Chapter 9
Higher Education Funding in Canada, the U.S. and Western Europe – A Comparison

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Abstract This chapter compares the higher education funding systems in the United States, Canada and Western Europe as described in the three previous chapters in this volume. To illustrate differences and commonalities between states we use a number of complementary perspectives and concepts: (1) Esping-Andersen's three *welfare regimes* of liberal, conservative and social-democratic societies, (2) three key *funding dilemmas*/characteristics around funding, along with OECD statistics and information on these characteristics, (3) higher education governance modes as shown in Clark's *triangle of coordination*, and (4) the perspective of *policy frames* driving higher education policy-making. The three policy frames we distinguish are: (1) economic competitiveness and labour market relevance, (2) scientific excellence and exclusiveness, and (3) societal challenges and inclusiveness.

Bringing these perspectives together allows us not just to describe the state-of-the-art in terms of the funding mechanisms of particular states, but also sheds light on the global movement towards market-type steering through the introduction of cost sharing, competition and performance-based funding in higher education. Our argument is that national higher education governance and funding systems differ in the degrees to which they will introduce (or already have embedded) particular manifestations – or *varieties* – of *academic capitalism*.

Introduction

This chapter compares higher education funding systems in the United States, Canada and Western Europe. Based on the descriptions of the three systems by, respectively, Laderman et al., Lang et al. and Garritzmann in the previous chapters we will make this comparison along the lines of the three welfare regimes identified by Esping-Andersen (1990). This welfare system classification will be combined

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with varieties of academic capitalism approach, introduced by Bégin-Caouette et al. (2016) and Schulze-Cleven & Olson (2017). Against this background, we hope to provide readers from Europe, North America and beyond with valuable insights on trends in funding policies from a comparative welfare perspective.

To compare funding policies across countries, the next section of this chapter develops a typology of higher education (HE) funding. This will be done along the lines of some of the key questions and issues for higher education funding (section "Funding Systems: The Key Questions, and Some Data on Funding"). How (OECD) countries have approached these questions is reflected in their choices in terms of levels of funding (the public-private trade-off), the policy instruments used for the funding of the HE institutions (e.g., through block grants and/or competitive funds for HEIs); and the way national funding authorities have shaped the student financial support system (through merit-based and/or need-based aid; student grants and/or student loans, et cetera).

Different welfare regimes may be connected to different funding policies and different funding reforms implemented in the three systems. Section "Welfare Regimes and Funding System Characteristics" will, therefore, present some highlights of funding systems embedded in the three ideal type welfare regimes – the liberal, conservative and social-democratic types distinguished by Esping-Andersen (1990).

Based on the three 'country chapters' (Europe, Canada, U.S.) describing HE financing, we then will compare the three funding systems (section "Marketisation in Higher Education: Coordination Modes and Policy Frames"), looking at their funding policy characteristics and connecting these to the dimensions of the three welfare regimes. In all three regions we have seen the introduction of more market-type steering and financing of higher education. All regions have witnessed the emergence of *academic capitalism* (Slaughter & Leslie, 1997). However, we argue that the particular type of academic capitalism that has emerged is mediated by the specificities of countries' welfare regimes, their coordination modes and the dominant ideas – policy frames – about how the higher education system works r should work.

In section "Conclusions and Reflections", we look back at the relationship between welfare regimes and coordination modes in higher education, on the one hand, and funding policies, respectively marketization policies and academic capitalism varieties on the other.

Funding Systems: The Key Questions, and Some Data on Funding

Countries differ a lot with respect to the way they finance their higher education providers and the students who study for a degree in those institutions (Jongbloed & Vossensteyn, 2016). There are differences between the developed and

less-well developed countries in the world, but also between countries within these two broad groups. Even the richest countries in the world – most of them members of the OECD – show clear varieties when it comes to the extent they finance their higher education system, the types of public expenditures for higher education and the recipients of public funding (OECD, 2020a, b). OECD databases, such as Education at a Glance, show wide differences in terms of the levels of funding and the composition of funds (e.g., OECD, 2021). Furthermore, as illustrated by the three chapters in this volume describing the Canadian, U.S. and European funding systems, there are also significant differences in the way public and private funds are allocated to higher education institutions and students in higher education.

The wealth of countries is one reason for these differences, but also the priorities attached to higher education (or, more generally, education in its entirety) are part of the reasons. Countries or regions (generically, "states") invest in education to promote economic growth (Nelson & Phelps, 1966) and innovation (Acemoglu, 1997; Redding, 1996). Within the overall framework of the welfare systems of countries, higher education plays a role that is often linked to the social-economic development of the country – its citizens and firms – and how that well-being/wealth can be improved further through education and research. Resourcing of higher education, therefore, is a policy tool – a means to an end, a strategy – for creating individual and national competitive advantage.

In deciding on the funds invested by countries – their governments, their citizens – in higher education, important choices and trade-offs must be made. Choices have to be made about using scarce resources to achieve often-conflicting goals. This implies that funding issues are very much about priority setting and assessing policy effectiveness and opportunity costs. In many ways, these are questions of a political-economic nature (Garritzmann, 2016).

