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# Expansion and differentiation in higher education: the historical trajectories of the UK, the USA and France

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# Expansion and differentiation in higher education: the historical trajectories of the UK, the USA and France

Vincent Carpentier

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## Abstract

The 2008 crisis has reactivated crucial debates regarding the relationship and tension between creation of wealth and its redistribution. Those debates coincide with a renewed interest in the understanding of the ways in which the expansion of higher education systems has led, sometimes simultaneously, to significant democratic advances and persistent inequalities. This paper proposes to bridge those debates by offering a historical lens on the connections and tensions between the processes of expansion, democratisation and institutional differentiation in higher education. A key question is whether institutional differentiation might not only reflect diversity but also channel inequalities. The paper seeks to investigate whether, and the extent to which, this link between expansion, stratification and inequalities might be historically contingent. For example, might progress and setback in the integration of various social groups at times be driven and at others constrained by institutional differentiation? To what extent might this depend on resources? This research explores whether and how those links and tensions between expansion and institutional differentiation around questions of structure, mission, and (in)equalities have evolved historically by looking at the contexts of the UK, USA and France since the 1920s. It examines whether and how socioeconomic fluctuations, and notably their influence on funding, might affect and be affected by the relationship between the dynamics of expansion and differentiation of higher education systems. The empirical side of the research relies on the methodology of quantitative history to construct historical datasets on enrolment and funding of the various groups of institutions which have shaped the expansion of higher education in the UK, France and the USA since the 1920s. Those datasets are used to explore the historical trends and patterns of expansion and institutional differentiation of higher education systems. By comparing and contrasting those historical series with key socio-economic aggregates, the paper examines the extent to which periods of economic prosperity and crisis might affect and be affected by the trends in the level and structure of funding, expansion and institutional differentiation in higher education. The historical lens shows that the

expansion of higher education and its democratisation have been driven and at times constrained by key institutional transformations and identifies the socioeconomic crises of the 1930s, 1970s and 2008 as key turning points during which the links between structure, mission and contribution to (in)equalities of institutional differentiation are reassessed.

## Introduction

In theory, a system of higher education could expand with or without differentiation. However, the historical trajectories of many countries suggest that the expansion of higher education is often and increasingly connected to institutional differentiation. Those processes of institutional differentiation have various origins and consequences. They are driven by complementary and sometimes conflicting social, political economic, cultural rationales which strongly influence the shape of higher education systems around key distinctive categories such as elite/non elite, public/private, vocational/academic and more recently face to face/online forms of provision. The analyses of the consequences of institutional differentiation in higher education range from positive accounts of the diversity of mission to more critical interpretations focusing on the stratification of inequalities.

The crisis of 2008 and its close connection with the question of inequality has reactivated such debates on the origins of stratification of higher education systems and their implications for students, staff and society. This paper proposes to offer a historical lens to those debates by looking at the long-term connections and tensions between the processes of expansion and institutional differentiation in higher education in the UK, France and the USA since the 1920s. It is significant that each country is at the time of writing engaged in lively debates regarding ways to address the tensions between the process of expansion and differentiation of their higher education systems and their impact on inequalities. For instance, the UK government has just launched a review of student finance which questions the impact of fees across institutions and subjects, as well as the tensions between academic and technical higher education. The French government has recently launched controversial historical reforms of the *Baccalauréat* and of the process of access to non-selective public universities. The impact of student debt, federal loans and the specific role of for-profit private institutions on inequalities is a key area of policy debates in the USA.

The paper examines the historical trajectories of expansion and institutional differentiation of higher education systems around three interconnected areas: the structure of differentiation, mission differentiation and the contribution to in(equalities), and explores their relation to economic fluctuations and social change in each country. The empirical dimension of the research is based on the comparison and contrast of historical data on funding and enrolment of the whole system and its various institutional segments. Those series are also confronted to key socio-economic aggregates in order to examine the extent to which periods of economic prosperity and crisis might affect and be affected by the trends in funding, access and institutional differentiation in HE.

Section 1 discusses the key debates on the links between expansion and differentiation and presents the research questions. Section 2 presents the theoretical and empirical approach of the paper. The research offers an interdisciplinary lens combining history of education and political economy. The empirical evidence is based on the construction of quantitative historical data tracking down the level and structures of expansion and differentiation of each system using the methodology of quantitative history. Section 3 examines three patterns of the historical expansion of higher education systems which are important to consider before looking at institutional differentiation: the pace of expansion, the question of democratisation and the transformation of the funding models. Section 4 to 6 focuses on the historical

process of differentiation in each country. Section 7 presents the key findings and offers some conclusions.

