

# **3** Student fees and student financial support

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This chapter examines undergraduate student fees and financial support, commencing with who sets tuition fees, who pays fees, and the impact of tuition fees on enrolment. It subsequently focuses on how students are assisted in meeting study costs, both through non-repayable support (grants and tuition waivers) and student loans, examining their design, costs, management and their effect on enrolment and student outcomes.

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### 3.1. Fees and student financial support – Trends and patterns

Tuition fees are the principal means by which higher education institutions and governments raise household contributions to higher education. In higher education systems where tuition fees exist, these fees, along with additional charges levied by higher education institutions, such as laboratory fees, required books and supplies, are often the main out-of-pocket cost experienced by students. Fees paid by students may help governments offset the costs of subsidising higher education, enabling them to expand the system or reduce public expenditure on the sector. Some governments also consider that institutions that receive a high proportion of their revenue from students will become more student-centred and more responsive to student needs, potentially improving learning.

In addition to meeting the cost of fees, students or their families also bear their living or maintenance costs of during study – these may be high for students who live away from their family home while in study, as is customary in some higher education systems.

Viewed from an economic perspective, learners may also experience another cost: income foregone during studies resulting from reduced (or, no) work and earnings. While this opportunity cost is an important component of the full cost of a person's study, earnings foregone is not typically a focus of government policy or student support systems. Therefore, it is outside the scope of this analysis.

Prospective students may face significant hurdles to participate in higher education due to price effects – when the current cost is high in relation to the estimated future returns from additional education – and liquidity constraints – when students do not have enough liquidity to meet the current cost of higher education. The higher the price, the fewer individuals may access higher education.

For this reason, most OECD countries have put in place systems of financial student support, tailored to solve liquidity constraints and mitigate price effects. Student support schemes constitute a key element in assuring equitable opportunities for students in higher education systems, broadening access and supporting completion (Dynarski, 2003<sup>[1]</sup>).

Countries vary significantly in the share of private contributions for higher education and the design of student financial support – with many countries offering students a package of grants or subsidised loans (or both). (Figure 3.1).

In some countries, higher education is funded in important part by household contributions, and governments have employed comprehensive public lending schemes to address liquidity constraints (e.g. the United Kingdom and Australia). Student support in those countries typically covers a large part, if not the total amount, of the required household expenditure in tuition fees, as well as providing a contribution towards living expenses. Other systems in which household expenditures on higher education are comparatively high – such as the United States, Japan, Korea and Chile – provide grant and loan-based support, though at average levels substantially lower than average household expenditure on higher education institutions (i.e. tuition fees and other charges).

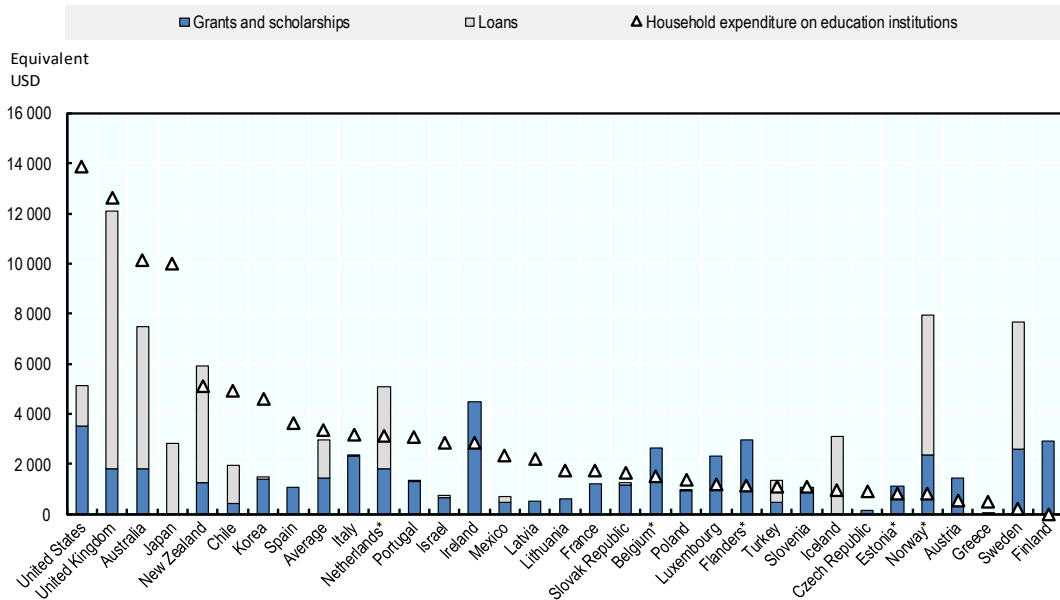
The coverage of public student support systems varies widely. The proportion of students who received public grant or loan support ranged from 70-100% in most Nordic and Anglophone systems, to fewer than 30% in Austria, Switzerland and Portugal (Figure 3.2).

The challenge for all countries is to use fees to ensure that institutions have sufficient revenues to provide wide access to study, at good levels of quality, while mitigating the risks to access that fees can pose.

In this chapter, we look first at how countries develop and manage their arrangements for fees and how they approach financial support for students; and we explore the strengths, weaknesses and risks of these arrangements.

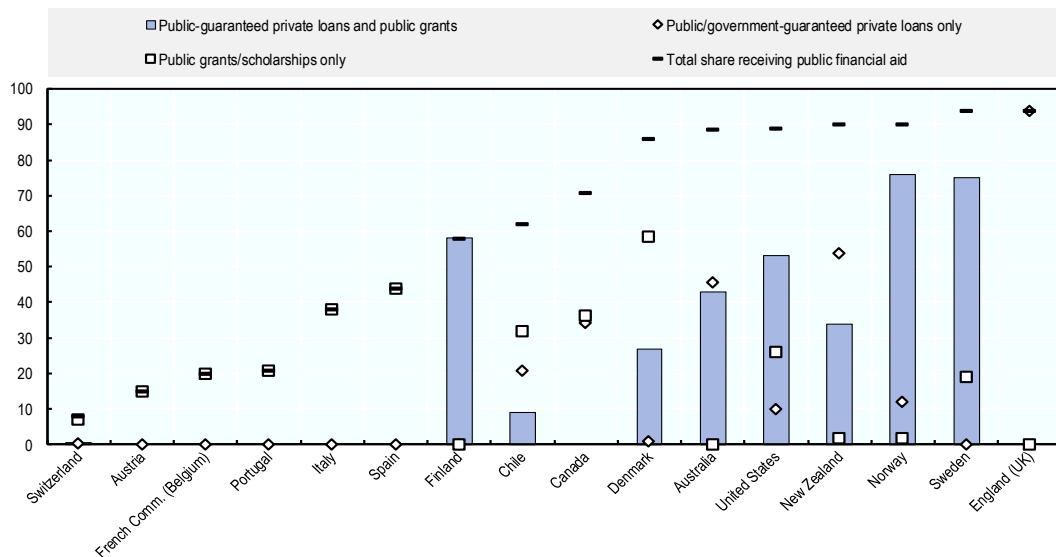
**Figure 3.1. The role of grants and loans in public expenditure, 2015**

Average per-student public expenditure on loans, scholarships and other grants, compared to the average level of per-student household expenditure in higher education institutions



Notes: Equivalent USD converted using PPP for GDP. Data for Chile refer to 2016. \*Countries that participated in OECD Benchmarking Higher Education System Performance exercise 2017/18.  
 Source: OECD (2019<sup>[2]</sup>), *Benchmarking Higher Education System Performance*, Figure 3.6, <https://doi.org/10.1787/888933940569>.

**Figure 3.2. Percentage of bachelor’s and master’s long first degree or equivalent students receiving financial support, 2017/18**



Source: OECD (2019<sup>[3]</sup>), *Education at a Glance 2019: OECD Indicators*, Table C5.2, <https://doi.org/10.1787/888933979234>.

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## 3.2. Tuition fees

### **Who sets tuition fees?**

Tuition fees, if autonomously set by higher education institutions, have, in principle, the capacity to bring significant efficiency improvement to higher education systems, by introducing price signals and incentivising efficient behaviour (Andrews and Stange, 2016<sup>[4]</sup>). Differentiated tuition fees can help students and institutions make choices that are more efficient and incentivise the system to be more responsive to student and employer preferences.

#### *Higher education institutions enjoy varying degrees of autonomy in setting tuition fees*

Private independent institutions typically set their own prices, the levels of which are shaped by market forces rather than public authorities. Countries vary widely in their approaches to fee setting for public institutions – including giving institutions the right to set fees, negotiated pricing (with government), autonomous pricing within caps, and no tuition setting authority.

In Switzerland, tuition fees are subject to negotiation, while in other European higher education systems, governments set a ceiling under which universities may raise fees (Italy, the United Kingdom, Portugal, and Romania). In some systems, like in Lithuania, Latvia and Hungary, for instance, governments allocate a number of state-funded study places, while the institutions may take in additional students and set fees for them within a given framework. By contrast, France, Spain, Ireland and the Netherlands determine tuition fees centrally, and no (undergraduate) tuition pricing discretion is permitted to institutions (European Commission/EACEA/Eurydice, 2018<sup>[5]</sup>; Pruvot and Estermann, 2017<sup>[6]</sup>). Elsewhere, as in New Zealand, governments may choose to regulate the maximum level of fee increase, rather than the fee itself (Smart, 2009<sup>[7]</sup>; Tertiary Education Commission, 2020<sup>[8]</sup>).