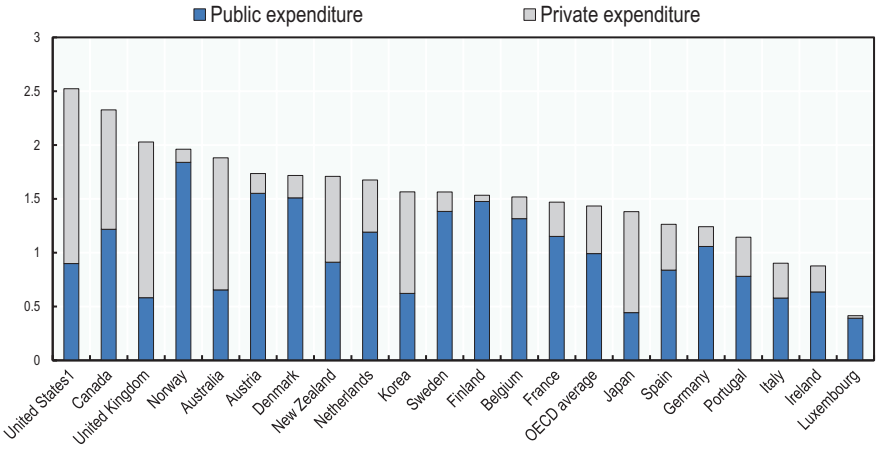
Public budgets for higher education have grown considerably (Johnstone, 2004). And with higher education being such a large part of the public sector, there is increasing scrutiny on how public resources for higher education are allocated and used – for education, research, student support, infrastructure, staffing, campus development, etcetera. At the national (i.e., federal, country, state) level, reforms in educational financing are frequently debated in policy circles to identify the funding mechanisms that produce the best outcomes in terms of guaranteeing access for students, high-quality education, and high-quality research, as well as connecting this education and research to the needs of society. Therefore, many trade-offs and dilemmas around equity and efficiency in higher education emerge (Enders & Jongbloed, 2007). And, given the political-economic nature of these dilemmas, higher education funding therefore cannot be studied from an economic perspective alone, but also will need to draw on insights from political science, public administration, public policy, and organizational studies. As illustrated by the Lang et al. chapter on the U.S. in this volume, political factors also impact funding decisions.

These key political-economic questions are:

1. How much is spent on higher education (or spent per student/ graduate/ unit of knowledge)?
2. What is the share of private spending (by students; households; companies) on higher education as compared to that of the public (government)?
3. How are the public funds for higher education made available to institutions and students?

Many of these questions are covered in the Garritzmann chapter in this volume and the author has provided some examples of the different ways countries have answered them. Elsewhere in this volume, the Laderman et al. (this volume) chapter on the U.S. funding system provided examples of the different higher education spending choices made by U.S. states in answering the above questions. The developments in the U.S. illustrate that particular types of support for higher education are susceptible to being crowded out by increases in demand for other budget categories. The latter relates to another fundamental question, namely what are the activities or societal domains that qualify for public funding? Questions like these go beyond the educational and research needs of states and necessitate making assessments of the returns on public investment in different areas of public concern.

To address the first key question the broadest measure of financing for HE is total public and private spending on higher education. Public spending includes not just operating transfers to HEIs for education or other purposes (capital expenditures, research expenditures), but also government payments to students (student financial support). In 2018, the OECD countries shown in Fig. 9.1 on average spend about



Note: 1. Figures are for net student loans rather than gross, thereby underestimating public transfers.

Source: Based on OECD (2021), Figure C2.2 (https://stat.link/n2rbd1)

Fig. 9.1 Total expenditure on higher education institutions as a % of GDP, by source of funds (2018)

1.4% of GDP on higher education from public and private sources - two-thirds of it on average coming from public and one third from private sources (OECD, 2021).

Looking at the public expenditure on higher education, Fig. 9.1 shows that the Nordic countries stand out with generous public spending, whereas Anglo-Saxon countries such as the UK and the U.S. spend much less. Western European countries invest quite considerably in higher education while Eastern Europe and some Southern European countries score in the middle of the distribution.

On the second question – the share of private funding – Fig. 9.1 as well as the chapter by Garritzmann in this volume, show that private expenditure on HE is particularly high in the Anglo-Saxon countries, especially in the U.S. The same is true for both Korea and Japan. In these countries, the level of tuition fees is relatively high.

Our third key question is about mechanisms of funding. Here, we focus on public funding, because that is where policies (and politics) have the greatest impact. The funding mechanisms question can be broken down into three sub-questions that deal with (1) the funding channel; (2) the funding base; and (3) the funding conditions. The first sub-question asks whether funds flow to student (*customer*) or provider (*supplier*). The second addresses the choice (say, trade-off) of making funds dependent on measures of input (e.g., student enrolment, cost projections, staff volume) or indicators of output (say, performance measures, such as degrees, publication counts, or citation measures). The third sub-question touches on the choice of allocating funds to higher education institutions in a top-down fashion by means allocating block grants, or allocating funds through a competitive process where HE institutions (or academics) themselves are more in the lead. In the latter case, HEIs submit proposals that then are negotiated and/or selectively awarded.

The way in which funds are allocated matters, because it affects the behaviour of those (i.e., HEIs, students, researchers) receiving them. The mechanisms for public funding contain important incentives to achieve higher education's three main goals, viz. quality, efficiency and equity. In order to encourage these goals, many governments have started to introduce performance elements in their funding mechanisms in the belief that this will contribute to a higher degree of cost consciousness and goal orientation among HEIs and students (Burke, 2002; Jongbloed & Vossensteyn, 2001). Performance-based funding modes create an environment of quasi-markets (Herbst, 2007) and both the Garritzmann and the Laderman et al. chapter in this volume present examples of performance-related funding arrangements introduced by states in the U.S. and elsewhere in the OECD.