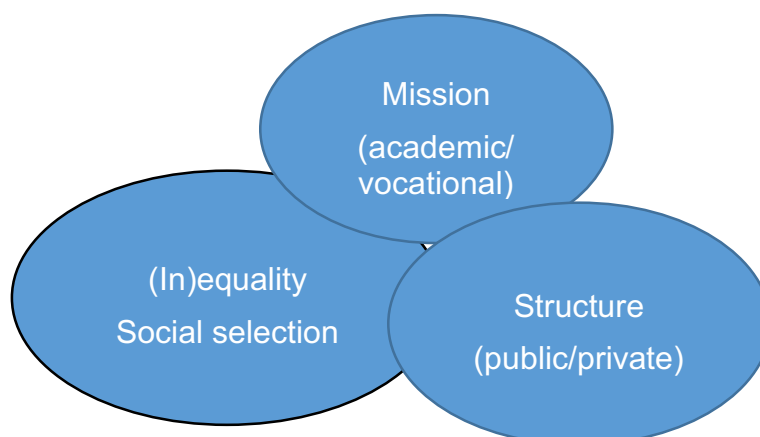
## 1. Literature review and research questions

The literature underlines the important role of differentiation in understanding current and past expansion. It identifies a variety of drivers behind differentiation and considers the implications across time and space. Among the key themes and debates identified, the following focuses on the long-term connections and tensions between expansion and differentiation associated with questions of structure, mission and (in)equalities.

### 1.1 Expansion and institutional differentiation: questions of structure, missions, and (in)equalities

Higher education is expanding worldwide and a growing number of countries have become high participation systems (Marginson, 2016a). Many of those systems expanded as a result of a process of aggregation or combination of several types of institutions (Huisman et al, 2015). The relationship between expansion and differentiation has received an increasing amount of attention. The literature identifies various drivers behind differentiation in higher education. For instance, Varghese and Puttmann (2011) see diversification as the result of academic drift, democratisation, the knowledge economy and demand for new skills, the expansion of secondary education and specialisation regarding teaching and research. In his review of the literature, Van Vught also focuses on mainly positive factors of differentiation which he sees “as a response to various students’ need, response to social mobility, response to the labour market, meets the needs of a variety of political groups within society, a mutual intents for a combination of mass and elite HE, innovations and low risk experimentations” (2009, p. 4).

The question of institutional differentiation is connected to a variety of key debates related to mission (teaching and research/vocational and academic), inequalities (of access, participation and success), competition for resources, types of governance and national or global competition (Hazelkorn, 2015). The variety of views on the role of differentiation is well illustrated by the concepts and definitions used in those debates including differentiation, diversity, diversification or stratification (Altbach et al., 2017).



Thus, there are many entries to look at differentiation and the following proposes to focus on three lenses of structure (public/private and local/central), mission



(academic/vocational or teaching/research) and (in)equalities (contribution to social cohesion). The assumption is that there are connections and tensions between the ways in which institutions are organised and funded, what they do and the students they enrol.

### ***Structure: origins and consequences of public/private differentiation***

Differentiation in higher education can be associated with various types of structure, control and organisation. A key change in the shape of higher education system includes the emergence (or in many cases a re-emergence) of private (for-profit or not for-profit) providers. The debates on the growing involvement of private provision in higher education have been particularly active and controversial and particular centred on the implications for equity and quality. Those debates are marked by the complexity of the public/private differentiation. Private provision has been associated with offering better, different or more higher education (Geiger, 1986) as well as a mix of various political, cultural, religious, social and economic rationales (Levy, 2003). This explains why private provision takes different forms according to the historical specificities of countries (Hunt et al, 2016). Private providers can be elite or non-elite institutions (Levy, 2003), national or international institutions (Robertson, 2018). McCowan also underlines the important distinction between for-profit and not for-profit institutions and their implications for equity and quality (2007). The growth of the private sector is also questioned in relation to its impact on the whole system with the frontiers between public and private sectors increasingly blurred (Tight, 2006). Another area of the structure of differentiation of higher education system related to central/local public provision (Unterhalter and Carpentier, 2010).

### ***Mission and institutional differentiation: division of labour or drift?***

Institutional differentiation is also the product of the diversity of missions reflected by the higher education system. For example, different types of institutions have distinctive degrees of involvement in teaching and research, vocational and academic education, local, national or international outlook. This has generated debates on whether and to what extent expansion might or should be necessarily driven by an institutional division of labour (Birnbaum, 1983). At the same time, many have observed a greater tendency towards institutional isomorphism or convergence (Musselin, 2004). This connects to ongoing debates on the origins and consequences of the academic drift, a process by which non-university institutions aspire to emulate universities by, for instance, shifting away from vocational higher education and increasing their involvement in research (Pratt and Burgess, 1974; Tight, 2015).

