Education Systems (INES) program. Their large geographical coverage gives an accurate view of the similarities and differences between higher education systems of developed countries. We select figures related to tertiary (higher) education, which great bulk is provided by universities. In what follows, figures refer to year 2011.

### *How much do countries spend for higher education?*

To answer this question, a very telling indicator is the annual expenditure per student. In the following tables, the annual expenditure per student includes all sources of funds (that is, public funding – including R&D expenditure – individual contributions of students and their families, and other private funding from companies and non-profit organizations).

**Table 1: Annual expenditure per student for tertiary education (2011) (In equivalent USD converted using PPPs, based on full-time equivalents)**



1. Public institutions only (for Colombia, in tertiary education only; for Italy, except in tertiary education).  
 2. Some levels of education are included with others. Refer to "x" code in Table B1.1a for details.  
 Countries are ranked in descending order of expenditure on educational institutions per student in primary education.  
 Source: OECD, Table B1.1a. See Annex 3 for notes ([www.oecd.org/edu/eag.htm](http://www.oecd.org/edu/eag.htm)).  
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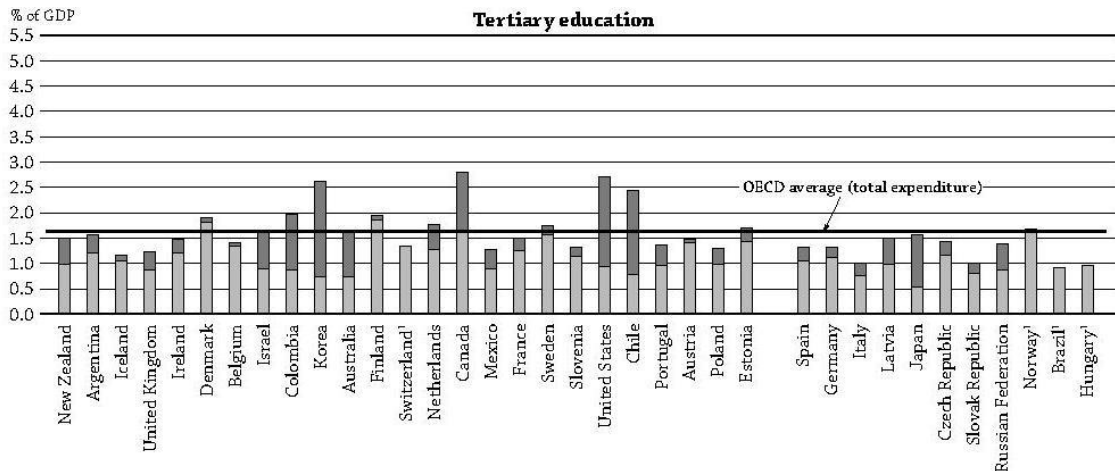
Source: Adapted from OECD (2014), op. cit., p. 207. A part of the disparities is explained by the fact that R&D is in some countries performed in universities, which raises the expenditure per student in these countries (Portugal, Sweden, Switzerland).

On average, OECD countries spend USD 13,958 per student at the tertiary level. Table 1 shows large disparities across countries. Between 1995 and 2000, the annual spending per student remained constant on average across OECD countries, and then increased between 2000 and 2011. For more than one third of countries under review, however, the expenditure per student has decreased since

2008, due to the adverse effects of the economic crisis.

The share of national wealth (GDP) dedicated to higher education is a complementary indicator. Higher education expenditure represents 1.6% of GDP on average (6.1% for all levels of education). Here also, figures of Table 2 reflect large disparities across countries.

**Table 2 Expenditures on tertiary educational institutions as a percentage of GDP (2011)  
 (From public and private sources of funds)**



1. Public expenditure only (for Switzerland, in tertiary education only; for Norway, in primary, secondary and post secondary non tertiary education only). Countries are ranked in descending order of expenditure from both public and private sources on educational institutions in primary, secondary and post secondary non tertiary education.