As shown in these two chapters and in other research (e.g., de Boer et al., 2015), many countries have implemented formula-based funding mechanisms where the public support that HEIs receive is based on a set of performance indicators such as the number of Bachelor and Master degrees (e.g., Austria, Denmark, Finland, Netherlands, Germany, and several sates in the United States such as Tennessee), the number of exams passed by students (e.g., Austria, Belgium, Denmark, Finland, Tennessee, Louisiana, South Carolina). Funding for research can be made dependent on performance measures such as the number of doctoral degrees (Denmark, Finland, Germany, Netherlands) or assessments of research quality (e.g., Italy,

Poland, UK), or the volume of competitive research grants won (Norway, Denmark, Finland, Germany, Ireland, Scotland).

There are different ways in which performance-based funding systems can be designed and the shares of public finding attached to measures of performance can differ very much between countries (e.g., de Boer et al., 2015). The hypothesis put forward in this chapter is that the degree of performance-orientation in the funding systems and performance-related tuition models will depend on the political-, socio-economic context of the country at hand – in particular its welfare regime (Esping-Andersen, 1990). are expected respectively. However, they also have raised concerns about unintended effects (Dougherty et al., 2016).

Welfare Regimes and Funding System Characteristics

Given the different approaches to higher education funding described in the three funding chapters in this volume, the immediate question that arises is: What is underlying the differences in the higher education funding systems across the (western) world? Garritzmann (this volume), in his chapter, suggests that the differences can be traced back to socio-economic structural factors, policy legacies, political institutions (e.g. political parties, interest groups) and public opinion (attitudes).

Taking up this suggestion, we make use of the *welfare regime* concept to denote the social-economic context of countries/states (Esping-Andersen, 1990). Welfare regimes are shaped by political legacies and are characterized by coherent patterns of social policies – around standards of living, social insurance, healthcare and employment. Esping-Andersen identified three main types of welfare states – three regimes – and categorized the modern OECD economies into three different categories:

1. Liberal welfare regimes (e.g., Canada, USA, Australia, New Zealand, and UK) are characterized by a strong role for markets, with states only assuming responsibility for welfare when the family and market fails.
2. Conservative welfare regimes (e.g., Austria, France, Germany, Netherlands, Italy, Switzerland, and Belgium) are characterized by a commitment to preserve social structures and hierarchies, and in particular the traditional family.
3. Social-democratic welfare regimes (e.g., Denmark, Norway, Sweden, and Finland) are characterized by universal social benefits for all citizens, guaranteeing the individual and families a decent standard of living, independently of market participation and family wealth.

In this section, we have attempted to compare the three regions (CAN, U.S., OECD/EU) and their higher education funding systems along similar lines, placing the funding systems in their social fabric – their particular welfare regime context (see Table 9.1). In doing so, we follow Pechar & Andres (2011), who studied higher education policies more broadly and who also included policies around access and participation in their comparison. Our attempt looks at funding models only.

Table 9.1 Welfare regimes and their higher education funding systems

	Public & private investment in HE	Mechanisms for funding HE providers	Mechanisms for financial support of students
Liberal (U.S., UK, Canada, Australia, NZ)	Medium/high public funding to foster human capital investments High tuition fees	Competitive grants Performance-based funding Deregulation/ decentralized decision-making Privatization; private provision	Individual responsibility for investing in education Reliance on student loans Risk taking Selection of students based on meritocratic criteria High proportion of students receiving aid (particularly: loans)
Conservative (e.g., DE, FR, ES, IT, NL, CH, BE, AT, PT)	Medium levels of public funding (reflecting medium investments in HE) Modest tuition fees	Reliance on block funding of HEIs Academic self-governance (peers) involved in allocation decisions Targeted funding Top-down provision (e.g. excellence funds) Supranational steering	Need-based and merit-based grants Status and class-based Reliance on family allowances and tax benefits Lower proportion of students receiving aid
Social-democratic (NO, SE, FI, DK)	High levels of public funding Zero/low tuition fees	Public provision of HE Balance between block funding and project funding Broad-based umbrella organisations involved in allocation decisions	Students as citizens Universal grants, not based on merit Less reliance on family No tax benefits through parents or family allowances High proportion of students receiving aid (particularly: grants)

Source: Author
Note: For country abbreviations see Appendix

Table 9.1 distinguishes the three types of welfare regimes, as well as three characteristics of the funding systems that relate to the key questions identified in section "Funding Systems: The Key Questions, and Some Data on Funding" (above). The funding characteristics are:

1. public/private investment in higher education;
2. mechanisms for the funding of HE providers;
3. mechanisms for financial support of students.

In the following we will clarify the cells in the table, explaining why the specific funding characteristic and the particular welfare regime category go together.

As part of the first set of characteristics, the volume of total public and private higher education expenditures (as a percentage of GDP) indicates the extent to which a country invests in higher education – expressing attention for human capital development and wealth creation. As shown in Table 9.1, liberal regimes show the highest levels, followed by social-democratic regimes, and conservative regimes.

The level of tuition fees is also part of the first set of characteristics, and addresses the question of who pays the fees and whether there is a differentiation of fees. When looking at the division between private and public expenditures, we see high private contributions in some liberal countries (mainly North America). This feature helps bring total spending on higher education to the highest levels worldwide. Tuition fees are modest in conservative regimes, and this is reflected in relatively moderate shares of private expenditures in many continental European countries. Fees are even lower – or zero –in social-democratic regimes.