#### *Tuition fees are rarely differentiated by field of study at the undergraduate level*

Universities have a long history of fee differentiation by field of study at the postgraduate level, but its extension to the undergraduate level is relatively recent and not widespread (Stange, 2013<sup>[9]</sup>). In 2013-14, 10 OECD member countries reported that higher education institutions charge differential tuition by study field, including Australia, New Zealand and Canada (OECD, 2015<sup>[10]</sup>).

There are varying reasons for the differentials in fees by field of study. These are mainly based on the heterogeneity of study fields in terms of expected returns on the labour market, costs of delivery and market mechanisms (Stange, 2013<sup>[9]</sup>). For instance, medicine, law, engineering and some business disciplines are characterised by greater employability and earning prospects than most other fields. Fee differentiation can then appear as a tool to better align the price of education with its associated returns.

Different academic programmes have significantly different costs (Hemelt et al., 2018<sup>[11]</sup>). In the absence of differentiated tuition fees acting as a price signal, students might not make careful choices between programmes and may select inefficiently (Stange, 2013<sup>[9]</sup>). Flat tuition fees may discourage institutions from offering more costly programmes and could erode incentives to improve quality and efficiency.

Australia, for instance, uses various rationales while determining the level of tuition fees by field of study. Students are charged the lowest level of fees in fields that have a low delivery cost such as humanities or salary (education). Conversely, they are charged the highest level of fees for studying in areas that have a high instruction cost (medicine) or high expected returns (law) (Hillman, 2018<sup>[12]</sup>).

Price differentiation by study field may also result from a government's strategic choice to attract students in study fields seen as particularly valuable in a society or needed in the labour market, for instance, through grants or subsidised places. For example, the SMART (Science, Mathematics and Research for

Transformation) programme implemented in the United States from 2006 to 2011 consisted of grants complementing Pell need-based grants, which were awarded to students in designated science, technology, engineering and mathematics (STEM) fields (among others). (Evans, 2017<sup>[13]</sup>). In Norway, part of the student loan can be converted into a grant for students studying to become teachers (OECD, 2018<sup>[14]</sup>).

If differentiated tuition fees are to be effective in promoting efficiency and equity, three conditions need to be satisfied. First, students and their families need access to reliable information on study programmes, quality, tuition fees and future income prospects to identify their best investment options. Second, financial support systems need to solve liquidity problems for students, permitting them to act based upon their assessment and their preferences. Third, higher education institutions need to be able to reallocate resources and respond to demand variations. (OECD, 2008<sup>[15]</sup>).

*Information issues:* In practice, however, most students have limited and unreliable information about price, quality and future income prospects; and even if comprehensive, reliable information on quality and returns does exist (as in England), many people do not access that information (NAO, 2017<sup>[16]</sup>). Moreover, judgments about the investment value of education are not simple and stable. Learners have the option, but no obligation, to enter higher education; they make decisions as they discover more about their aptitude and taste for study. This suggests that their decisions may change in the light of new information, particularly in the case of students with moderate abilities. Evidence shows that if students are able to make decisions about their enrolment in stages in response to information that they acquire as they go along, this increases the value of the studies to the student (Stange, 2012<sup>[17]</sup>).

*Liquidity issues:* Properly designed income-contingent lending systems can address liquidity problems completely. For example, in Australia and the United Kingdom the loan entitlement covers the entire tuition fee. However, when the cost of fees is fully met by the student support system, part of the rationale for differentiated fees – the signaling of efficient choices to students – is lost. When tuition fees in England moved from GBP 3 500 to GBP 9 000 in 2012/13, enrolments by full-time and young students did not fall (although enrolments by part-time, older students fell significantly) (Geven, 2015<sup>[18]</sup>). This fee change was accompanied by removal of enrolment caps and by wide eligibility for subsidised loans that covered the fees completely. Liquidity problems were avoided, and participation, completion and labour market outcomes for low-income students were not adversely affected (Murphy, Scott-Clayton and Wyness, 2017<sup>[19]</sup>; Azmat and Simion, 2017<sup>[20]</sup>).

At the same time, lending schemes that eliminate all upfront costs may have the effect of diminishing the signalling effect of price differentiation among study programmes. To the extent that borrowers are myopic and base study choices upon present costs (set to zero), they may be insensitive to differentiation in pricing among study programmes.

Many countries in which there is a wide scope of lending do not fully eliminate liquidity constraints. For example, in the United States and Japan, tuition fees (and other study costs) may exceed borrowing limits in public lending programmes. In those systems, some students will face a liquidity constraint, and this may undermine the participation of specific groups to study fields or institutions in which they were already under-represented.

Reallocation of resources in responsive to demand shifts: Higher education institutions have a limited capacity to reallocate resources efficiently in response to demand changes. In some higher education systems, prospective students and their families often see tuition prices as a proxy for quality, leading to fee-rising competition among autonomous higher education institutions that causes prices to exceed the quality they signal (Wolinsky, 1983<sup>[21]</sup>). The use of tuition fees as a quality proxy appears also to retard efficiency-enhancing competition to reduce fees (NAO, 2017<sup>[16]</sup>).

### ***Who pays fees, and how much?***

A principal economic argument in support of cost-sharing in funding higher education systems is that while higher education generates important social benefits, graduates also experience, on average, substantial private returns. Thus, graduates should contribute, in part, to the costs of higher education provision (Barr, 2004<sup>[22]</sup>).

Where all citizens pay (through taxation) and only few complete higher education, publicly funded higher education represents regressive public expenditure. Where participation in higher education is wide, higher education wage premia are comparatively modest, and tax systems are progressive, the regressivity of public expenditure for higher education is likely to be substantially – if not completely – mitigated (OECD, 2018<sup>[23]</sup>; Aziz et al., 2012<sup>[24]</sup>).

#### *International students often pay fees, and are a major source of revenue in some systems*

In about half of OECD countries, public education institutions charge different tuition fees for national and foreign students enrolled in the same programmes, with foreign students paying more (Marconi and Sanchez-Serra, 2018<sup>[25]</sup>). Non-national students pay twice (or more) the tuition fees paid by national students in Australia, Austria, Canada, New Zealand and the United States (Marconi and Sanchez-Serra, 2018<sup>[25]</sup>). In European higher education systems, international students from EU countries are subject to the same fee policies as domestic students. Universities have much greater autonomy in setting fees for non-EU international students, and with increasing numbers of systems either permitting or requiring universities to charge study fees to non-EU students (Pruvot and Estermann, 2017<sup>[6]</sup>).

For some higher education systems, revenues generated through international student fees can represent a large share of the total resources. In 2015, US universities were estimated to have obtained about 28% of annual revenues (USD 9 billion) from foreign students (Loudenback, 2016<sup>[26]</sup>), while foreign students in Australia and New Zealand provided more than 25% of total expenditure on public and private institutions at the bachelor's, masters and doctoral (or equivalent) levels (Marconi and Sanchez-Serra, 2018<sup>[25]</sup>).

International students can provide economic, fiscal and financial benefits to their host countries. Their main economic impact is that they spend money on tuition fees, living expenses and expenditures by friends and family who visit them. Evidence from the United Kingdom, for instance, shows that the total benefit of an international undergraduate (GBP 147 000) to the UK economy is almost double that of an EU-domiciled student (GBP 87 000), and those benefits are widely spread across the country (Migration Advisory Committee, 2018<sup>[27]</sup>). Furthermore, they contribute tax revenue primarily through the money spent in the local economy; and as they are generally young with few or no dependents, they typically make few demands on public services such as health.

Seen from the vantage point of public higher education institutions, international students can provide a means by which to offset the loss of public operating subsidies, thus subsidising the education of domestic students, and research. For example, among public research universities in the United States, a 10% reduction in state appropriations (during 1996-2012) was associated with a 12% increase in international undergraduate enrolment at these institutions, and a 17% increase among the most research-intensive public universities (Bound et al., 2016<sup>[28]</sup>).

However, there are constraints on the reliance upon international students as a source of revenue; in particular, there are concerns about the impact on domestic students, and about the capacity of the receiving country to integrate international graduates into the society. For instance, universities in the Netherlands will have a legal duty of care for their international students' Dutch language proficiency under proposed new legislation designed to address the rapid growth in foreign admissions and English-only courses in the country. In addition, tougher criteria for justifying teaching a course in a language other than Dutch will likely lead to an increase in administrative burden (Matthews, 2019<sup>[29]</sup>).

*What is the impact of tuition fees on enrolment in higher education?*

Research evidence shows that students are responsive to net price variation. The empirical literature indicates a negative relationship between net price and enrolment (OECD, 2008<sup>[15]</sup>), albeit one that varies according to student and institutional characteristics. For example, a study using US data shows that a USD 100 increase in tuition fees led to a decline in enrolment of a little more than 0.25%, with a larger effect in research universities. These effects are most pronounced among students from families of low socioeconomic status and low-performing students, and most limited in selective public research universities (Farhan, 2014<sup>[30]</sup>). Likewise, analysis of data from public universities in the province of Ontario shows that during the period 2007-2014, a 1% increase in tuition was associated with a 1.38% decline in enrolment, on average across all public institutions. The price elasticity of demand was significantly lower for research-intensive universities (a .55% decline) and much higher for teaching-intensive universities (a 1.55% decline).