Source: OECD, Table B2.3. See Annex 3 for notes ([www.oecd.org/edu/eag.htm](http://www.oecd.org/edu/eag.htm)).  
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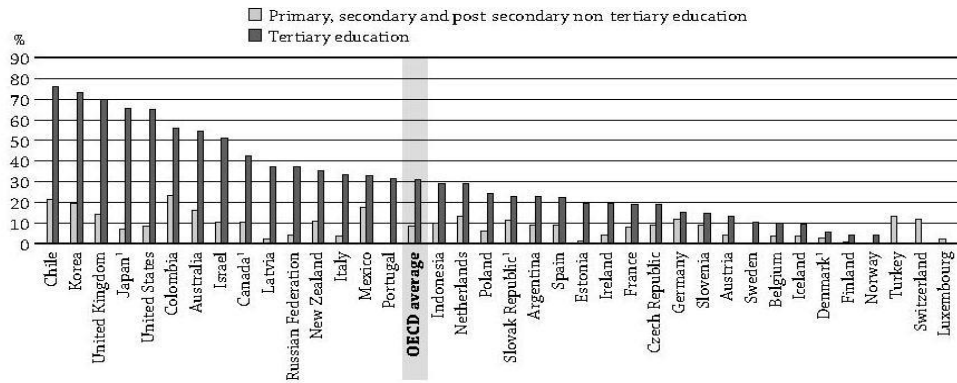
Source: Adapted from OECD (2014), *op. cit.*, p. 224.

### Public versus private funding of higher education

Table 2 above shows the breakdown of public sources (light grey) and private sources (dark grey) in the share of GDP dedicated to higher education. The diversity of national situations is quite visible, with countries where public funding largely dominates (Northern European countries, Germany, Austria, France...) and countries where private funding is quite important (Australia) or dominates (United States, Korea, Japan, Chile). It is worth noticing that countries where higher education expenditures as a percentage of GDP are much above the OECD average are also those where private sources of funds are quite important or dominant (Canada, United States, Korea, Chile).

Table 3 below focuses on the share of private funding of higher education. The average share in OECD countries is 30%. But there is a sharp contrast across them. In some countries, the share of private funding is over 50% (Chile, Korea, United Kingdom, Japan, United States, Colombia, Australia, Israel), while in some others, this share does not exceed 10% (Sweden, Belgium, Iceland, Denmark, Finland, Norway).

**Table 3 Share of private expenditure on educational institutions (2011)**



1. Some levels of education are included with others. Refer to "x" code in Table B1.1.a for details.  
 Countries are ranked in descending order of the share of private expenditure on educational institutions for tertiary education.  
 Source: OECD, Table B3.1. See Annex 3 for notes ([www.oecd.org/edu/eag.htm](http://www.oecd.org/edu/eag.htm)).  
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Source: Adapted from OECD (2014), *op. cit.*, p. 236.

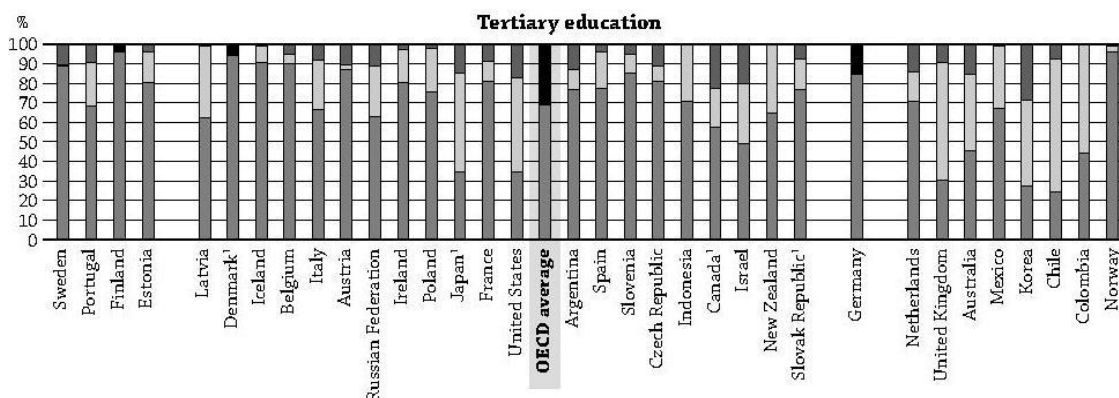
We complete these data with the breakdown of higher education institutions (universities and other institutions) according to their public or private status. Institutional and legal differences across countries make comparison difficult, and the following figures give only a summary illustration for several countries (own compilation of data gathered at the French Ministry of Foreign Affairs [for year 2013 or 2014]). In the United States, there are 4,706 higher education institutions, out of which 1,649 are public, 1,653 are non-profit private institutions and 1,404 are for-profit institutions. In Japan, there are 1,190 higher education institutions, 1,077 of them being public. In Korea, there are 433 higher education institutions, with 376 private ones. In the United Kingdom, there are 166 government-dependent higher education institutions, with just one of them being private. Germany has 428 higher education institutions, all public. In Sweden, there are 48 higher education institutions (31 public, 17 private). However, the Swedish example shows that this public/private status may have only a relative importance, as private institutions are mainly fuelled with public subsidies.