Turning to funding mechanisms (the second set of funding characteristics), we expect liberal states to relatively embrace more market-type steering approaches. Indeed, in many Anglo-Saxon countries, the core funds that states provide to their HEIs are more driven by performance-based funding mechanisms and a higher share of research funds is provided by means of competitive procedures. An example is the heavily performance-based mechanism of research funding in the UK (i.e. the REF – Research Excellence Framework). The chapters by Lang et al. (this volume) and Laderman et al. (this volume) show that for the funding of research, the federal governments in Canada, respectively the U.S., heavily rely on research councils that provide competitive research grants.

When it comes to these funding mechanisms, the social-democratic countries are at the other side of the spectrum; they rely more on combined block funds for education and research, with some targeted project funds decided by intermediary organisations that represent the collective interests of a wide set of stakeholders. Conservative states, such as the ones in continental Western Europe, take a middle position between the liberal and the social-democratic regimes, and make use of a more balanced mix between state steering through block funds and competitive funding by means of research councils. Here, the academics themselves are much more controlling the market and channelling the competition between HEIs.

On the third funding characteristic, student financial support, we note that in liberal countries (see chapters by Laderman et al., this volume and Lang et al. this volume) the state very much supports underrepresented groups, providing them with relatively modest means-tested grants. Given that liberal countries stress the private benefits of investing in higher education, they expect their students to be prepared to take out a loan to cover the costs of their higher education. In contrast, students in social-democratic countries have access (as independent citizens) to scholarships/grants from their government and/or to student loans.

In conservative countries, marginal students receive grants and student loans are less prominent. Here, one might say that the student support systems are less well-developed. In this group of conservative welfare systems, Southern European countries are more family-oriented, with students very much dependent on their family for financial support and their parents receiving tax support. Few of these countries

have loan schemes for their students – unlike many liberal and social-democratic countries.

Following the OECD, countries can be roughly divided into four groups – four 'worlds', in the words of Garritzmann (2016) – depending on their level of tuition fees and the financial support available through the country's student financial support system for tertiary education (e.g., OECD, 2012, Chart B5.1). Table 9.2 places countries in these four groups, using a share of 50% students benefiting from student support and a tuition fee level of (roughly) USD 4000 as the cut-off points for making distinctions between groups. Countries where the student support system is relatively generous and where students pay no or low fees are often in social-democratic regimes that have more progressive tax structures and where citizens face high income tax rates. In many countries in continental Europe, students are charged low or moderate fees (with the exception of the Netherlands). Many of these countries fall in the category of conservative welfare regimes.

Surely, student support policies are subject to change, with some countries developing their student support systems and/or revising the fees charged to their students (Hauptman, 2007). The chapter by Laderman et al. (this volume) illustrates the multiple reforms and tweaks made to the states' and the federal government's support for student grant aid, student loans and tax benefits. Also in Canada (see the chapter by Lang et al., this volume), changes were made in the federal student loan program and the system of tax credits that helps reduce the students' tuition fee cost. With the ongoing corona pandemic, several countries have provided more generous grants to students – at least for the time being. Some of these measures may turn out to be more structural reforms and may lead to the blurring of distinctions between conservative and social-democratic countries.

What Tables 9.1 and 9.2 do not capture is the interaction between the dimensions, that is either between public funds and private funds, or between institutional funding and student funding. Garritzmann (this volume) points to the phenomenon that sometimes governments use public and private expenditure as substitutes in order to maintain a stable level of total spending. An example is raising student contributions (e.g. tuition fees) or replacing student grants by student loans while at the same time reducing public expenditures on higher education. This policy is also

Table 9.2 The four worlds of student finance (situation: 2017/18)

	Less than 50% of students benefit from public loans AND/OR scholarships/grants	More than 50% of students benefit from public loans AND/OR scholarships/grants
Below average (or zero-fees) charged by public HEIs	AT, IT, ES, PT, FR, BE, DE, CH	FI, NO, DK, SE
Above average tuition fees charged by public HEIs	South Korea, Japan,	U.S., CAN, UK, AUS, NZ, IE, NL

Source: OECD (2019, 2020a, 2021); Garritzmann (this volume)
Note: For country abbreviations see Appendix

known as a cost sharing (Johnstone, 2004) or privatization (Brown, 2011) and it may be driven by political as well as economic (e.g. austerity) motives.

In the chapter by Laderman et al. (this volume) we see another example of substitution. The authors present trends that show an increase of public expenditures on student aid in the U.S. coinciding with a decrease in the direct funding of institutions through the states' appropriations to their higher education institutions.

These examples refer to the trade-offs that policymakers make between goals like improving access, encouraging efficiency and ensuring high quality. How policymakers choose between goals and how they make trade-offs can be related to the state's politico-economic conditions and demographic factors, but also to public opinion and interest groups, as argued in the Garritzmann chapter (this volume). The Laderman et al. (this volume), chapter also mentions the role of political factors and interest groups that impact funding decisions in the U.S. A complicating factor that affects the funding decisions and trade-offs in the U.S. is the balanced-budget restriction that each state in the United States has to respect and that can affect the level and type of state grant aid for students.

Marketisation in Higher Education: Coordination Modes and Policy Frames

Categorizing countries in terms of welfare regimes, 'worlds' of student finance and classes is a useful exercise when highlighting similarities and differences across countries, but it does not capture the dynamics in the funding systems. An interesting question is whether over time one can detect funding systems converging or perhaps growing more apart. At the system level, what changes in the financial governance arrangements in the higher education systems can be detected?

Esping-Andersen pictured the three welfare regimes as different arrangements between state, market, and the family. Burton Clark, one of the most influential higher education researchers of the past decades, made use of a similar 'triangle of coordination' to analyse higher education governance (Clark, 1983). The three corners of Clark's triangle are the state, the market and the academic oligarchy. His triangle (see Fig. 9.2a) has frequently been used as a paradigm for describing, assessing, and comparing systems of postsecondary education (e.g., Van Vught, 1989).