Evidence from European higher education systems suggests that responsiveness to tuition fee changes has been low in the Netherlands, especially among the more affluent students (Canton and Vossensteyn, 2001<sup>[31]</sup>). In Germany, the introduction of tuition fees (in 7 out of 16 German federal states) did not reduce enrolment rates but did shift where students enrolled. Enrolments among first-year male students were shifted from institutions in fee-charging states to those institutions in nearby non-charging neighbouring states (Alecke, Burgard and Mitze, 2013<sup>[32]</sup>).

This suggests that the careful design and implementation of student financial support schemes is crucial to equitable access, particularly in systems that rely on private contributions to higher education.

### 3.3. Non-repayable types of student financing

#### ***Who administers public grant assistance?***

Responsibility for the administration of grants varies considerably across countries: some give responsibility to government authorities (e.g. Australia and the Netherlands), some to an intermediate agency (e.g. the Flemish Community of Belgium), and others to higher education institutions (e.g. Portugal) or to institutions and government authorities jointly (e.g. Mexico (OECD, 2008<sup>[15]</sup>)).

Decisions on the role of higher education institutions in delivering grant assistance depend on assessments of institutions' incentives and capabilities, as well as concerns about horizontal equity – i.e. about whether families whose circumstances are similar would receive similar levels of benefit. Grant schemes might be better tailored to student needs at the higher education institution level, as the institution might have more flexibility in designing financial support adapted to the circumstances of its students, whereas central government might be less well informed of the needs and therefore inefficient in providing tailored student support.

However, the management of grant schemes and tuition waivers might be administratively taxing for institutions. In addition, efficient tuition waivers and grants tailored to family income depend upon timely, reliable and precise income data from the tax agency.

If institutions have discretion to manage grants and tuition waivers, horizontal inequities – whereby students from similar backgrounds are treated differently – may result, and institutions may exercise discretion in support of institutional criteria that are not aligned to government priorities (OECD, 2019<sup>[33]</sup>).

### ***Which institutions, study programmes and qualifications are eligible for student financial support?***

Concerns about meeting upskilling and re-skilling needs of individuals has led some countries to explore new kinds of study programmes and credentials adapted to non-traditional learners. These new learning opportunities may include short-cycle degrees and micro-credentials; modular courses; academic and industrial certificates, sometimes offered by new kinds of education and training providers (e.g. coding academies); or new collaborations between HEIs and non-traditional providers.

In many higher education systems, policy makers have been willing to authorise the establishment of new private institutions to create additional enrolment capacity that public higher education institutions could not offer at various levels of higher education. Nonetheless, public authorities are sometimes reluctant to authorise the extension of student grant and loan benefits to these institutions. This reluctance may arise where the quality of provision in private institutions is not comprehensively and rigorously assured (OECD, 2019<sup>[33]</sup>), or be based upon efficiency concerns that private institutions, particularly those operating on a for-profit basis, may respond to grant assistance by raising tuition fees and capturing student support (Cellini and Goldin, 2014<sup>[34]</sup>).

Governments in nearly all OECD member countries are not yet willing to allow higher education loan and grant programmes to support the new types of educational credentials obtained from non-degree study programmes, such as micro-credentials, badges, and certificates. Though these offerings may be targeted to the reskilling our upskilling needs of adult learners, these new offerings are provided outside of degree qualification frameworks and quality assurance systems, and governments are concerned that public investment might be put at risk in unproven education and training offerings. However, in some countries – such as New Zealand – student support is available to people studying quality-assured micro-credential programmes (Kato, Galán-Muros and Weko, 2020<sup>[35]</sup>).

Small-scale efforts are underway in some countries to assess the feasibility of expansion to new providers or learning options. In the United States, for example, a small-scale pilot project was launched by the US Department of Education in 2016 (McKenzie, 2018<sup>[36]</sup>), through which students enrolled in MOOCs (Massive, Open, Online Courses), industry-designed courses, and coding academies, (some of which are offered by non-traditional education and training organisations), are able to participate in federal student aid programmes.

If policy makers do not extend grant or student loan participation to private institutions, they may create inequities among students, especially where selective public institutions are either free or subsidised, and students are ineligible to obtain grant assistance for fees charged by private higher education institutions. In Mexico, for example, study places in autonomous federal and state universities are limited, highly sought after and effectively tuition-free to a student population drawn substantially from middle-income households. Many lower-income students who are unable to gain entry to these institutions study instead at private higher education institutions that are ineligible to participate in the nation's student grant programme, *Programa Nacional de Becas para la Educación Superior* (OECD, 2019<sup>[33]</sup>).

### ***Which students receive grant aid?***

In most OECD countries, grants or tuition waivers are part of the student financial support system. Publicly funded grants exist in all European higher education systems apart from Iceland and the United Kingdom – England, where there are only student loans – i.e. repayable types of student support. (European Commission/EACEA/Eurydice, 2018<sup>[5]</sup>).

Many countries that provide both publicly funded grants and publicly subsidised or state-guaranteed loans do so as a package that combines both (e.g. Germany, Luxembourg, Norway and Switzerland). For example, in Germany, half of the general public student support is awarded as a grant, and the other half



as an interest-free loan. Elsewhere, there may be conversion of one form of assistance to another. In Norway student support is initially given as a loan, but up to 40% may be converted to a public grant for students who live away from their parents and pass all exams on time (European Commission/EACEA/Eurydice, 2018<sup>[5]</sup>).

Grant schemes are mostly means-tested grants, although some countries offer a universal, non-needs-based grant. Merit-based grants are common in some countries too, particularly in Eastern European and South-East European countries.

### *Basic universal grants*

Universal grant schemes in which the allocation is not based on either financial need or academic merit exist in Korea (for students attending technical colleges only), the Netherlands (the amount made available during the studies becomes a grant only upon graduation), and the Nordic countries – Denmark, Finland, Norway and Sweden (European Commission/EACEA/Eurydice, 2018<sup>[5]</sup>). While the grants in Denmark, Finland, and Sweden are open to all students, they can be reduced or eliminated if the student has another source of personal income above a specified amount. In the United Kingdom – Wales, all first- and short-cycle full-time students can benefit from a universal grant for living costs of GBP 1000 per year (higher amounts of grants are possible, but are means-tested) (European Commission/EACEA/Eurydice, 2018<sup>[5]</sup>).

Basic universal grants are often provided to support student choice and matching to available opportunities, as well as to promote geographic mobility. Additionally, they may promote access to education for socioeconomically disadvantaged groups who may underestimate the net benefits of higher education.

If tuition fees are zero and maintenance grants – to cover living costs – are universal, price and liquidity constraints play little part in higher education participation. While this combination of financial aid may incentivise high participation in higher education and low dropout rates, it may also discourage timely completion of studies, as evidence from Nordic countries shows (Arendt, 2012<sup>[37]</sup>); (Nielsen, Sørensen and Taber, 2010<sup>[38]</sup>) (Häkkinen and Uusitalo, 2003<sup>[39]</sup>). Moreover, universal grants might be argued to be inefficient and regressive as they allocate funding irrespective of student means, and they represent dead weight spending (i.e. they fund students who would enrol and complete irrespective of the support).

### *Means-tested grants are the most common type of student financial support*

Means-tested grants are targeted to students based on financial need. The most frequent criterion for eligibility and total amount of the grant is family (parental) income, but there is significant variation in the in how means are assessed, and in level and purpose of grant support. Some countries award means-tested grants to meet both tuition and living costs, while others use them only to cover one or the other. Students who qualify for the grant either receive a flat-rate contribution or the amount of grant is differentiated according to student needs.

In designing student support systems many countries link need to other eligibility criteria, including citizenship/residency; age; living with parents or independently; being financially dependent or independent from parents; marital status; having children; field of study, level of study, academic merit and/or academic performance; special educational needs or orphan status. (European Commission/EACEA/Eurydice, 2018<sup>[5]</sup>).

To retain a means-tested grant, students are often obligated to achieve a minimum academic performance, to make satisfactory academic progress, or to complete their studies within a limited time.

Means-tested grants can remove liquidity constraints for disadvantaged students and minorities, improving higher education access and outcomes. Research in the United States has shown that a rise in publicly funded grants increased educational attainment and the probability of attending college (Dynarski, 2003<sup>[11]</sup>).

Grants have been also found efficient for minorities, as some groups are debt averse and reluctant to take up repayable student support – i.e. they have higher levels of uncertainty about the financial returns to their studies and their ability to repay loans (Linsenmeier, Rosen and Rouse, 2006<sup>[40]</sup>). In the United Kingdom and France, maintenance means-tested grants are effective in increasing enrolment for low-income students (Dearden, Fitzsimons and Wyness, 2014<sup>[41]</sup>) (Fack and Grenet, 2015<sup>[42]</sup>).

*Targeted grants are also used in an attempt to influence study choices, or mitigate disadvantages, but effects are difficult to demonstrate*

While universal or means-tested grant programmes comprise the bulk of public spending on non-repayable assistance, in some higher education systems, grants have been adopted with the aim of encouraging students to enter certain study fields, or to mitigate social disadvantages. While the costs of these targeted initiatives is typically modest given the comparatively small size of eligible populations, their effectiveness has sometimes been difficult to establish.