Table 4 allows for a good understanding of what private funding means. For every country, the light grey piece of the vertical bar represents the importance of household expenditure (incurred by students and their parents), as a percentage of total expenditure. In most countries, household expenditure is by far the largest part of the private expenditure on educational institutions. In the United States, Korea and Chile, three of the four countries with the highest share of their GDP dedicated to higher education, the private spending by individuals is more important than the public spending.

From 2000 to 2011, the average share of public funding of higher education institutions decreased from 73.7% to 68.3% (on average across the 20 OECD countries that provide data for all the period). Co-relatively, the average share of private funding increased, due in some European countries to a rise in tuition fees and a greater commitment of companies in providing grants.




**Table 4: Distribution of public and private expenditure on tertiary educational institutions (2011)**



1. Some levels of education are included with others. Refer to "x" code in Table B1.1a for details.

Countries are ranked in descending order of the proportion of public expenditure on educational institutions in primary, secondary and post secondary non tertiary education.

Source: OECD, Table B3.1. See Annex 3 for notes ([www.oecd.org/edu/eag.htm](http://www.oecd.org/edu/eag.htm)).

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Source: Adapted from OECD (2014), *op. cit.*, p. 239.

### *How much do students pay for higher education?*

In order to get deeper into the topic which is addressed in this paper, we need to focus on the funding of higher education by individuals, and to examine more specifically the issue of tuition fees.

An overview of tuition fees in 20 selected OECD countries is given in Table 5 below. There are large differences, and countries can be classified on the following scale:

- No tuition fees: Denmark, Finland, Mexico, Norway, Sweden
- Tuition fees up to 1,500 USD per year: Austria, Belgium, France, Germany (Tuition fees were supposed to be totally eliminated in 2015), Italy, Switzerland
- Tuition fees between 1,500 and 4,000 USD per year: Australia, the Netherlands, New Zealand
- Tuition fees over 4,000 USD per year: Canada, Chile, Japan, the United Kingdom, the United States

**Table 5 – Estimated annual average tuition fees charged by tertiary-type A educational institutions (2011) - National full-time students, in equivalent USD converted using PPPs**

Annual tuition fees (USD)		Public institutions	Gouvernement dependent institutions	Independent private institutions
No tuition fees	DENMARK	0 (?)	? (?)	- (?)
	FINLAND	0 (74%)	0 (26%)	
	MEXICO	0 (67%)	-	5,684 (33%)
	NORWAY	0 (85%)	? (5%)	5,868 – 7296 (10%)
	SWEDEN	0 (87%)	0 (7%)	-
< 1,500	AUSTRIA	860 (84%)	860 (13%)	up to 11,735 (3%)
	BELGIUM (FL.)	576 – 653 (52%)	576 – 653 (48%)	-
	FRANCE	200 – 1,402 (86%)	1,138 – 8,290 (5%)	? (9%)
	ITALY	1,407 (90%)	-	4,406 (10%)
	GERMANY	? (96%)	? (4%)	-
	SWITZERLAND	865 (95%)	865 (3%)	? (2%)
1,000 to 4,000	AUSTRALIA	3,924 – 6,099 (96%)	-	9,635–10,110 (4%)
	NETHERLANDS	1,966 (?)	-	? (?)
	NEW ZELAND	3,645 (?)	? (?)	? (?)
>4,000	CANADA	4,288 (?)	? (?)	? (?)
	CHILE	5,885 – 6,345 (23%)	6,924 – 8,757 (18%)	6,230 – 8,357 (59%)
	JAPAN	5,019 – 5,106 (25%)	-	7,423 – 8,039 (75%)
	KOREA	5,385 (23%)	-	9,383 (77%)
	UN. KINGDOM	-	4,980– 7,814 (100%)	-
	UNITED STATES	5,402 (70%)	-	17,163 (30%)

Source: Adapted from data collected in OECD (2014), *op. cit.*, p. 271. Notes: The proportion of students enrolled is added next to the annual tuition fees figures". “ - ” means that category does not apply ; “ ? ” means that data are missing

There is a sharp contrast between countries which do not charge any tuition fees (This is the case also for Iceland, Poland and Slovenia in addition to the five countries already mentioned.) or charge moderate tuition fees, most of them belonging to Northern and continental Europe, and countries where higher education is expensive or very expensive for students and their parents, these countries being Anglo-Saxon ones, or with an American-inspired higher education system (such as Korea). Looking back to Table 4, we notice that countries with the highest level of tuition fees are also those where private funding by companies represents a significant share of the total higher education expenditure.