Both in Esping-Andersen's and in Clark's coordination triangles we encounter the state and the market. The state – or government – stands for public hierarchical administration or bureaucracy, while the market represents coordination through competition and leaves coordination to the 'invisible hand'. Unlike Esping-Andersen's, Clark's triangle does not include the family, but instead awards a role to the professional self-management by an academic oligarchy. Coordination in the higher education system thus is pictured as the balance between academic self-governance, state and market competition.

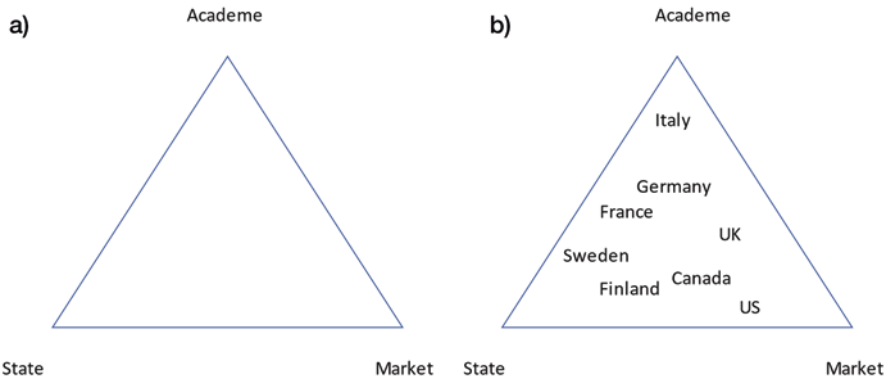


Fig. 9.2 Clark's triangle of coordination

In terms of the balance between the three principal actors in the triangle of coordination (Fig. 9.2), one could say that, throughout many years, the locus of power was in the corner of academic self-governance. However, the need to make higher education more efficient and more relevant to the labour market and the economy meant that, gradually, the state took back more control over how and where its budget was spent. This placed the focus more on bottom-left and bottom-right corners of the triangle. The introduction of more market-type steering in the public sector (including in higher education) meant that the state stepped back and is allowed market forces to gain more control (Jongbloed, 2003).

Figure 9.2b shows an attempt by the author of this chapter at placing some OECD member states in Clark's triangle of coordination. Based on recent information from the OECD on current funding model characteristics and student finance arrangements (OECD, 2020b, 2021) the picture compares the countries in terms of higher education funding arrangements. We have to stress that locating the countries is not an exact science; the picture is mostly intended as a means to summarise funding-related information into some kind of stylized visualisation.

The Nordic countries have been placed in the state corner; some of the larger continental European countries (e.g., Italy, Germany, France) are leaning more towards the academic self-governance corner, while the Anglo-Saxon states (e.g., Canada, UK, U.S.) are closer to the market corner.

Marketization is one of the most frequently debated trends in higher education Brown, 2011. It is often seen as reflecting the broad world-wide rationalisation trends in the public sector (Ramirez & Meyer, 2013) and includes the introduction of performance criteria, competition, the introduction of tuition fees, privatisation, liberalisation and the use of contracting, for instance through performance agreements. Markets stress freedom to choose; they encourage responsiveness towards customers (e.g. students) and innovation (to gain a competitive advantage). While across the higher education systems in Canada, the U.S. and Europe one can see

examples of New Public Management-inspired funding reforms (e.g., Broucker & De Wit, 2015; and the three funding chapters in this volume), these reforms have been implemented differently by the funding authorities in the various countries. The differences in political-economic structures – *welfare regimes*, in short – have led to different varieties of marketisation in higher education; to different varieties of academic capitalism (Gornitzka & Maassen, 2000; Slaughter and Leslie, 1997; Slaughter & Rhoades, 2004). Other scholars (e.g., Bégin-Caouette et al., 2016; Jessop, 2017) also have tried to explain the emergence of different varieties of academic capitalism.

Policy studies have used the term politico-administrative *regimes* to study how policies and coordination modes are affected by context (e.g., Dobbins et al., 2011; Bleiklie & Michelsen, 2019). Others pointed to paradigms (e.g. Hall, 1993) and policy frames (Surel, 2000; May & Jochim, 2013). Paradigms, policy frames and policy regimes are about the 'constellation of ideas, institutional arrangements, and interests that are involved in addressing policy problems' (May & Jochim, 2013, 426). Capano (2023) stressed the importance of ideas and instruments in policymaking.

Policies and reforms undertaken by governments and funding authorities as part of rationalisation efforts have contributed to a convergence in higher education coordination systems. However, while we can detect similarities as a consequence of these isomorphic tendencies that are strengthened by globalisation and policy internationalisation, we still can detect divergences in steering higher education systems (Musselin, 2011). Reforms depend, first of all, on the social welfare regime and the cooperative arrangements between state, market and academe in which they are situated. However, they also will be driven by a policy framework – an idea or understanding between policymakers of how the higher education system should work and what policy instruments are the most suitable to solve policy problems (Capano, 2023). Policy frames encompass norms and values – political priorities in terms of what needs fixing and what the different actors should and should not do. Without an "idea" about what to expect when they act, policymakers cannot intervene. Policy frames therefore are 'diagnostic/prescriptive stories that tell, within a given issue terrain, what needs fixing and how it might be fixed' (Rein & Schön, 1996). Policy frames thus help policymakers choose.