For example, to encourage enrolment in STEM fields, a federal student aid programme in the United States, the SMART grant, provided supplementary grant assistance to about 65 000 low- and moderate-income third- and fourth-year students who majored in STEM fields during the 2007-2011 academic years (out of a national population of 21 million undergraduate students). (Denning and Turley, 2017<sup>[43]</sup>) found that income-eligible students in Texas were approximately 3 percentage points more likely to major in STEM fields in their junior or senior year, while (Evans, 2017<sup>[13]</sup>) found no evidence of SMART grant impacts on whether students in Ohio persisted in STEM majors or earned STEM degrees. Targeted programmes may generate significant information and application burdens on learners, limiting take-up. Behavioural effects may also be limited as learners are constrained in responding to these offers by preferences and ability.

Grants specifically targeting economically disadvantaged student populations appear to be more effective in achieving their intended outcomes than those aiming to influence study choices. In one randomised trial implemented in the (US) Wisconsin public higher education system, low-income students received a USD 3 500 annual grant (supplemental to other student supports), renewable for up to five years, and with recipients demonstrating a 21% increase in graduation rates, and a 29% increase in on-time completion (Goldrick-Rab et al., 2016<sup>[44]</sup>). Australia, Canada, and other OECD jurisdictions award targeted financial support for indigenous student populations, often as part of a wider set of equity measures or “enabling programmes” (Pitman et al., 2017<sup>[45]</sup>). Norms governing research concerning indigenous populations have channelled studies towards non-experimental methodologies (Social Sciences and Humanities Research Council, 2019<sup>[46]</sup>), and evidence of grant aid impacts in improving outcomes for these students remain limited.

*Grants awarded on the basis of academic merit raise concerns about equity and efficiency*

Many OECD jurisdictions provide publicly funded grants that reward past academic success, typically awarded based upon based on secondary school results and/or performance in higher education admission tests.

Although merit-based grants may incentivise students to perform better in secondary school or higher education, reducing study times, and increasing study completion among its recipients (Scott-Clayton and Zafar, 2016<sup>[47]</sup>). However, allocating grants solely based on academic merit may also widen inequities among students (Dynarski, 2004<sup>[48]</sup>), and lead to inefficient expenditure, since merit-based grant schemes represent an income transfer to students many of whom would have attended higher education in the absence of the grant. In addition, the academic performance requirement for the grant may motivate students to avoid tougher courses to maintain a higher grade or motivate high school teachers and college professors to inflate students’ grades to increase student access to college.

*Grant-like benefits – tuition waivers*

Some OECD countries may authorise higher education institutions to waive tuition fees, providing a grant-like benefit to learners. In Japan, the budget for tuition waivers for students increased from JPY 20 billion in 2006 to JPY 43.4 billion in 2017 (MEXT, 2017<sup>[49]</sup>), and each university has discretionary power to decide how to allocate tuition waivers. Although the California Community College System introduced tuition fees in 1984, it put a fee waiver policy into place at the same time. Between the years 1984 and 2015, fees were waived for a total of 5.1 million students, and during the 2012-13 academic year were provided to 45% of the system's students (Fisher, 2016<sup>[50]</sup>).

**Setting grant levels and duration**

In principle, the level of non-repayable grants should be decided on the basis of student response to higher education costs. The most efficient amount is the one that offsets the costs of higher education for the marginal student – leading to their enrolment. On the other hand, if the grant is targeting students who face significant costs, the amount of the grant should be high enough to incentivise the student to enrol (and complete) higher education studies. In practice, grant levels appear to vary according to social or political demands and fiscal constraints, and are not informed by estimates of behavioural responses.

**Duration of grants**

Inefficiencies in non-repayable support schemes might arise if the duration of non-repayable support is not limited. Students might be incentivised to prolong their studies, taking longer time-to-graduate through slow progression, low credit take-up or switching programmes.

When student financial support is linked with strict merit requirements, incentives to complete are strong. Well-designed financial incentives within student support schemes have been proven by several policy evaluations in different OECD countries to improve completion and time-to-graduate. Incentives work when additional tuition fees are charged to those who fail to meet the merit requirement (as in Italy (Garibaldi et al., 2012<sup>[51]</sup>)). This is more efficient than marginal fee reductions for taking up additional credits (as in the United States (Hemelt and Stange, 2016<sup>[52]</sup>)) or more generous grant availability (as in Finland (Hämäläinen, Koerselman and Uusitalo, 2017<sup>[53]</sup>)).

Designing grant schemes and tuition waivers in order to incentivise students toward on-time completion might reduce costs for institutions and government and allow a more efficient allocation of financial support to students.

**Student financial aid for living/maintenance costs**

If student support covers only tuition fees and not maintenance (living) costs, it may be difficult to ensure an optimal matching of students and location of study. Access will be inequitable, as students from households with low incomes may be constrained to study locally. Likewise, cost factors such as housing prices play a significant role for students choosing to study abroad, as policy evaluations of the Erasmus+ programme in EU countries have reported (Beine, Noël and Ragot, 2014<sup>[54]</sup>). Where public authorities seek to promote domestic or international mobility, maintenance costs will be an important component of the design of student assistance.

Conversely, the expansion of online education may reduce or eliminate maintenance subsidies for those in fully distance-delivered programmes, lowering public expenditure. Whether and how student support systems have adapted to accommodate distance education requires closer examination.

### ***Student support through tax benefits***

Other forms of non-repayable student financial support delivered through the income tax system, as tax credits, have been implemented in a few countries and comprise a small share of student support, compared to grant and loan schemes. Tax credits have been targeted directly to students as well as to families, depending on the programme and country involved. (Bulman and Hoxby, 2015<sup>[55]</sup>) evaluated the effect of a 2009 change in the US federal tax credit, finding a high level of take-up of the tax credit, but that the credit had no effect on student enrolment.

Issues that could arise in delivering benefits through the tax system include inefficient targeting, since the instrument cannot reach the lowest income households if they have no tax liabilities and the benefit is not refundable, and timing, since support availability comes after tuition fees have been paid (GAO, 2006<sup>[56]</sup>).

### ***Assisted saving for educational outlays***

A number of jurisdictions in fee-paying higher education systems have put in place policies to assist households in saving to meet educational expenditures. The United States has “pre-college savings plans”, a tax-preferred saving vehicle typically offered by states, which permit households to build savings for future education expenses. Participation in these plans limited to about 3% of households (GAO, 2012<sup>[57]</sup>), and about half of participants (in 2010) had household incomes above USD 150 000 per year (Reeves and Joo, 2017<sup>[58]</sup>). Canadian households are encouraged to save through the Canada Education Savings Grant, an incentive programme that provides families with matching contributions to a Registered Education Savings Plan for dependents aged 17 or younger (Government of Canada, 2019<sup>[59]</sup>). Owing to the strong incentive feature of the programme, in 2018, 52.7% of eligible children (0 to 17 years old) in Canada received education savings incentives. The behavioural impact of these programmes on savings, enrolment, and study success is not, however, well established.

## **3.4. Repayable types of student financing**

As part of their student support systems, many countries have chosen to adopt publicly supported student lending mechanisms, either in isolation or in combination with grant assistance, to help students pay for fees or living costs or both. The economic rationale for this policy is well established. Students are typically credit-constrained; they do not have access to private, risk-based lending needed to meet the costs of education, risking large-scale underinvestment in education. Publicly supported loan-based financing helps achieve an efficient level of investment in human capital. Student loans, in effect, transfer future earnings of students to pay current expenses for education, solving student liquidity constraints. Private banking institutions supported by government, or the government itself, lend money during the period of study. Repayment begins (typically) after graduation (plus a potential grace period), when the graduate has started earning.

### ***Loans have grown in importance in student support systems***

Budgetary pressures, reinforced by the global financial crisis that commenced in 2008, have led to changes in the financing of higher education in many OECD countries. Tuition fees have been increased in several countries. In response, grants often expanded, but have typically not kept up with rising costs, and the use of loans has been on the rise (European Commission/EACEA/Eurydice, 2018<sup>[5]</sup>).

### ***Lending programmes may also be designed to influence study or career choices over a life course***

Policy makers may design student loans programmes for targeted populations or for policy aims other than simply solving the liquidity problem facing students. Lending programmes may be designed with the aim of influencing study or career choices. This may be done by providing special interest rate subsidies for borrowers, or loan forgiveness for graduates who enter targeted occupations, such as teaching or nursing.

Norway, for instance, encourages students to enter fields in demand by converting a higher share of their loan into a grant for successful completion. Another important feature of the State Educational Loan Fund (*Lånekassen*) is the duration of student financial support, which can be as long as eight years spread over a life course – enabling individuals to attend classes (not necessarily leading to a degree) at any age.

### ***How to capitalise loans: the role of banks and government***

Student loan systems that rely on private lending – loans obtained from banks on the basis of creditworthiness – exist, but are not an efficient and equitable solution for students. The fundamental reasons why conventional risk-based lending, or mortgage-type loans, work well for homeownership but not for investment in skills and education are:

- lack of collateral, since, in contrast with home loans, there is nothing for a bank to sell if a student defaults on their loan, and if students emigrate, leaving no forwarding address, the lender is unable to enforce repayment;
- asymmetric information, since students are better informed than lenders about their ability and whether they aspire to careers in highly rewarding sectors.