In recent years, many countries have showed an increase in tuition fees. One striking example is given by the United Kingdom. In 2012, tuition fees were tripled and this reform significantly altered the

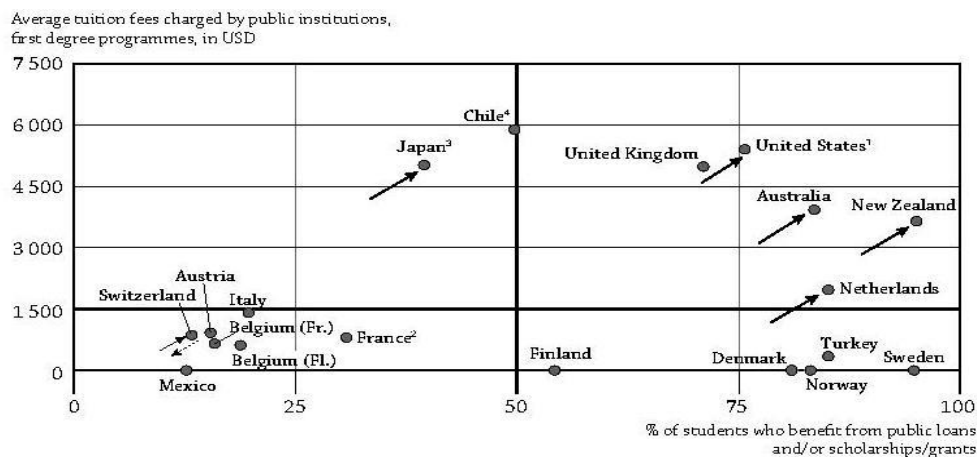
whole higher education sector. Since then, they have amounted to GBP 9,000 per year. What is original in this reform is that tuition fees are coupled with a loan mechanism. Fees are paid by a public lending agency, which means that the student does not pay for them while attending university, but will have to reimburse the corresponding loan later, on a basis of 9% of his/her annual earnings, provided that they are over GBP 21,000 a year.

Data show that major differences exist across OECD countries in the way they share the cost of higher education among public sources, students and other private sources. But differences exist also in the financial support provided to students.

In countries where tuition fees are charged, and especially when their level is high, some financial support may exist in order to alleviate contribution by individuals. This must be taken into account for a proper appraisal of the effective cost of higher education for students. This financial support takes mainly the form of public grants (discounting tuition rates for low-income students is another form of support, with no repayment being required, and loans with repayments required in the future.

Loans are offered by many countries, usually at low interest rates. They are generally managed by a public entity. Grants are allocated to a subset of students on a meritocratic and/or social basis. They allow students to cover at least partly the tuition fees, if any, and the costs of living. Figures gathered by the OECD do not show any obvious relationship between the level of grants and the level of tuition fees (see Chart 1 below). The largest annual grants are to be found in Nordic countries (Denmark: USD 29,000; Finland: USD 9,000; Sweden: USD 8,000) and in Austria (USD 11,000). Among countries with the highest tuition fees, grants of a substantial amount are found only in the United States (USD 27,000) and the United Kingdom (USD 5,000) (OECD, 2014, op. Cit.).

**Chart 1: Relationship between average tuition fees charged by public institutions and the proportion of students who benefit from public loans and/or scholarships/grants (2011)**



1. Figures are reported for all students (full time national and full time non national/foreign students)  
 2. Average tuition fees from USD 200 to USD 1.402 for university programmes dependent on the Ministry of Education.  
 3. Tuition fees refer to public institutions but more than two thirds of students are enrolled in private institutions.  
 4. If only public institutions are taken into account, the proportion of students who benefit from public loans and/or scholarships/grants should be 68%.  
 Source: OECD. Tables B5.1 and B5.2. See Annex 3 for notes ([www.oecd.org/edu/eag.htm](http://www.oecd.org/edu/eag.htm)).  
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Source: Adapted from OECD (2014), *op. cit.*, p. 260. These figures cover only “tertiary-type A” higher education, that is largely theory-based programmes with a minimum duration of three years.