This chapter is not the place to discuss where policy frames and policy ideas come from, but it is fair to say that in today's interconnected global economy the emergence and diffusion of ideas and policy recipes is the result of debates among policymakers collaborating in international forums such as the OECD and the EU, as well as debates among experts and scientists that interact with policy-makers in various communities, fora, think tanks and public media. Governing instruments in higher education are increasingly influenced by the ideas and recipes of international organisations such as the OECD and the EU.

In other words, higher education funding policy frames equally have been shaped by ideas put forward by different communities of experts and policymakers. In that respect one can distinguish the following dominant policy frames / policy ideas:

1. the policy frame of scientific excellence;
2. the policy frame of economic competitiveness;
3. the policy frame of societal challenges.

Obviously, these frames are ideal types –like many of the other tools and classifications presented in this chapter. Reality will always be a mix of different types. However, making the distinction between three policy frames helps reduce complexity.

The three frames have been identified in previous research (Ulnicane, 2015) and feature prominently in recent European discussions on science and innovation policy (Sørensen et al., 2016), thus very much focusing on the research mission of higher education. In this discussion, scientific excellence (frame #1) is about academia focusing on scientific capital – research output, high-quality research articles, et cetera. The economic competitiveness frame (frame #2) focuses on relevance in research – applied research outputs, valorisation of research and knowledge transfer. Research addressing societal challenges (frame #3) involves higher education undertaking activities that aim to contribute to major societal issues and achieving the United Nations' Sustainable Development Goals (Mazzucato, 2021).

The three research policy frames can be broadened to also include the education mission of higher education, thus reformulating them into the following three policy frames:

1. To acknowledge not just the research but also the education mission of higher education, we rephrase the (first) policy frame of scientific excellence and relabel it as *excellence and exclusion* – thus highlighting its contrast to a policy frame that focuses on inclusiveness and equality in education.
2. To broaden the policy frame of economic competitiveness to also include education, we relabel it to *competitiveness and relevance*, thus stressing the links between higher education graduates and the labour market. Economic competitiveness is not just strengthened by means of HEIs producing applied research, but also by giving more of a say to business in shaping the curriculum (next to its influence on the academic research agenda).
3. The third policy frame (i.e. societal challenges) can be broadened to encompass the education mission by ensuring that the higher education curriculum pays attention not just to learning outcomes that focus on economic relevance, but also on social relevance, sustainable development goals. We therefore relabel it to societal challenges and inclusiveness.

The result of this rephrasing of the three dominant policy frames in Table 9.3 shows the different degrees of marketisation – or different varieties of academic capitalism that one may expect to encounter in the different combinations of welfare regimes and point of gravity (locus) in the state-market-academe triangle.

One may argue that in liberal welfare regimes, where the coordination of the higher education system very much takes place through markets and competition, the higher education institutions will be focusing more on research

Table 9.3 Welfare regimes, policy frames and academic capitalism

		Dominant Policy Frame	Variety of academic capitalism
Welfare regime and locus in Clark's triangle	Liberal/market-oriented	Economic competitiveness and labour market relevance	Hybridisation
	Conservative/academic self-governance	Scientific excellence & exclusiveness	Coordinated HE market
	Social-democratic/ state-centered	Societal challenges & inclusiveness	Consensus & collaboration

Source: Author

commercialisation and will engage in partnerships with the private sector. This is likely to lead to economically driven HEIs that become more like hybrid organisations (Jongbloed, 2015).

Funding concentration and stratification is a more common feature of the Continental European model, where academic self governance still is relatively strong. Here, the introduction of markets will be more coordinated (also by European policymaking), protecting academic autonomy and maintaining a balance between the production of scientific capital and economic capital. Academic capitalism will be more moderate compared to the liberal model.

In the social-democratic (say, Nordic) model, the balance between block funding and competitive funding is also moderate, but there is more steering by the state to make the HEIs focus more on producing outputs for the public good. Values like consensus, inclusiveness and collaboration will be put relatively high on the higher education agenda (Esping-Andersen, 2015).

As part of global rationalisation trends, marketisation policies therefore are mediated by the nations' social welfare arrangements, their national traditions and their policy regimes. They undergo national translation and are 'filtered' by local contexts, thus giving way to path dependencies and exhibiting historical institutionalism (Thelen, 1999). As a result, different varieties of academic capitalism are the end result. Thus, the label marketization can be used to describe very different things (Jungblut & Vukasovic, 2018).

Conclusions and Reflections

Overlooking the different kinds, patterns and politics of higher education funding in countries across the world, the first observation we made in this chapter is that countries differ tremendously. However, secondly, there are also similarities between countries – in particular between countries that have similar social fabrics – that belong to a particular social welfare regime. Liberal, social-democratic, and conservative regimes could be distinguished partly based on the public-private funding

ratio for higher education systems. This relation between welfare regimes and funding characteristics was found in earlier studies (e.g., Pechar & Andres, 2011; Bégin-Caouette et al., 2016).

However, a straightforward relationship between welfare regimes and funding patterns does not exist, and, as stated by Garritzmann (this volume), when studying the variety of higher education funding one always needs to specify the kind of funding that one looks at. There is a wide variation within each of the three welfare regimes and at the same time also a significant amount of overlap among the different regimes.

In this comparative chapter, we have taken a kind of a winding road, starting with welfare regimes, then taking on board some of the key funding dilemmas in higher education and using both Clark's triangle of coordination and the perspective of policy frames to arrive at different varieties of academic capitalism – different manifestations of marketisation.