The distinction between horizontal differentiation (a division of labour based on the type of knowledge, activities and missions) and vertical differentiation (a hierarchy of institutions quality, reputation, status of students and future graduates) is particularly productive when looking at those questions (Marginson, 2016; Teichler 2008). Teichler notes that those movements are historically contingent, arguing that “in the 1980s, attention shifted gradually towards “vertical” differences among institutions of formally the same type. Since the 1990s, more extreme modes of vertical diversity were more frequently advocated as options to embark into world-wide competition for “world-class university” status (2008, p.1). Goglio and Regini describe a shift in the key objective of differentiation in European higher education from the creation of a vocational track related to the demand from the labour market in the 1960–1970s towards a vertical differentiation where institutions started to compete for resources and prestige from the 1990s onwards (2017).

Those shifts in mission differentiation may be explored in relation to broader social change. For example, they question whether institutional differentiation reflect a division of labour or more problematic ways of distributing inequalities (Brennan and Naidoo, 2008; Archer et al.; McCowan 2015) or both.

### ***Differentiation as a driver of diversity or inequalities?***

The 2008 crisis has reactivated crucial debates about the tensions between wealth creation and its redistribution (Piketty, 2014) which coincided with a renewed interest in the understanding of the reasons why the expansion of higher education systems has led, sometimes simultaneously, to significant democratic advances and persistent inequalities. A key question is whether the persistence of inequalities associated with the expansion of higher education systems might be channelled through their institutional differentiation (Carpentier and Unterhalter, 2011). Bastedo and Gumpert refer to “shifts in the stratification of student opportunity” (2016, p.355). Does institutional differentiation represent a displacement of inequalities rather than their elimination? (Burke, 2012; Morley and Lugg, 2009).

Blessinger and Anchan (2015) define the democratisation of higher education “as the process of making higher education, through a diversification of institutional types and missions, available to anyone who wishes to avail themselves of the services it has to offer” (Blessinger, 2015). Their definition is productive and includes differentiation but does not take on board differences in equity of access to those different institutions as well as the real or perceived differences in quality that may be explained by differential resources. These are the decisive conditions by which institutional differentiation may drive or constrain the democratic project of higher education. McCowan’s ideal egalitarian system requiring a horizontal differentiation characterised by “even prestige and quality across the system” (2015, 659) has been debated for some time. On the one hand, Shavit et al. interpret differentiation as a process of inclusion rather than diversion arguing that “while differentiation is commonly viewed as a consequence of expansion, it may also contribute to expansion, as new places become available in new segments of the education system” (2007, p. 4). On the other hand the connections between institutional differentiation and the distribution of inequalities have been observed in many countries (Bourdieu and Passeron, 1964; Reay et al, 2005; Boliver, 2015).

Those debates increasingly question the role of institutional differentiation in that process and revolve around a tough dilemma: Is differentiation catering for under-represented groups or keeping them isolated in some segments of the system? For example, there are debates on whether the academic drift of non-university institutions represents a democratisation of knowledge or a danger to widening participation.

The links and tensions between the questions of structures, missions and (in)equalities at the heart of institutional differentiation are well captured by Parry who argues that “the debate has shifted to what kinds of higher education are accessed by what kind of students for what kind of outcomes” (2015, p. 15). The following looks at this issue historically.

## **1.2 Historical connections and tensions between the dynamics of differentiation**

The dynamics between expansion and differentiation has been acknowledged very early. Trow’s model based on historical stages leading from elite (up to 15%) to a mass (16% to 49%) and universal (50%) (1974) system of higher education is not only about

the scale of a system but also, and perhaps more fundamentally, about changes in its institutional structure (1974). This is well summed up by Teichler who identifies “a growing number of sectors of the higher education system: elite higher education is supplemented in the process of expansion by mass higher education and later additionally by universal higher education” (2008, p. 354). Marginson considers that as higher education is a positional good, “the tendency to stratification of institutions on the basis of unequal value is inevitable where there is inequality of wealth and status and social competition for a limited number of well paid professionals” (Marginson, 2016b, 81). This trend of stratification has since been confirmed in many countries with high participation systems (Marginson, 2016a).

This paper seeks to investigate whether and the extent to which this link between expansion, differentiation and inequalities might be historically contingent. For example, might progress and setback in the integration of various social groups at times be driven and at others constrained by institutional differentiation? To what extent might this depend on resources? It examines whether and how socioeconomic fluctuations and notably their influence on funding might affect and be affected by the relationship between the dynamics of expansion and differentiation of higher education systems. This research explores whether and how those links and tensions between expansion and institutional differentiation around questions of structure, mission, and (in)equalities evolved historically by looking at the contexts of the UK, USA and France since the 1920s.