As a result, with conventional mortgage-type loans, investment in human capital would be too low. That deterrent applies to all students, but particularly to those from poorer backgrounds who tend to be less informed and less able to absorb financial risk (Barr et al., 2018<sup>[60]</sup>).

To achieve an efficient level of investment in human capital, a loan system needs two elements:

- consumption smoothing: the loan needs to be large enough to allow individuals to transfer some of their income they will earn over the course of their careers to their low-income study period – i.e. allowing a measure of consumption smoothing over the course of the loan;
- insurance: if consumption smoothing is to be effective (i.e. if people borrow enough to finance an efficient amount of investment in human capital), the loan needs to provide an element of insurance against the risk of earning a low income (Barr et al., 2018<sup>[60]</sup>).

Operationally, student lending schemes require a risk-sharing arrangement in which the government guarantees against loan default, which is covered by general taxes; or a risk-pooling arrangement in which borrowers pay together for the loan default, for example, by increasing the interest rate with a risk premium. Government guarantees are often supplemented through other subsidies to borrowers, such as interest rate subsidies, to encourage lender participation.

*A number of countries provide loans with a public subsidy of interest rates and/or a public guarantee against loan default*

Publicly subsidised or state-guaranteed student loans exist in many OECD countries, but these loans are a less common type of public support than grants. In much of Europe – for instance, the French Community of Belgium, France, Italy, Slovakia and Switzerland – few, if any, students receive loans. Wide use of student lending is often associated with countries in which there are universal or high tuition fees (notably in the United States, some other English-speaking countries and Asian countries). Additionally, some

tuition-free systems, such as the Nordic European countries, also have a high proportion of loan recipients, since Nordic families expect their children to be independent and bear the costs of living (European Commission/EACEA/Eurydice, 2018<sup>[5]</sup>).

These loans vary significantly in scale and scope across OECD countries. They can be provided to students through a public loan fund (e.g. Australia, Iceland, the Netherlands, New Zealand, Norway, Sweden, the United Kingdom and others), or through commercial banks (e.g. Estonia, Finland, Poland and Portugal) or both systems (e.g. Chile and Korea).

Countries exhibit a wide range of policies concerning interest subsidies, eligibility criteria, the maximum amount a student can borrow, the maximum duration a student can borrow, whether a grace period following completion of studies exists, and the conditions under which loans are forgiven.

Almost without exception, public loans are forgiven due to death and permanent disability. There are a diverse range of additional circumstances under which loan forgiveness is provided: if repayment has not been completed within a given number of years after study completion (30 in the United Kingdom) or until a given age (68 in Sweden), if the graduate is employed in specific geographic areas, specific industries, giving birth or having financial difficulties (e.g. Norway), if the borrower becomes bankrupt (e.g. New Zealand), achieves excellent academic performance (e.g. Japan), or is continuing to higher studies after completion of specific areas of study (e.g. Sweden) (OECD, 2008<sup>[15]</sup>). In some countries (e.g. Norway, some Canadian provinces), if the student completed studies within a pre-determined period, part of the loan is converted into a grant.

### ***Structuring the repayment of loans: mortgage-style and income-contingent loans***

A key feature of loan systems is the structure of repayment, which can range from mortgage-style to being completely dependent on income.

#### *Mortgage-style loans can cause financial hardship and repayment burden*

While many loan schemes provided through public loan funds have repayment criteria dependent on income, loans provided through commercial banks are exclusively mortgage-style, involving a nominal repayment of a certain amount of money per month, for a certain number of years. With these loan schemes:

- an increase in the interest rates raises monthly nominal repayments;
- the duration of the loan is fixed and the only variable component is the fraction of a person's income absorbed by repayments (referred to as the repayment burden);
- because repayments stay the same (in the absence of interest rate changes), the repayment burden increases if income falls (Barr et al., 2018<sup>[60]</sup>).

As a result of these features, mortgage-style loans may lead to financial hardship and default, when borrowers experience unemployment, low earnings or illness.

Prominent examples of mortgage-style student loans include the US Federal Family Education Loan programme (which operated between 1965 and 2010), and the Japan Student Services Organization (JASSO) interest-free (type 1) and low-interest (type 2) student loan programmes.

Fixed repayment loans have created financial hardship for many loan recipients and their families. Countries have responded by introducing more flexible repayment schedules and arrangements to reduce or suspend payments where disability, unemployment or underemployment make it difficult for borrowers to repay loans (e.g. Norway). Both the Japanese and United States federal student lending systems – which were formerly mortgage-style – have transitioned part of the student loan portfolio to “income-driven

repayment” (United States) or (partial) “income-contingent repayment” (Japan, for Category 1 JASSO loans).

*Loan systems with income-contingent repayments can ease repayment burden for graduates...*

Income-contingent loans (ICL) differ substantially from mortgage-style loans:

- Monthly repayments change according to the borrower’s income level, meaning that the fraction of a person’s income absorbed by loan repayments is fixed, and the repayment burden cannot exceed the defined rate, which could reach zero for low-income levels.
- Variations in the interest rate have no effect on monthly repayment amounts; what changes is the duration of the repayment period.

Such schemes are used in Australia, Hungary, the Netherlands, New Zealand and the United Kingdom, with repayments being organised in different ways (Barr et al., 2018<sup>[60]</sup>):

- based on current income, as in Australia, New Zealand and England – since repayments adjust automatically to current earnings, this is the best method so long as a country has the institutional capacity to implement it effectively;
- based on past income, as in Hungary;
- through a hybrid arrangement – e.g. the Netherlands has a traditional mortgage-like system, but if a person’s earnings are low, they can contact the student loans administration and request a lower repayment rate.

ICL repayments in England, New Zealand and Australia accurately reflect a borrower’s current capacity to repay. Since the incomes of young people are less stable and depend significantly on the state of the labour market when they graduate, repayments based on past income could not be sufficiently flexible to avoid repayment burden.

*...but certain conditions are necessary for their successful implementation...*

While this lending scheme seems optimal, there are a number of difficulties associated with its implementation that limit its adoption. Successful adoption requires, among other conditions:

- a large budget investment from the government to capitalise loans while supporting the entire system, until the first repayments are collected; ICL systems usually entail a substantial initial investment – only recovered once students start their repayments – not easily supported by the public budget (OECD, 2008<sup>[15]</sup>);
- reliable, timely and complete earnings information – as under-reporting of income could be a substantial problem for loan recovery – this requires the loan administrator to have timely access to a borrower’s tax records;
- automatic adjustment of repayments, linked with income tax and social security, to keep the marginal cost of collection low. These transactional efficiencies are viable as long as the ICL scheme can rely on a tax system with a high degree of compliance. If loans are to be collected outside of the tax system, capable and efficient actors who can service loans in repayment are required – whether government entities or contractors retained by government. In some lending systems, such as in the United States, designing contracts to get proper performance from loan servicers has proven to be difficult;
- the ability to recover loans from graduates working beyond national borders, preferably through tax reciprocity.

*...and depending upon design, income-contingent lending programmes may carry a very high public subsidy cost, leading to debates about sustainability*

Once implemented, the decisions to be taken about when repayment begins (at what income threshold) and ends (repayment period), and whether there should be a real rate of interest on loans or surcharges for high-earning graduates have large implications for government costs, and might result in loans carrying a large subsidy value.

An ICL system that is cost neutral would need to include a combination of smaller loans, real interest rates above the government cost of borrowing, loan surcharges, lower repayment thresholds, higher repayment rates, longer loan terms and a healthy labour market with good earnings growth (Chapman and Ryan, 2005<sup>[61]</sup>).

Few ICL schemes meet all of those conditions. For instance, Australia and the United Kingdom have high repayment thresholds. Australia charges interest only at the rate of inflation, and New Zealand charges no interest at all as long as the borrower is resident in New Zealand. The United Kingdom writes off loans unpaid after 30 years, and New Zealand writes off the loans of bankrupts and if the borrower dies with the loan not paid off. As a result, most ICL schemes are not cost neutral – even if they are cash neutral (i.e. even if the repayments equal or exceed the lending in a given year). In New Zealand, the government expenses around 41 cents for each dollar it lends (New Zealand Ministry of Education, 2019<sup>[62]</sup>).

If repayment thresholds and repayment rates are designed so that graduates with high earnings repay the full (present) value of the loan (or more, in the case of surcharges), loan defaults can be covered, at least partially, within the same cohort of graduates (Barr et al., 2018<sup>[60]</sup>). Lessons from the United Kingdom and New Zealand suggest that the combination of interest rate and cohort risk premium should be above the government's cost of borrowing, and below unsecured individual loan interest rates, in order to avoid low repayment rates and adverse selection.

### ***Impact of student lending on enrolment***

Evidence from across the world suggests that well-designed student lending systems have increased higher education enrolment. While we lack experimental evidence about the impact of loan programmes, studies using regression discontinuity designs – comparing like populations immediately above and below programme eligibility thresholds – show strong positive effects on enrolment. Students situated just above and below eligibility thresholds based on credit scores (in South Africa) and test scores (in Chile) show the estimated impact of loan availability on enrolment to be 20% in both systems (Dynarski, 2015<sup>[63]</sup>).