Along the way we argued that governance and funding in higher education is not a simple matter of more or less state intervention. Rather, it is about regulating competition, channelling markets through a cleverly designed composition and balance of performance incentives, contracting for outcomes, tuition fee setting, quality assurance policies, et cetera. Ultimately, the challenge is 'how to get the incentives right'.

In this chapter, we have argued that funding models in liberal, conservative and social-democratic systems will vary not just in terms of their locus in Clark's triangle, but also in terms of policy frames. Given the nature of the different worlds of welfare capitalism distinguished by Esping-Andersen, we expect markets and the policy frame of economic competitiveness to be more frequently used in the Anglo-Saxon model while 'competing' policy frames around excellence and societal challenges are more likely to receive a higher place on the policy agendas of conservative, respectively social-democratic states.

Despite the distinctions in governance and funding between higher education systems situated in the three welfare systems, some common characteristics have appeared over time. Many higher education systems have witnessed increased marketisation tendencies, based on a policy frame of economic competitiveness. However, new policy frames are on the rise. Modern policy frames/paradigms place a heavy focus on relevance of higher education for contributing also to other policy domains, in particular to addressing the sustainable development goals (SDGs). This may imply that we may see a shift back from market-oriented funding policies, where government takes the lead and sets the direction of change, enabling bottom-up experimentation. Higher education then not just is stressing economic (or innovation) issues, but also addresses societal issues in areas such as health, environment and energy. The mission-based approach would expect higher education institutions to help produce breakthrough technologies, in R&D projects carried out together with business and industry. Government then would have to become more of an *Entrepreneurial state* (Mazzucato, 2011, 2021). And, given that individual states will not be able to manage and resource such challenges alone, one may expect to

see a bigger role played by supranational governments and international organisations in creating missions and supplying the resources required.

The key question is, of course, whether funding policies matter for the outcomes of the system. In the U.S. chapter (Laderman et al., this volume) ample attention is paid to the relationships between state funding and student success. As stated by Garritzmann (this volume), higher education funding matters, because different types of funding models have considerable effects on students' enrolments, their studying behaviour and, therefore, on inequalities in society. But equally interesting then is whether the evidence on policy effectiveness actually feeds back into the design of funding policies and the debate on the varieties of academic capitalism that shape the performance of the higher education sector.

We hope that this comparative chapter can help shape a theoretical framework to study how countries' political-economic structures, coordination modes and policy frames may influence the public goods and private benefits produced in higher education systems. In doing so, this chapter also may contribute to the ongoing debate on the balance between the converging and diverging tendencies in higher education funding systems.

Appendix: Country Abbreviations

AT	Austria
AUS	Australia
BE	Belgium
CAN	Canada
CH	Switzerland
DE	Germany
DK	Denmark
ES	Spain
FI	Finland
FR	France
IE	Ireland
IT	Italy
NL	Netherlands
NO	Norway
NZ	New Zealand
PT	Portugal
SE	Sweden
UK	United Kingdom
U.S.	United States

References

Acemoglu, D. (1997). Training and innovation in an imperfect labor market. *Review of Economic Studies, 64*(3), 445–464.

Bégin-Caouette, O., Askvik, T., & Cui, B. (2016). Interplays between welfare regimes typology and academic research systems in OECD countries. *Higher Education Policy, 29*(3), 287–313.

Bleiklie, I., & Michelsen, S. (2019). Scandinavian higher education governance—Pursuing similar goals through different organizational arrangements. *European Policy Analysis, 5*(2), 190–209.

Broucker, B., & De Wit, K. (2015). New public management in higher education. In J. Huisman, H. F. de Boer, & M. Souto-Otero (Eds.), *The Palgrave international handbook of higher education policy and governance* (pp. 57–75). Palgrave Macmillan.

Brown, R. (Ed.). (2011). *Higher education and the market*. Routledge.

Burke, J. C. (Ed.). (2002). *Funding public colleges and universities for performance: Popularity, problems, and prospects*. State University of New York Press.

Capano, G. (2023). Ideas and instruments in public research funding. To be published. In B. Lepori, B. Jongbloed, & D. Hicks (Eds.), *Handbook of the public funding of research*. Edward Elgar.

Clark, B. R. (1983). *The higher education system: Academic organization in cross-national perspective*. University of California Press.

de Boer, H., Jongbloed, B., Benneworth, P., et al. (2015). *Performance-based funding and performance agreements in fourteen higher education systems: Report for the Dutch Ministry of Education, culture and science*. CHEPS.

Dobbins, M., Knill, C., & Vögtle, E. M. (2011). An analytical framework for the cross-country comparison of higher education governance. *Higher Education, 62*(5), 665–683.

Dougherty, K. J., Jones, S. M., Hana Lahr, R. S., Natow, L. P., & Reddy, V. (2016). *Performance funding for higher education*. Johns Hopkins University Press.

Enders, J., & Jongbloed, B. (Eds.). (2007). *Public-private dynamics in higher education. Expectations, developments and outcomes*. Transcript Verlag.

Esping-Andersen, G. (1990). *The three worlds of welfare capitalism*. Princeton University Press.

Esping-Andersen, G. (2015). Welfare regimes and social stratification. *Journal of European Social Policy, 25*(1), 124–134.

Garritzmann, J. L. (this volume). Politics of higher education funding in (Western) Europe – And beyond. (Chapter 6). In J. Jungblut, M. Maltais, E. Ness, & D. Rexe (Eds.), *Comparative higher education politics*. Springer.