Chart 1 shows the relationship between tuition fees and the proportion of students benefiting from a loan and/or a grant. The arrow indicates how the relationship has changed since 1995. Interestingly,

when looking at the right part of this chart we notice that in several countries the proportion of students benefiting from a public support is almost the same, regardless of the level of average tuition fees charged by public institutions.

### *The diversity of national approaches to the funding of higher education*

Taking into account the level of the tuition fees and the financial support available for students, four different groups of countries can be distinguished - according to the OECD publication which large and deep statistical contents feeds the present paper.

#### **Group 1: Countries with no or low tuition fees and generous student support systems**

As already said, students in the five Nordic countries pay no tuition fees, and this is by law. In addition, these countries offer substantial financial support to students.

#### **Group 2: Countries with low tuition fees and less-developed student support systems**

The remaining European countries for which data are available constitute this group: Austria, Belgium, the Czech Republic, France, Germany, Ireland, Italy, Poland, Portugal, Switzerland and Spain. Mexico presents a similar profile. All these countries feature relatively low tuition fees (Ireland, Mexico and Germany do not charge tuition fees since 2015) and relatively low level of support (benefiting less than 40% of them). In these countries, loan systems are at an embryonic stage, and universities heavily depend on state funding.

#### **Group 3: Countries with high tuition fees and well-developed student support systems**

In this group we find countries such as Australia, Canada, the Netherlands, New Zealand, the United Kingdom and the United States. In these countries, the high costs of higher education for students are partially offset by financial support in the form of grants and/or loans, which benefit to 75% of the student population (Data are not available for Canada). Another characteristic of this group is that private entities (companies, non-profit organizations) make substantial contributions to the funding of higher education (see Table 4 above).

#### **Group 4: Countries with high tuition fees and less-developed student support systems**

Japan, Korea and Chile are the major representatives of this group. Students have to face high tuition fees (more than US 4,500 per year) without benefiting from appropriate financial support. In Japan and Korea, some of them benefit from reduction or exemption of tuition fees on a meritocratic basis. Few of them benefit from public loans.

## **Discussion**

Although higher education systems in developed countries pursue similar goals and face similar challenges, their economic models differ significantly, as evidenced by the statistical overview that has just been presented. Keeping in mind the basics of the economics of higher education, we now discuss this diversity from a more theoretical and even normative point of view.

Many questions arise when comparing national models of higher education. Should students and their family pay for higher education, and why? Is higher education a right or a privilege? Should financial support to students take preferably the form of grants or loans? Are some national models

more favorable to equity and access to higher education than others? So many essential questions cannot be deeply addressed in the limited format of this paper. But we will try to provide general benchmarks for this conclusive discussion by focusing on the issue of tuition fees, which we consider as the pivotal issue. The level of tuition fees charged by tertiary education institutions – as well as the level and type of financial assistance countries provide through their student support systems – can greatly influence access to and equity of higher education. In every country, tuition fees are a marker reflecting the core values on which the society is grounded. Either tuition fees are substantial or high, and – although being far from covering the real cost of higher education – they tend to be considered as a price on a market, which the student-consumer has to pay for buying a service; or tuition fees are low or inexistent, and the logics of higher education as a marketable service is weak or absent. Market in the first case and state in the second are the polar forces that shape the higher education system.

### *What are the reasons for no or low tuition fees?*

One country out of two among those reviewed by the OECD belongs to group 1 (no tuition fees) or group 2 (limited tuition fees). Group 1 and group 2 countries share in common the view that higher education must be a public service, which is supposed to be the best form of social organization for securing equality of opportunity and equity. Higher education is viewed as a public good which should be accessed for free. With no or limited tuition fees, financial obstacles to access higher education are lowered – all the more as financial support is simultaneously given to students through public grants, like in the countries that are the most advanced in this logic (group 1). Students from low-income backgrounds can thus access more easily higher education.

Adding to this first argument, which stands on the side of equity, a second argument refers to social efficiency. As explained in part I of this paper, higher education is characterized by high positive externalities. Without policy stimuli, the demand for higher education and also its supply would reach a level insufficient to reap all its social benefits. Inexistent or low tuition fees act as an incentive to push upwards the demand for higher education.