### **1.3 Research questions**

The key research questions include:

- What are the historical trajectories of expansion and differentiation of higher education systems? How are they related?
- What are the key historical changes and continuities regarding institutional differentiation of higher education in relation to the questions of mission (academic/vocational; teaching/research), structure (public/private) and (in)equalities (elite/non elite)? How are they connected?
- Do socioeconomic fluctuations affect the relationship between the dynamics of expansion and differentiation of higher education systems, and vice-versa?

## **2. Approach**

The complex and multifaceted links between higher education expansion and differentiation incites the adoption of an interdisciplinary approach. History of education and political economy are combined in order to examine the various ways in which long-term socioeconomic changes influenced higher education expansion and stratification. The empirical side of the research explores those connections through the analysis of historical data on funding, enrolment of the overall system and its various institutional segments in the UK, France and USA since the 1920s.

### **2.1 Interdisciplinary approach: the lenses of political economy and history of education**

An interdisciplinary approach is useful to explore the long-term connections and tensions between the political, social, economic and cultural rationales behind the expansion of a higher education system and its institutional contours (Carpentier 2018). This paper combines the lenses of the political economy and history of

education in order to examine how the links between the expansion and differentiation in higher education connect with the successive regimes of accumulation which reflect different types of articulation of wealth creation and its distribution. Those two historical regimes were identified and conceptualised by the regulation theory as Fordism (a social compromise of mass production and consumption based on a public sphere set up by the combined effects of the Great depression of the 1930s and the Second World War) and post Fordism (a shift from state intervention to a more market economy and society, increasingly globalized following the long stagnation in the 1970s).

### ***History of higher education perspectives***

The research explores the historical connections and tensions between expansion and differentiation of higher education systems in the USA, UK and France since the 1920s. A reasoned approach of the use of the past to illuminate the current context (Aldrich, 2003) is shared by Clark when he argues that “much can be learned about the differentiation of academic systems by analyzing the historical origins and especially the persistence over long periods of time of the major forms that comprise existing structure” (1978, p. 251).

Institutional differentiation has a very long history. The first medieval universities of the 12<sup>th</sup> century (Perkin, 2006) were preceded by higher education institutions both outside (India, China) and inside Europe (cathedral schools and Studium Generale). Since then, various competing or complementary rationales – such as feudal and religious competitions, nation state building, the political and industrial revolutions – have led to the emergence, transformation and at times disappearance of various types of institutions, periodically reshaping higher education systems (Carpentier, 2018). This suggests substantial historical and geographical variations in the origins, forms, roles and consequences of differentiation. History is useful to understand the perceived and actual roles of universities and other higher education institutions in relation to questions of in(equalities) (elite/non elite), missions (academic/vocational; teaching/research) and structure (public/private). The hierarchy between the rationales behind the creation of an institution or a group of institutions might also have changed across time and space. For example, technical institutions might be elite in some places and not in others, during some periods and not others. The post 1920s higher education systems of the three countries explored in this paper are the product of that longer history.

A key historical question is whether economic fluctuations might help to understand whether, when and how institutional differentiation reflects a functional diversity or a more problematic process of channelling inequalities, or a bit of both. The field of history of education is characterised by a tradition of dialogue with social science to reflect on past and present (Lowe 2003; McCulloch 2011) association with economic history (Hobsbawm 1997; Sanderson, 2007). For that, I turn to regulation theory.

### ***A political economy approach: higher education, economic fluctuations and social change***

Looking back at the relationship between expansion and differentiation since the 1920s is important not only because it covers the construction of mass higher education but also because it coincides with substantial socioeconomic transformations. The socioeconomic lens connects well with the key analysis of differentiation in terms of structure (public/private), mission (academic/technical) and

contribution to (in)equalities (distribution of wealth).