The enrolment impact of loan programmes appears to be sensitive to programme design. Mortgage-style student loan repayment appears to be especially less effective in encouraging enrolment among low-income students, most especially when loan repayment commences during studies or operates on a mortgage-style basis with few adaptations to earnings variability among graduates.

In Japan, for example, prospective students from low-income households are reported to be forgoing a university education to avoid student loan debt. The Japanese government has introduced some measures, including grants and a partial ICL scheme, to help alleviate these problems, but access remains a problem for those from disadvantaged backgrounds (Armstrong et al., 2019<sup>[49]</sup>).

*Carefully designed student support schemes can permit tuition fees to be introduced or raised without adverse effects on students*

Rigorous research indicates that students from disadvantaged backgrounds tend to strongly overestimate current costs and underestimate the benefits of higher education (e.g. future labour market benefits (Cohodes and Goodman, 2014<sup>[64]</sup>)). Carefully designed income-contingent loan schemes can allow tuition



fees to be introduced or raised without adverse effects on access, persistence and completion. As evidence from Australia and the United Kingdom shows, the joint introduction of ICLs with higher tuition fees has not decreased the participation rates of students from low-income families (Murphy, Scott-Clayton and Wyness, 2017<sup>[19]</sup>; Azmat and Simion, 2017<sup>[20]</sup>). In fact, the gap in participation rates between the rich and the poor has even slightly narrowed since the reforms (Chowdry et al., 2012<sup>[65]</sup>).

### 3.5. Impact of student indebtedness

#### ***Evidence about the adverse effects of student debt is shaped by the experiences of a few high-tuition countries***

The rising tuition fees of higher education institutions, as well as a general increase in the demand for higher education, have increased the number of individuals borrowing to pay for college and rising loan balances. Recent examples of this phenomenon can be found in Chile, Canada, the United Kingdom and the United States.

#### ***Indebtedness affects career choices and, to some extent, postgraduate studies***

Rising levels of student indebtedness in a few higher education systems, most especially in the United States, have generated concerns about the potential effects of student indebtedness on career choice, postgraduate studies, family formation, home ownership and personal well-being. There have been claims that indebtedness affects career choices and, to some extent, postgraduate studies.

Indebted students appear to value job security and earnings over job satisfaction. Compared to graduates without debt they less often change jobs or remain unemployed (Chapman, 2015<sup>[66]</sup>), they are less involved in entrepreneurship (Ambrose, Cordell and Ma, 2014<sup>[67]</sup>) and they opt for high-earning sectors over public-sector jobs (Ambrose, Cordell and Ma, 2014<sup>[67]</sup>; Rothstein and Rouse, 2007<sup>[68]</sup>). Evidence on the link between student indebtedness and plans for graduate study is mixed; with effects seem to depend significantly on the type of graduate degree (Perna, 2004<sup>[69]</sup>), the undergraduate institution attended (Zhang, 2013<sup>[70]</sup>), the amount of debt already accumulated (Malcom and Dowd, 2012<sup>[71]</sup>), socio-economic background (Eyermann and Dongbin, 2006<sup>[72]</sup>) and ethnicity (Malcom and Dowd, 2012<sup>[71]</sup>).

#### ***Indebtedness can delay wealth accumulation and family formation***

There is evidence that student loan debt is negatively correlated with financial wealth throughout an individual's lifetime. Significant effects have been found in the United States on outcomes such as net worth, financial distress and retirement savings. Individuals with outstanding student debt have consistently lower levels of net wealth and are more exposed to financial loss (Elliott and Nam, 2013<sup>[73]</sup>). Indebted graduates suffer higher levels of financial distress, both in terms of credit access and loan repayments (Bricker and Thompson, 2016<sup>[74]</sup>). These negative side effects are consistently larger for individuals who do not complete their higher education studies. Finally, several studies have documented the negative effect on retirement preparedness, both in terms of savings and retirement age (Egoian, 2013<sup>[75]</sup>; Hiltonsmith, 2013<sup>[76]</sup>; Rutledge, Sanzenbacher and Vitagliano, 2018<sup>[77]</sup>).

In the United States, as well as in the United Kingdom, individuals with outstanding student debt significantly delay home ownership (Cooper and Wang, 2014<sup>[78]</sup>; Mezza et al., 2017<sup>[79]</sup>; Bleemer et al., 2014<sup>[80]</sup>). Mortgage availability is linked with income requirements in United Kingdom (Andrew, 2010<sup>[81]</sup>) and with debt-to-income ratio in the United States (Mishory and O'sullivan, 2012<sup>[82]</sup>), causing a substantial restriction to additional credit for indebted graduates.

Negative side effects, although not consistently confirmed (Ziebarth and Gervais, 2017<sup>[83]</sup>), can be found also in marriage and family formation choices, particularly for women (Gicheva, 2016<sup>[84]</sup>; Sieg and Wang, 2018<sup>[85]</sup>).

By contrast, evidence from Australia and New Zealand – two countries providing income-contingent loans – shows that student indebtedness has little impact on:

- graduates' consumer behaviour and home ownership (Hall and Scobie, 2005<sup>[86]</sup>; Scobie, Gibson and Le, 2005<sup>[87]</sup>);
- career decision making, mental health and mobility (Kemp, Horwood and Fergusson, 2006<sup>[88]</sup>);
- the likelihood of having children (Yu, Kippen and Chapman, 2007<sup>[89]</sup>; Scobie, Gibson and Le, 2005<sup>[87]</sup>).

## References

- Alecke, B., C. Burgard and T. Mitze (2013), “The Effect of Tuition Fees on Student Enrollment and Location Choice – Interregional Migration, Border Effects and Gender Differences”, *SSRN Electronic Journal*, <http://dx.doi.org/10.2139/ssrn.2221351>. [32]
- Ambrose, B., L. Cordell and S. Ma (2014), “The Impact of Student Loan Debt on Small Business Formation”, *SSRN Electronic Journal*, <http://dx.doi.org/10.2139/ssrn.2417676>. [68]
- Andrew, M. (2010), “The Changing Route to Owner Occupation: The Impact of Student Debt”, *Housing Studies*, Vol. 25/1, pp. 39-62, <http://dx.doi.org/10.1080/02673030903361656>. [82]
- Andrews, R. and K. Stange (2016), “Price regulation, price discrimination, and equality of opportunity in higher education: Evidence from Texas”, No. w22901, National Bureau of Economic Research. [4]
- Arendt, J. (2012), “The effect of public financial aid on dropout from and completion of university education: evidence from a student grant reform”, *Empirical Economics*, Vol. 44/3, pp. 1545-1562, <http://dx.doi.org/10.1007/s00181-012-0638-5>. [37]
- Armstrong, S. et al. (2019), “Student loans in Japan: Current problems and possible solutions”, *Economics of Education Review*, Vol. 71, pp. 120-134, <http://dx.doi.org/10.1016/j.econedurev.2018.10.012>. [64]
- Aziz, O. et al. (2012), “The effect on household income of government taxation and expenditure in 1988, 1998, 2007 and 2010”, *Policy Quarterly*, Vol. 8/1, <http://dx.doi.org/10.26686/pq.v8i1.4411>. [24]
- Azmat, G. and S. Simion (2017), “Higher Education Funding Reforms: A Comprehensive Analysis of Educational and Labor Market Outcomes in England”, *IZA Discussion Paper*, No. 11083, IZA, Bonn, <http://ftp.iza.org/dp11083.pdf>. [20]
- Barr, N. (2004), “Higher education funding”, *Oxford review of economic policy*, Vol. 20/2, pp. 264-283. [22]
- Barr, N. et al. (2018), “Reflections on the US College Loans System: Lessons from Australia and England”, *SSRN Electronic Journal*, <http://dx.doi.org/10.2139/ssrn.3196760>. [60]
- Beine, M., R. Noël and L. Ragot (2014), “Determinants of the international mobility of students”, *Economics of Education Review*, Vol. 41, pp. 40-54, <http://dx.doi.org/10.1016/j.econedurev.2014.03.003>. [54]
- Bleemer, Z. et al. (2014), “Debt, Jobs, or Housing: What’s Keeping Millennials at Home?”, *SSRN Electronic Journal*, <http://dx.doi.org/10.2139/ssrn.2530691>. [81]
- Bound, J. et al. (2016), *A Passage to America: University Funding and International Students*, National Bureau of Economic Research, Cambridge, MA, <http://dx.doi.org/10.3386/w22981>. [28]