But one may advocate, on the contrary, that substantial or high tuition fees are justified. The first reason is grounded on the standard microeconomic theory, the goal of which is to explain economic calculation of individuals supposed to behave rationally in the context of a free market economy. According to this view, the private returns on higher education justify that individuals should pay for them – or at least provide a positive contribution to the costs. In the background stands the social philosophy of the market, which is in principle supposed to be efficient in inciting people to make efforts and in allocating economic and human resources to their best effective use. From this perspective, it is just normal that individuals pay for the educational services they benefit from. Here dominates the vision of higher education as a private economic good.

There is a second argument, which is more pragmatic. Tuition fees are a resource for universities, and when their level is high, they allow more easily universities to increase the quality of their services, to face increasing expenses coming from the extension of student enrollments and from the costly innovations required by changing forms of pedagogy. Of course, one may object that alternative sources of funds exist for meeting such challenges, and countries belonging to group 1 give evidence that universities can perform quite well without collecting tuition fees. However, in the recent context of pressures on overall public spending, several countries have seen in the rise in tuition fees the only way to raise somehow the size of university budgets. A compromise solution, which is adopted by an increasing number of OECD countries, is to charge higher tuition fee for international students. For instance, in Sweden, which is a no-tuition fee country, international students have been

required to pay tuition fees since 2011.

### *Is there a correlation between the level of tuition fees and access to higher education?*

Is there any relationship between the level of tuition fees and the entry rate (the percentage of an age class that is expected to follow a tertiary curriculum over a lifetime) into higher education? The entry rate is  $t$ . From the figures gathered by OECD, the highest entry rates are to be found in countries of group 1 and group 3. The average entry rate in countries of group 1 (Nordic countries) amounts to 74%, much above the OECD average (59%). In countries of group 3 (high tuition fees and well-developed student support systems), the average entry rate to higher education is 75%. Based on the entry rate indicator, both groups perform quite well although they follow quite opposite tuition fee policies. But they have in common to offer substantial financial support to students. In Nordic countries, more than 55% of students receive a public grant, a public loan, or both. This percentage reaches 75% in Australia, the Netherlands, New Zealand, the United Kingdom and the United States, that is, group 3 countries.

These figures suggest that the level of financial support which is available to students might be even more important than the level of tuition fees for explaining access to higher education. Conversely, in group 2 countries (low tuition fees but limited financial support available for students) the entry rate is rather low (56%), which suggests that low tuition fees are not sufficient in themselves to favor a better access to higher education.

### *Grants versus loans*

Should financial support to students be provided preferably through grants or through loans? Obviously, these are not equivalent forms of support, as receiving a grant does not imply any repayment in the future, contrary to a loan. However, such loans are normally available at low (subsidized) interest rates in the frame of public programs – and for that reason they are named “public loans”.

High tuition fees coupled with student loans is now a well-fashioned cocktail in many countries. A review of 36 countries made by the OECD shows that two-thirds of them combine grants and loans. Both forms of support are widely developed in Australia, the Netherlands, Norway, Sweden, the United Kingdom and the United States. In one country, Iceland, loans are the only form of support available. A dozen or so countries – among which Austria, Belgium (Flanders), Finland and France – do not provide students with public loans and rely only on grants for supporting students.

Loans, contrary to grants, are somewhat controversial. Their major advantage, according to their proponents, is to transfer a part of the cost of higher education to those who benefit directly from it. Loans are in keeping with the liberal and individualistic vision of higher education. They are a temporary aid, as they must be reimbursed, and do not have to face the criticism of assistantship. And with income-contingent loans, they take into account the individual's own capacity of reimbursement, with repayments linked to future effective earnings. But on the negative side, besides the fact that loans are said to be less efficient than grants for encouraging low-income individuals to enter higher education, there is the burden of debt at graduation. This issue is not a theoretical one: student debt in the United States reached USD 1,100 trillion in 2013, and the default rate increased from 5% in 2008 to more than 10% today. And according to the Institute for Fiscal Studies, the UK government could lose 43% of the funds it advances to students, due to repayment thresholds and provisional default rates (Crawford / Jin, 2014): paradoxically, with the major increase in tuition fees the 2012

reform could benefit British universities mostly, while raising the financial burden on students and on the government.