Regulation theory offers a political economy framework articulating economic fluctuations to wider social change and technological transformations (Boyer and Saillard 2002; Fontvieille and Michel 2002) which is useful to understand educational development. Regulation theory emerged during the downturn of the 1970s seeking to understand the mechanisms of crises by exploring the regularities and changes in the mode of regulation of socio-economic system. Although the 1929 and 1973 downturns are usual points of reference (Galbraith 1954), other significant crises have also been explored by works associated with long economic (or Kondratiev) cycles (Louçã and Reijnders 1999). The First Depression (1830-1848), the Long Depression (1873-1897), the Great Depression (1921-1939), the Long Stagnation (1973-?) and the Great Recession (2008-?) conform or differ in relation to their origins, intensity, duration, degree of internationalisation and impact on (un)employment, productivity and prices. Regulation theory offers a framework to reflect on the origins and effects of those successive crises (Carpentier, 2015). It shows that until the Second World War, crises were key turning points crystallising both the contradiction of the economic system manifested by the periodic increase in inequalities and the development of the transformations necessary to overcome them. Each pre 1945 crisis led to a renewal of the institutionalised compromise seeking to address the growing instability by a realignment of social and technological systems (Freeman and Louçã, 2001). However, the combined effects of the crisis of the 1930s and the Second World War produced a qualitative transformation of the system (Fontvieille and Michel, 2002), crystallised by the emergence of what regulation theory describes (following Gramsci) as the Fordist model (Boyer, 2015). A new post war institutionalised compromise emerged with a specific model of growth based on an intensive accumulation combining mass production and consumption, translating productivity gains into wages and driving productive social spending (such as higher education) through the development of the welfare state to drive what the neo-Schumpeterians have called a new techno-economic paradigm (Freeman and Louçã, 2001). The crisis of the 1970s characterised by a movement of stagflation (lower growth and high inflation) shook the foundation of the Fordist model and interrupted the post war institutionalised compromise maintained by the Keynesian welfare state. The Post-Fordist model which followed was based on the reduction of taxation leading to a (re)concentration of income at the top (Piketty, 2014) and controlled public spending combined by the marketisation and financialisation of the social sphere (Van der Zwan, 2014, p.111) including higher education.

The theory raises key questions about crises across history. For instance, is the 2008 downturn the beginning of a new crisis or the culmination of the 1970s crisis (Carpentier, 2015)? It also raises questions about higher education. How did such a transition from Fordism and post Fordism impact both quantitative and qualitative expansion of higher education systems and their differentiation? This paper seeks to understand the extent to which the various models of creation and redistribution of wealth might have influenced or might have been influenced by the level and structures of differentiation. It considers how economic fluctuations and social change and their effect on the level and structure of funding influence and are influenced by expansion and differentiation and its articulation of the questions of structure, mission and (in)equalities.

## **2.2 Empirical methods: a quantitative history of expansion and differentiation**

The methodology of quantitative history drives the empirical side of the research enabling the collection and processing of long-term data on higher education funding and enrolment at the systemic and institutional levels. The objective is to collect data on mission, control and selection disaggregated by the various segments of higher education systems.

### ***A quantitative history of the UK, USA and French systems***

The research maps out trends and patterns in expansion and differentiation since the 1920s in the USA, UK and France by tracking historical data on funding and enrolment of the institutional segments of these countries' higher education systems. This new historical dataset complements a previous ESRC research related dataset at the systemic level (Carpentier, 2004). The comparison of different periods and countries raises obvious challenges regarding the data collection, process and interpretation. In order to mitigate these, this research uses the methodology of quantitative history which can be defined as a retrospective history ruled by the principles of national accounting. This method offers an exhaustive and coherent system of collecting and processing of data which provides homogenous statistical series that are comparable across time and space (Marczewski 1961).

The choice of those three countries is motivated by various reasons. First, they represent key models of higher education with common and different historical trajectories. They all reached massification with different funding systems. US higher education has an important tradition of private funding and provision. France is mainly a public funded republican model. The UK has shifted from a public funded system to an increasingly privately funded system, although based on government-backed loans. Another area of interest is the differences regarding their organisation. The French republican model is traditionally centralised. There are differences across the UK nations with enrolment in England representing 82% of UK enrolment (HESA 2017) and Scotland – which has a different funding system – around 10%. The analysis will indicate when some findings are more relevant to England than the rest of the UK. It is also important to note that the USA is a federal system with important state competence in higher education and as a result substantial differences across systems. There is also difference in size in system which may influence both expansion and differentiation. For example, the state of California covers 13% of all US enrolment.

The three systems have all experienced distinctive forms of institutional differentiation to enact their expansion agenda. The British expansion was initially based on the development in the 1960s of a binary system combining the growth of the university sector with the development of a more vocational and teaching orientated public sector of higher education until the system became unified in 1992 (excepted for higher education provision in a small number of further education colleges). The French expansion was initially based on the development of universities and selective specialist higher schools of higher education (including the Elites Grandes Ecoles) complemented by the emergence in the 1960s of 2-year vocational higher education in university (*University Institute of Technology- IUT*) and Lycées (*Higher Technical Sections-STS*). The US expansion grew under a stratified system based on the distinction between 2-year and 4-year private (for-profit and not for-profit) and public institutions.