- Bricker, J. and J. Thompson (2016), "Does education loan debt influence household financial distress? An assessment using the 2007-2009 Survey of Consumer Finances panel", *Contemporary Economic Policy*, Vol. 34/4, pp. 660-677, <http://dx.doi.org/10.1111/coep.12164>. [75]
- Bulman, G. and C. Hoxby (2015), "The Returns to the Federal Tax Credits for Higher Education", *Tax Policy and the Economy*, Vol. 29/1, pp. 13-88, <http://dx.doi.org/10.1086/683364>. [55]
- Canton, E. and H. Vossensteyn (2001), *Deregulation of higher education: tuition fee differentiation and selectivity in the US*. [31]
- Cellini, S. and C. Goldin (2014), "Does Federal Student Aid Raise Tuition? New Evidence on For-Profit Colleges", *American Economic Journal: Economic Policy*, Vol. 6/4, pp. 174-206, <http://dx.doi.org/10.1257/pol.6.4.174>. [34]
- Chapman, B. and C. Ryan (2005), "The access implications of income-contingent charges for higher education: Lessons from Australia", *Economics of Education Review*, Vol. 24/5, pp. 491-512, <http://dx.doi.org/10.1016/j.econedurev.2004.08.009>. [61]
- Chapman, S. (2015), "Student loans and the labor market: Evidence from merit aid programs", *Northwestern University Department of Economics*, <http://sites.northwestern.edu/slc890/files/2015/09/Download-Job-Market-Paper-PDF-274452u.pdf> (accessed on 13 May 2019). [67]
- Chowdry, H. et al. (2012), *Fees and student support under the new higher education funding regime: what are different universities doing?*, Institute for Fiscal Studies, London, UK. [66]
- Cohodes, S. and J. Goodman (2014), "Merit Aid, College Quality, and College Completion: Massachusetts' Adams Scholarship as an In-Kind Subsidy", *American Economic Journal: Applied Economics*, Vol. 6/4, pp. 251-285, <http://dx.doi.org/10.1257/app.6.4.251>. [65]
- Cooper, D. and J. Wang (2014), "Student Loan Debt and Economic Outcomes. Current Policy Perspective No. 14-7.", *Federal Reserve Bank of Boston*, <https://eric.ed.gov/?id=ED558180> (accessed on 13 May 2019). [79]
- Dearden, L., E. Fitzsimons and G. Wyness (2014), "Money for nothing: Estimating the impact of student aid on participation in higher education", *Economics of Education Review*, Vol. 43, pp. 66-78, <http://dx.doi.org/10.1016/j.econedurev.2014.09.005>. [41]
- Denning, J. and P. Turley (2017), "Was that smart?: Institutional financial incentives and field of study", *Journal of Human Resources*, Vol. 52/1, pp. 152-186, <http://dx.doi.org/10.3368/jhr.52.1.0414-6340R1>. [43]
- Dynarski, S. (2015), "An Economist's Perspective on Student Loans in the United States", No. 5578, CASifo, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2694441](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2694441) (accessed on 27 May 2019). [63]

- Dynarski, S. (2004), "The New Merit Aid", in Hoxby, C. (ed.), *College Choices: The Economics of Where to Go, When to Go, and How to Pay For It*, University of Chicago Press, Chicago. [48]
- Dynarski, S. (2003), "Does Aid Matter? Measuring the Effect of Student Aid on College Attendance and Completion", *American Economic Review*, Vol. 93/1, pp. 279-288, <http://dx.doi.org/10.1257/000282803321455287>. [1]
- Egoian, J. (2013), *73 Will Be the Retirement Norm For Millennials*, <https://www.nerdwallet.com/blog/investing/73-retirement-norm-millennials/> (accessed on 23 May 2019). [76]
- Elliott, W. and I. Nam (2013), *Is Student Debt Jeopardizing the Short-Term Financial Health of U.S. Households?*, Federal Reserve Bank of St. Louis Review. [74]
- European Commission/EACEA/Eurydice (2018), *National student fee and support systems in European higher education - 2018/19*, Eurydice - Facts and Figures, Luxembourg: Publications Office of the European Union, <http://dx.doi.org/10.2797/233986>. [5]
- Evans, B. (2017), "SMART money: Do financial incentives encourage college students to study science?", *Education Finance and Policy*, Vol. 12, pp. 342-368. [13]
- Eyermann, T. and S. Dongbin (2006), "Undergraduate Borrowing and Its Effects on Plans to Attend Graduate School Prior to and After the 1992 Higher Education Act Amendments Recommended Citation", *Journal of Student Financial Aid*, Vol. 36/2, <http://publications.nasfaa.org/jsfa>. [73]
- Fack, G. and J. Grenet (2015), "Improving College Access and Success for Low-Income Students: Evidence from a Large Need-Based Grant Program", *American Economic Journal: Applied Economics*, Vol. 7/2, pp. 1-34, <http://dx.doi.org/10.1257/app.20130423>. [42]
- Farhan, B. (2014), "Tuition elasticity of demand as a tool to manage higher education institutions", *International Journal of Arts and Sciences*, pp. 159-172. [30]
- Fisher, S. (2016), *The California Community Colleges Board of Governors Fee Waiver: A Comparison of State Aid Programs*, California Community Colleges Chancellor's Office. [50]
- GAO (2012), *A Small Percentage of Families Save in 529 Plans*, United States Government Accountability Office, Washington DC, <https://www.gao.gov/assets/660/650759.pdf>. [57]
- GAO (2006), *Schools' Use of the Antitrust Exemption Has Not Significantly Affected College Affordability or Likelihood of Student Enrollment to Date*, United States Government Accountability Office, Washington DC, <https://www.gao.gov/new.items/d06963.pdf>. [56]
- Garibaldi, P. et al. (2012), "College Cost and Time to Complete a Degree: Evidence from Tuition Discontinuities", *Review of Economics and Statistics*, Vol. 94/3, pp. 699-711, [http://dx.doi.org/10.1162/rest\\_a\\_00195](http://dx.doi.org/10.1162/rest_a_00195). [51]

- Geven, K. (2015), "How Did the Latest Increase in Fees in England Affect Student Enrolment and Inequality?", in Curaj A. et al. (eds.), *The European Higher Education Area*, Springer, Cham, [http://dx.doi.org/10.1007/978-3-319-20877-0\\_31](http://dx.doi.org/10.1007/978-3-319-20877-0_31). [18]
- Gicheva, D. (2016), "Student loans or marriage? A look at the highly educated", *Economics of Education Review*, Vol. 53, pp. 207-216, <http://dx.doi.org/10.1016/j.econedurev.2016.04.006>. [85]
- Goldrick-Rab, S. et al. (2016), "Reducing Income Inequality in Educational Attainment: Experimental Evidence on the Impact of Financial Aid on College Completion", *American Journal of Sociology*, Vol. 121/6, pp. 1762-1817, <http://www.journals.uchicago.edu/t-and-c> (accessed on 8 April 2020). [44]
- Government of Canada (2019), *Overview - Canada Education Savings Grant*, <https://www.canada.ca/en/services/benefits/education/education-savings/savings-grant.html> (accessed on 16 March 2020). [59]
- Häkkinen, I. and R. Uusitalo (2003), "The Effect of a Student Aid Reform on Graduation: A Duration Analysis", <https://www.econstor.eu/handle/10419/82695> (accessed on 13 May 2019). [39]
- Hall, J. and G. Scobie (2005), "Capital Shallowness: A Problem for New Zealand?", No. 05, New Zealand Treasury, <http://www.treasury.govt.nz> (accessed on 22 November 2019). [87]
- Hämäläinen, U., K. Koerselman and R. Uusitalo (2017), "Graduation Incentives Through Conditional Student Loan Forgiveness", <https://www.econstor.eu/handle/10419/174052> (accessed on 13 May 2019). [53]
- Hemelt, S. and K. Stange (2016), "Marginal Pricing and Student Investment in Higher Education", *Journal of Policy Analysis and Management*, Vol. 35/2, pp. 441-471, <http://dx.doi.org/10.1002/pam.21891>. [52]
- Hemelt, S. et al. (2018), "Why is Math Cheaper than English? Understanding Cost Differences in Higher Education", No. 25314, NBER, Cambridge, <https://www.nber.org/papers/w25314.pdf> (accessed on 28 March 2019). [11]
- Hillman, N. (2018), "Differential Tuition Fees: Horses for Courses?", No. 104, HEPI. [12]
- Hiltonsmith, R. (2013), *At What Cost? How student debt reduces lifetime wealth*, Demos, New York, <https://www.demos.org/sites/default/files/publications/AtWhatCost.pdf>. [77]
- Kato, S., V. Galán-Muros and T. Weko (2020), *The emergence of alternative credentials*, OECD Publishing, Paris, <https://doi.org/10.1787/b741f39e-en> (accessed on 8 April 2020). [35]
- Kemp, S., J. Horwood and D. Fergusson (2006), "Student loan debt in a New Zealand cohort study", *New Zealand Journal of Educational Studies*, Vol. 41/2, p. 273. [89]
- Linsenmeier, D., H. Rosen and C. Rouse (2006), "Financial Aid Packages and College Enrollment Decisions: An Econometric Case Study", *Review of Economics and Statistics*, Vol. 88/1, pp. 126-145, <http://dx.doi.org/10.1162/rest.2006.88.1.126>. [40]