## Main findings and conclusion

As a conclusion of this outlook on economic models of higher education of developed countries, we would like to wrap up the main lessons. Drawing on the extensive empirical work done by the OECD, we have noted that OECD countries can be classified in four groups: countries with no or low tuition fees and generous student support systems; countries with low tuition fees and less-developed student support systems; countries with high tuition fees and well-developed student support systems; and countries with high tuition fees and less-developed student support systems.

Groups 1 and 2 gather countries with no or low tuition fees. They belong to the “social-democratic model”, while groups 3 and 4 gather countries belonging to the “neo-liberal model”. Recalling that our starting point was to read the organization of higher education from a state versus market perspective, we can easily recognize that higher education is – or remains – state-oriented in the “social-democratic model”, and is more – or much more – market-oriented in the “neo-liberal model”.

These two models share common features, and also differences. The general goals of higher education are roughly the same everywhere. In every country, governments declare their intention to combine access, equity and quality in what they think is the best possible way. And in every country, governments tend to push up the supply of and the demand for higher education through public commitment and/or public support, in order to maximize the social returns of higher education.

But countries use different paths to reach these goals, and the way they combine public and private funding differ widely across them, which gives rise to the two polar economic models that we have identified. Our opinion is that the core differences between the two models are not primarily based on economic grounds, but are rooted in national history and culture and in specific values of social philosophy. We summarize here these differences.

In the neo-liberal model, higher education is seen primarily as a private good which benefits the individual. This explains why individuals are basically seen as responsible for their choice of following a tertiary level curriculum and for the way they can face the resulting expenses. Like prices in a free market economy, the level of tuition fees acts as an economic signal and an input in the cost-benefit calculation of the incumbent student.

In the social-democratic model, on the contrary, higher education is seen primarily as a public good. In such a model, benefits of higher education for individuals are not undervalued, but a major emphasis is put on social benefits, with a quest to ensure that the core values of social equity and equality of opportunity are satisfied.

To put it sharply, in the neo-liberal model, the assets acquired by an individual through higher education belong primarily to him/her, whereas in the social-democratic model such assets are thought to belong also to the society. It seems to us that the same distinction can apply to human health, which can be seen primarily as a private concern, or seen primarily as a social concern (which justifies public support to health expenditure). These contrasted visions lead to differences in the way expenditures in higher education are supported. Market instruments are of a frequent use in the neo-liberal model: students buy education services through the payment of tuition fees, they get indebted in order to cover tuition fees and costs of living, they pay back their loans once the monetary return on

their academic investment becomes positive... while in the social-democratic model, higher education is not seen as a traded service by students who pay nothing or very little to enroll at universities, and for some of them benefit from publicly-subsidized grants.

This results in sharp differences in the way higher education institutions are funded. To put it simply, in the neoliberal model, less money comes from the state and more money comes from the student's pocket.

In this respect, it should be made clear that paying no fees at all while being deprived of a grant or loan is not equivalent to subscribing a loan or receiving a grant with one hand, and paying tuition fees with the other hand, even if similar amounts flow in and out at the student's level. In each of these situations, public money is channeled quite differently from the state to universities. In the social-democratic model, public money goes directly to universities through public subsidies – which students may not be quite aware of – while in the neo-liberal model, most of the public money flows from the state to universities through individuals.

These different ways of circulating public money tell a lot about societies. Socialization mechanisms dominate in the social-democratic higher education model, while mechanisms centered on the individual dominate in the neo-liberal model.

The shift that took place in the British policy of tuition fees with the 2011-2012 reform offers here a prime illustration. With this reform, direct subsidies to universities have decreased and tuition fees have increased three-fold. But these fees are not paid by students while they attend university, they are paid to universities by a public lending agency. In return, students must subscribe a loan from the lending agency. Among financial support to students, loans are the closest to the essential values of the market. Comparing with the situation that prevailed before the reform (and even more striking, with the no-tuition-fees situation that prevailed before 2000), the recent British reform testifies to a double process of “de-socialization” and “marketization”.

As a final word, we will put forward that both models have to face today their own challenge. The neo-liberal model is being challenged by the student debt issue: the burden of the debt may not be sustainable in the long run, both for individuals who are strained by repayments during several years of their work life and for the state, which guarantees loans and may have to substitute borrowers for reimbursement. For their part, countries with a social-democratic model are challenged by the shortage of public money for higher education. This leads them to seek changes in the cost sharing of higher education, as illustrated by recent policy experiences.

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