### **Data sources, construction of datasets and interpretation**

Mapping out differentiation back to the 1920s is a mix of logistics and convenience in terms of access to data. This period corresponds to the intensification of funding in higher education that has led to the set up of new processes of inspection and control contributing to the emergence of key statistics (Carpentier, 2008). For instance, UK sources were significantly enriched after 1919 when the University Grants Committee (UGC) was created to distribute public fund to universities requiring returns from them in exchange for financial involvement from the state (Shinn, 1980). This continued when the UGC became the University Funding Council and Further Education and Polytechnics Funding Council in 1988 before being replaced by the Higher Education Funding Council for England in 1992. French official data are also closely connected to the state, such as the *Annuaire Statistique de la France* and other key publications from the Ministry of Education. Data on funding draw on Carry (1999) and have been updated and complemented by new series on enrolment. US Data were gathered by the National Center for Education Statistics (NCES) and published by the US Department for Education and the Bureau of Statistics replaced by the Bureau of Census in 1938. These data are in the public domain, available from key governmental departments and statistical agencies of the three countries.

Statistical categories are social constructs reflecting the historical specificities of the expansion of each system and their differentiation at the time of their production (Carpentier 2008). This explains why certain data are not available for some countries making some areas of comparison difficult and why the paper examines some issues in some countries but not in others. Annual statistical series have been reconstructed and harmonised in order to ensure continuities across time and space. The UK series distinguishes the universities from the public sector of higher education. In France, the distribution relates to universities, *Grandes Ecoles* and 2-year vocational higher education institutions. The US series distinguish 2- and 4-year institutions and private (for-profit and not for-profit) and public institutions. The historical series in the dataset include:

- The level and structure of enrolment by types of institution and its structures regarding students (gender, social class, nationality...) and mode of enrolment (fulltime/part-time; undergraduate/postgraduate...).
- The level and structure of funding within groups of institutions.

Those historical series are compared to key demographic and socioeconomic data. Those data were extracted from the works of Mitchell (1988) and Maddison (1995, 2000), Lindert (2004) and Piketty (2014) and the World Wealth and Income Database (WID.world) (Alvaredo et al. 2017) as well as government sources such as the Statistical Abstract for the US, the *Annuaire Statistique de la France* and INSEE for France and the Annual Abstract of Statistics for the UK. All economic and educational series are expressed in purchasing power parity in 1990 Geary-Khamis US\$ (PPP). PPP is a conversion rate that quantifies the amount of a country's currency necessary to buy in the market of that country the same quantity of goods and services as a dollar in the US. Such a tool is necessary in order to give a comparative estimate of the value of educational expenditure eliminating differences in price level between countries. The PPP indices series are derived from Maddison (2000) and updated.

The collected and processed historical data are interpreted in order

- to highlight specific or common evolutions of long-term funding and development of institutional segments of higher education systems
- to compare and contrast key historical trends on structure, mission and inequalities of the various groups of institution to those on the whole system of higher education (Carpentier, 2004)
- to match those trends with key historical socioeconomic data including GDP, productivity, labour market and existing datasets on inequality, taxation and public spending (Piketty, 2014).

The multiplicity of factors that can influence or be influenced by the expansion and differentiation shows that it is important to differentiate correlation from causality. By developing historical case studies, the paper seeks to explore the historical trajectories of each country and identify key features, characteristics of differentiation in relation to structure, mission and in(equalities) and how this affects and is affected by the relationship and tensions between expansion and differentiation.

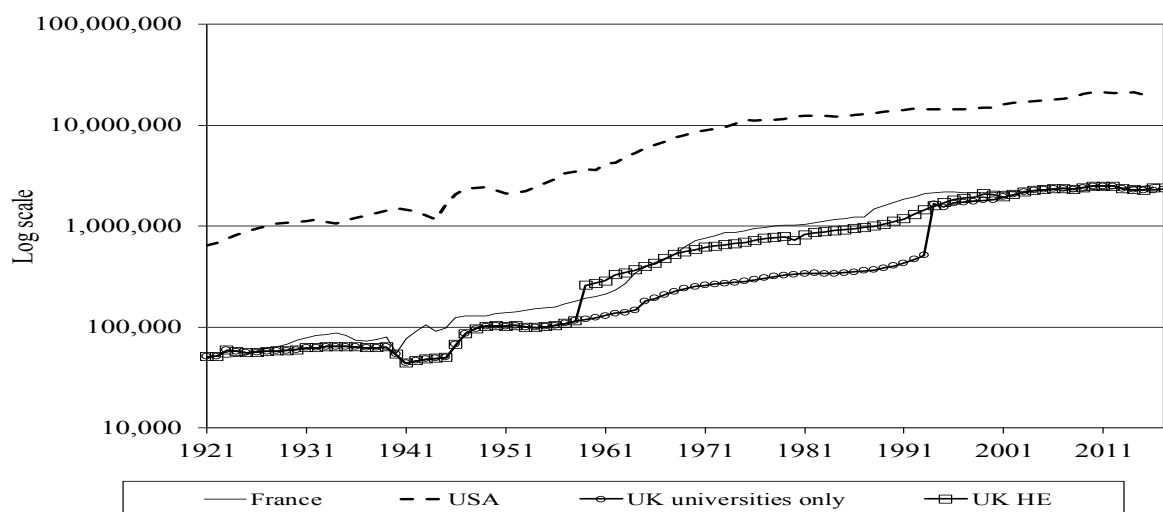
### 3. Three key historical characteristics of expansion