Garritzmann, J. L. (2016). *The political economy of higher education finance. The politics of tuition fees and subsidies in OECD countries, 1945–2015*. Palgrave Macmillan.

Gornitzka, Å., & Maassen, P. (2000). Hybrid steering approaches with respect to European higher education. *Higher Education Policy, 13*(3), 267–285.

Hall, P. A. (1993). Policy paradigms, social learning, and the state. The case of economic policymaking in Britain. *Comparative Politics, 25*(3), 275–296.

Hauptman, A. M. (2007). Higher education finance: Trends and issues. In J. J. F. Forest & P. G. Altbach (Eds.), *International handbook of higher education* (pp. 83–106). Springer.

Herbst, M. (2007). *Financing public universities: The case of performance funding*. Kluwer.

Jessop, B. (2017). Varieties of academic capitalism and entrepreneurial universities. *Higher Education, 73*(6), 853–870.

Johnstone, D. B. (2004). The economics and politics of cost sharing in higher education: Comparative perspectives. *Economics of Education Review, 23*(4), 403–410.

Jongbloed, B. (2003). Marketisation in higher education, Clark's triangle and the essential ingredients of markets. *Higher Education Quarterly, 57*(2), 110–135.

Jongbloed, B. (2015). Universities as hybrid organizations. Trends, drivers, and challenges for the European university. *International Studies of Management and Organization, 45*(3), 207–225.

Jongbloed, B., & Vossensteyn, H. (2001). Keeping up performances: An international survey of performance based funding in higher education. *Journal of Higher Education Policy and Management, 23*(2), 127–145.

Jongbloed, B., & Vossensteyn, H. (2016). University funding and student funding: International comparisons. *Oxford Review of Economic Policy, 32*(4), 576–595.

Jungblut, J., & Vukasovic, M. (2018). Not all markets are created equal: Re-conceptualizing market elements in higher education. *Higher Education, 75*(5), 855–870.

Laderman, S., Cummings, K., Lee, J. C., Tandberg, D., & Weeden, D. (this volume). Higher education finance in the United States: Sources of funding and impacts of state investments. (Chapter 7). In J. Jungblut, M. Maltais, E. Ness, & D. Rexe (Eds.), *Comparative higher education politics*. Springer.

Lang, D., St-Amant, P.-A. B., & Maltais, M. (this volume). Financing higher education in a federal system: The case of Canada. (Chapter 2). In J. Jungblut, M. Maltais, E. Ness, & D. Rexe (Eds.), *Comparative higher education politics*. Springer.

May, P. J., & Jochim, A. E. (2013). Policy regime perspectives: Policies, politics, and governing. *Policy Studies Journal, 41*(3), 426–452.

Mazzucato, M. (2011). *The entrepreneurial state*. Demos.

Mazzucato, M. (2021). *Mission economy: A moonshot guide to changing capitalism*. Allen Lane.

Musselin, C. (2011). Convergences and divergences in steering higher education systems. In R. King, S. Marginson, & R. Naidoo (Eds.), *Handbook on globalization and higher education* (pp. 454–468). Edward Elgar Publishing.

Nelson, R., & Phelps, E. (1966). Investment in humans, technological diffusion and economic growth. *American Economic Review, 56*, 69–75.

OECD. (2012). *Education at a glance 2012: OECD indicators*. OECD Publishing.

OECD. (2019). *Education at a glance 2019: OECD indicators*. OECD Publishing.

OECD. (2020a). *Education at a glance 2020: OECD indicators*. OECD Publishing.

OECD. (2020b). *Resourcing higher education: Challenges, choices and consequences*. Organisation for Economic Co-operation and Development.

OECD. (2021). *Education at a glance 2021: OECD indicators*. OECD Publishing.

Pechar, H., & Andres, L. (2011). Higher-education policies and welfare regimes: International comparative perspectives. *Higher Education Policy, 24*, 25–52.

Ramirez, F. O., & Meyer, J. W. (2013). Universalizing the university in a world society. In J. Shin & B. Kehm (Eds.), *Institutionalization of world-class university in global competition* (pp. 257–273). Springer.

Redding, S. (1996). The low-skill, low-quality trap: Strategic complementarities between human capital and R & D. *The Economic Journal, 106*(435), 458–470.

Rein, M., & Schön, D. (1996). Frame-critical policy analysis and frame-reflective policy practice. *Knowledge and Policy, 9*(1), 85–104.

Schulze-Cleven, T., & Olson, J. R. (2017). Worlds of higher education transformed: toward varieties of academic capitalism. *Higher Education, 73*(6), 813–831.

Slaughter, S., & Leslie, L. L. (1997). *Academic capitalism: Politics, policies, and the entrepreneurial university*. Johns Hopkins University Press.

Slaughter, S., & Rhoades, G. (2004). *Academic capitalism and the new economy: Markets, state, and higher education*. Johns Hopkins University Press.

Sørensen, M. P., Bloch, C., & Young, M. (2016). Excellence in the knowledge-based economy: From scientific to research excellence. *European Journal of Higher Education, 6*(3), 217–236.

Surel, Y. (2000). The role of cognitive and normative frames in policy-making. *Journal of European Public Policy, 7*(4), 495–512.

Thelen, K. (1999). Historical institutionalism in comparative politics. *Annual Review of Political Science, 2*(1), 369–404.

Ulnicane, I. (2015). Broadening aims and building support in science, technology and innovation policy: The case of the European research area. *Journal of Contemporary European Research, 11*(1), 31–49.

Van Vught, F. A. (1989). Creating innovations in higher education. *European Journal of Education, 24*(3), 249–270.