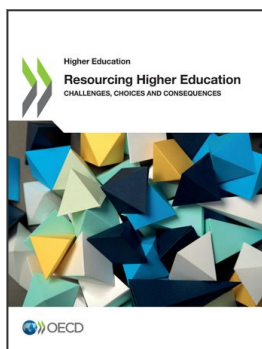
- Loudenback, T. (2016), *International students are now 'subsidizing' public American universities to the tune of \$9 billion a year*, Business Insider, <https://www.businessinsider.fr/us/foreign-students-pay-up-to-three-times-as-much-for-tuition-at-us-public-colleges-2016-9> (accessed on 24 May 2019). [26]
- Malcom, L. and A. Dowd (2012), "The Impact of Undergraduate Debt on the Graduate School Enrollment of STEM Baccalaureates", *The Review of Higher Education*, Vol. 35/2, pp. 265-305, <http://dx.doi.org/10.1353/rhe.2012.0007>. [72]
- Marconi, G. and D. Sanchez-Serra (2018), *Increasing International Students' Tuition Fees: The Two Sides of the Coin*, pp. 13-14, <https://ejournals.bc.edu/index.php/ihe/article/view/10278/8953>. [25]
- Matthews, D. (2019), *Compulsory Dutch looms for foreign students in the Netherlands*, Times Higher Education, <https://www.timeshighereducation.com/news/compulsory-dutch-looms-foreign-students-netherlands> (accessed on 8 March 2020). [29]
- McKenzie, L. (2018), *Federal experiment in nontraditional providers stumbles out of the gate*, Inside Higher Ed, <https://www.insidehighered.com/news/2018/04/18/federal-experiment-nontraditional-providers-stumbles-out-gate> (accessed on 22 November 2019). [36]
- MEXT (2017), *Major Issues in the Budget of Higher Education Bureau 2017*, [https://www.mext.go.jp/component/b\\_menu/other/\\_icsFiles/afieldfile/2017/01/12/1381133\\_01\\_1.pdf](https://www.mext.go.jp/component/b_menu/other/_icsFiles/afieldfile/2017/01/12/1381133_01_1.pdf). [49]
- Mezza, A. et al. (2017), "Student Loans and Homeownership", *Finance and Economics Discussion Series*, Vol. 2016/10, <http://dx.doi.org/10.17016/feds.2016.010r1>. [80]
- Migration Advisory Committee (2018), *Impact of international students in the UK*, <https://www.gov.uk/government/organisations/migration-advisory-committee> (accessed on 22 November 2019). [27]
- Mishory, J. and R. O'sullivan (2012), *Denied? The impact of student debt on the ability to buy a house*, [https://www.cgsnet.org/ckfinder/userfiles/files/Denied-The-Impact-of-Student-Debt-on-the-Ability-to-Buy-a-House-8\\_14\\_12.pdf](https://www.cgsnet.org/ckfinder/userfiles/files/Denied-The-Impact-of-Student-Debt-on-the-Ability-to-Buy-a-House-8_14_12.pdf). [83]
- Murphy, R., J. Scott-Clayton and G. Wyness (2017), *The End of Free College in England: Implications for Quality, Enrolments, and Equity*, National Bureau of Economic Research, Cambridge, MA, <http://dx.doi.org/10.3386/w23888>. [19]
- NAO (2017), *The higher education market: A picture of the National Audit Office logo*, National Audit Office, London, <https://www.nao.org.uk/wp-content/uploads/2017/12/The-higher-education-market.pdf> (accessed on 26 May 2019). [16]
- New Zealand Ministry of Education (2019), *Student Loan Scheme Annual Report 2019*, Ministry of Education, <https://www.educationcounts.govt.nz/publications/series/2555/student-loan-scheme-annual-report-2019> (accessed on 7 April 2020). [62]

- Nielsen, H., T. Sørensen and C. Taber (2010), “Estimating the Effect of Student Aid on College Enrollment: Evidence from a Government Grant Policy Reform”, *American Economic Journal: Economic Policy*, Vol. 2/2, pp. 185-215, <http://dx.doi.org/10.1257/pol.2.2.185>. [38]
- OECD (2019), *Benchmarking Higher Education System Performance*, OECD Publishing, Paris, <https://doi.org/10.1787/be5514d7-en>. [2]
- OECD (2019), *Education at a Glance 2019: OECD Indicators*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/f8d7880d-en>. [3]
- OECD (2019), *The Future of Mexican Higher Education: Promoting Quality and Equity*, Reviews of National Policies for Education, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264309371-en>. [33]
- OECD (2018), *Education at a Glance 2018: OECD Indicators*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/eag-2018-en>. [23]
- OECD (2018), *Higher Education in Norway: Labour Market Relevance and Outcomes*, Higher Education, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264301757-en>. [14]
- OECD (2015), *Indicator B5 Tables*, OECD Publishing, <http://dx.doi.org/10.1787/eag-2015-table154-en>. [10]
- OECD (2008), *Tertiary Education for the Knowledge Society: Volume 1 and Volume 2*, OECD Reviews of Tertiary Education, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264046535-en>. [15]
- Perna, L. (2004), “Understanding the Decision to Enroll in Graduate School: Sex and Racial/Ethnic Group Differences”, *The Journal of Higher Education*, Vol. 75/5, pp. 487-527, <http://dx.doi.org/10.1080/00221546.2004.11772335>. [70]
- Pitman, T. et al. (2017), “The impact of enabling programs on Indigenous participation, success and retention in Australian higher education”, in Frawley, J., S. Larkin and J. Smith (eds.), *Indigenous Pathways, Transitions and Participation in Higher Education: From Policy to Practice*, Springer Singapore, [http://dx.doi.org/10.1007/978-981-10-4062-7\\_14](http://dx.doi.org/10.1007/978-981-10-4062-7_14). [45]
- Pruvot, E. and T. Estermann (2017), *University Autonomy in Europe III: The Scorecard*, EUA. [6]
- Reeves, R. and N. Joo (2017), *A tax break for ‘Dream Hoarders’: What to do about 529 college savings plans*, Brookings, <https://www.brookings.edu/research/a-tax-break-for-dream-hoarders-what-to-do-about-529-college-savings-plans/> (accessed on 7 April 2020). [58]
- Rothstein, J. and C. Rouse (2007), “Constrained After College: Student Loans and Early Career Occupational Choices”, No. 146, CEPS, [http://www.epi.org/datazone/06/wagebyed\\_a.pdf](http://www.epi.org/datazone/06/wagebyed_a.pdf) (accessed on 22 November 2019). [69]



- Rutledge, M., G. Sanzenbacher and F. Vitagliano (2018), *How Does Student Debt Affect Early-Career Retirement Saving?*, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2839453](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2839453) (accessed on 13 May 2019). [78]
- Scobie, G., J. Gibson and T. Le (2005), "Household wealth in New Zealand", Wellington: Institute of Policy Studies, Victoria University of Wellington. [88]
- Scott-Clayton, J. and B. Zafar (2016), "Financial Aid, Debt Management, and Socioeconomic Outcomes: Post-College Effects of Merit-Based Aid", *NBER Working Paper*, No. 22574, National Bureau of Economic Research, Cambridge. [47]
- Sieg, H. and Y. Wang (2018), "The impact of student debt on education, career, and marriage choices of female lawyers", *European Economic Review*, Vol. 109, pp. 124-147, <http://dx.doi.org/10.1016/j.euroecorev.2017.05.009>. [86]
- Smart, W. (2009), *Counting the cost: An analysis of domestic tuition fees*, New Zealand Ministry of Education, <https://www.educationcounts.govt.nz/publications/80898/44620> (accessed on 1 March 2020). [7]
- Social Sciences and Humanities Research Council (2019), *Indigenous research statement of principles*, [https://www.sshrc-crsh.gc.ca/about-au\\_sujet/policies-politiques/statements-enonces/indigenous\\_research-recherche\\_autochtone-eng.aspx](https://www.sshrc-crsh.gc.ca/about-au_sujet/policies-politiques/statements-enonces/indigenous_research-recherche_autochtone-eng.aspx) (accessed on 7 April 2020). [46]
- Stange, K. (2013), "Differential Pricing in Undergraduate Education: Effects on Degree Production by Field", No. 19183, NBER, Cambridge, <http://www.nber.org/papers/w19183> (accessed on 28 March 2019). [9]
- Stange, K. (2012), "An empirical investigation of the option value of college enrollment", *American Economic Journal: Applied Economics*, Vol. 4/1, pp. 49-84, <http://dx.doi.org/10.1257/app.4.1.49>. [17]
- Tertiary Education Commission (2020), *2020 Funding Conditions Catalogue*, <http://www.tec.govt.nz>. (accessed on 7 March 2020). [8]
- Wolinsky, A. (1983), "Prices as Signals of Product Quality", *The Review of Economic Studies*, Vol. 50/4, p. 647, <http://dx.doi.org/10.2307/2297767>. [21]
- Yu, P., R. Kippen and B. Chapman (2007), "Births, debts and mirages: the impact of the Higher Education Contribution Scheme (HECS) and other factors on Australian fertility expectations", *Journal of Population Research*, Vol. 24/1, pp. 73-90, <https://research.monash.edu/en/publications/births-debts-and-mirages-the-impact-of-the-higher-education-contr> (accessed on 12 March 2020). [90]
- Zhang, L. (2013), "Effects of college educational debt on graduate school attendance and early career and lifestyle choices", *Education Economics*, Vol. 21/2, pp. 154-175, <http://dx.doi.org/10.1080/09645292.2010.545204>. [71]
- Ziebarth, N. and M. Gervais (2017), "Life after Debt: Post-Graduation Consequences of Federal Student Loans", *Society for Economic Dynamics*, Vol. 238/2017 Meeting Papers. [84]





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