This section underlines three key characteristics of the historical process of expansion which are important to consider before looking at the historical trajectory of institutional differentiation in each country. First of all, the process of expansion was not linear and, once demography is taken into account, was the result of two key phases of expansion around the 1960s and the 1990s. Secondly, the expansion is marked by a mix of democratic progress and persistent intersectional inequalities. Thirdly, the two phases of expansion can be distinguished by a substantial shift in funding models in the 1970s closely connected to economic cycles and the transition from a Fordist to a Post-Fordist socio-economic model.

#### 3.1 Two key phases of expansion of the 1960s and 1990s

The expansion of enrolment in higher education in all three countries is manifest both in absolute and relative numbers. Figure 1 shows that from 1920 to 2016, enrolment multiplied by 54 in the UK, 33 in the USA and 47 in France. Two historical phases of expansion are identified around the 1960s and 1990s.

**Figure 1 Enrolment in higher education (all students) 1921-2017**

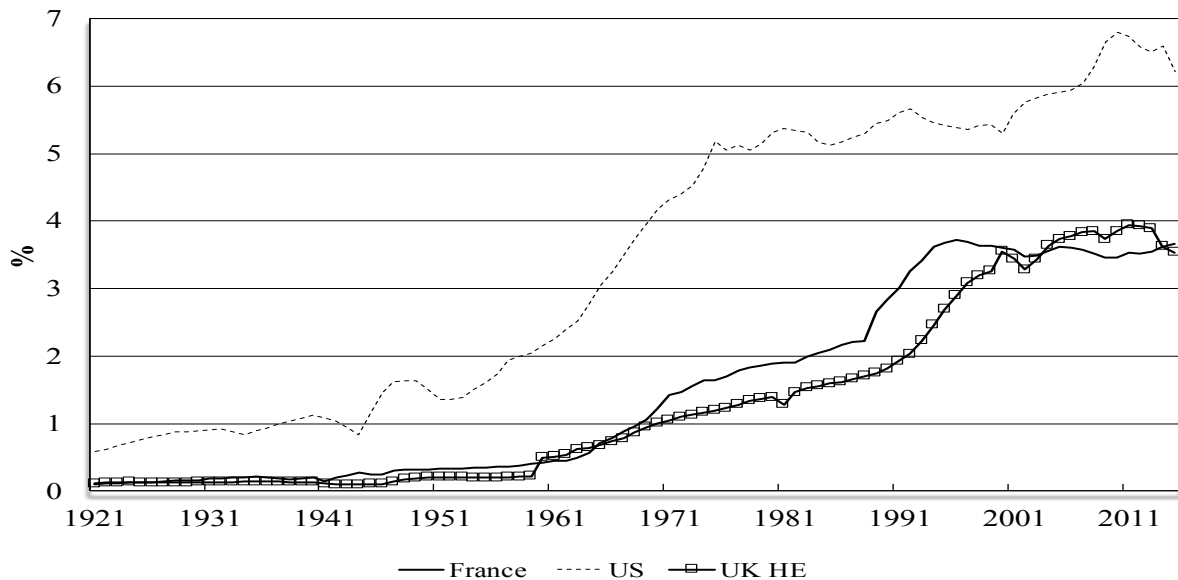


Source: see Carpentier 2012) updated, See annexes.



Figure 2 shows that the expansion is influenced but not fully conditioned by demographic changes. The rise in enrolment exceeds the growth in the population in all countries. The US advance in the ratio of enrolment to total population is significant throughout the whole period (although community colleges are included in US data while equivalent institutions are not considered as higher education in France and the UK and are not included in the data) although the gap in the UK and France has narrowed since the 1990s (although is still substantial).

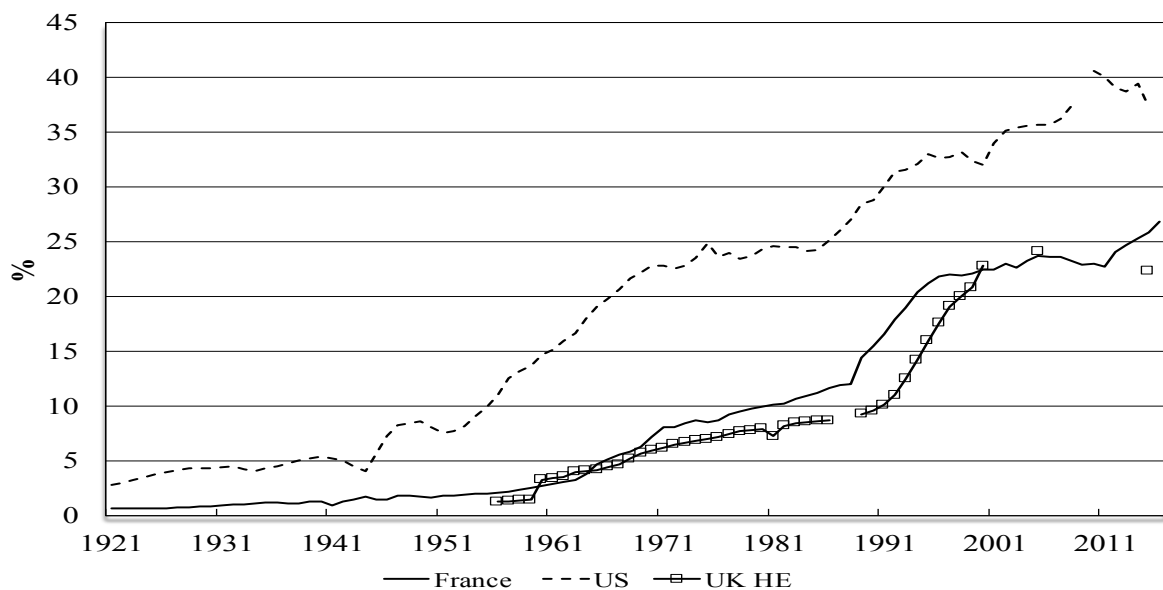
**Figure 2 Enrolment (FT and PT) as a share of the total population: 1921-2014**



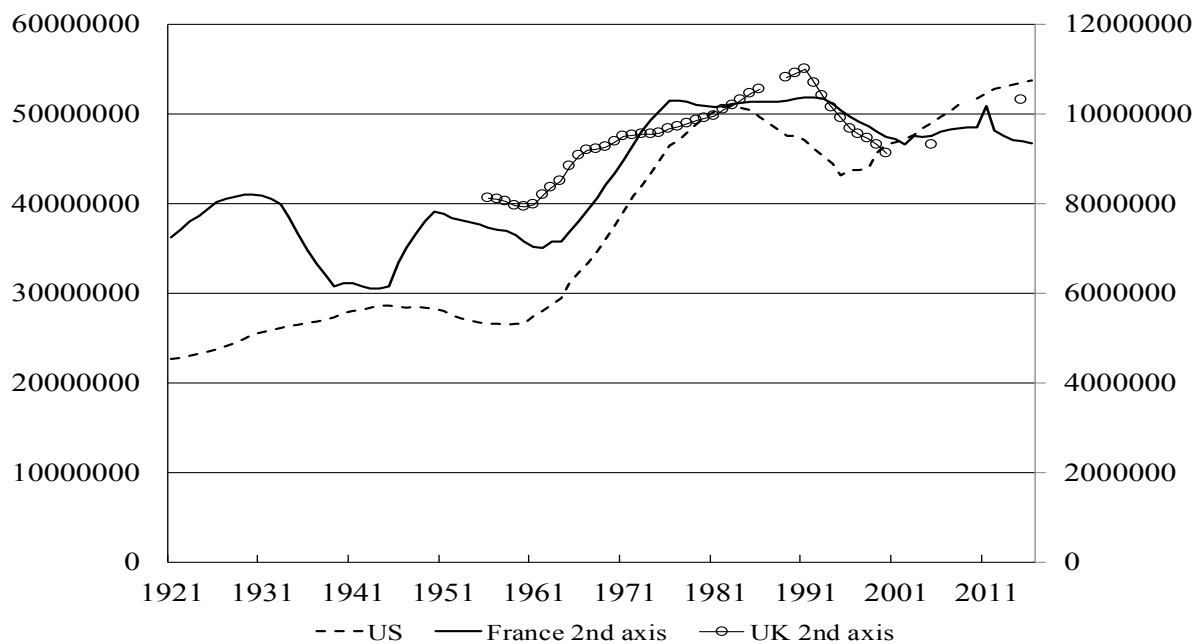
Source: Mitchell 1988; updated.

Figure 3 shows enrolment to the variation of the 18-30 age group and confirms the advance of the USA. It also confirms the key phases of expansion in the 1960s and 1990s. However, Figure 4 shows that those two phases took place in different demographic contexts.

**Figure 3 Total enrolment as a share of the 18-30 age group 1921-2016**



**Figure 4 The 18-30 age group 1921-2016**



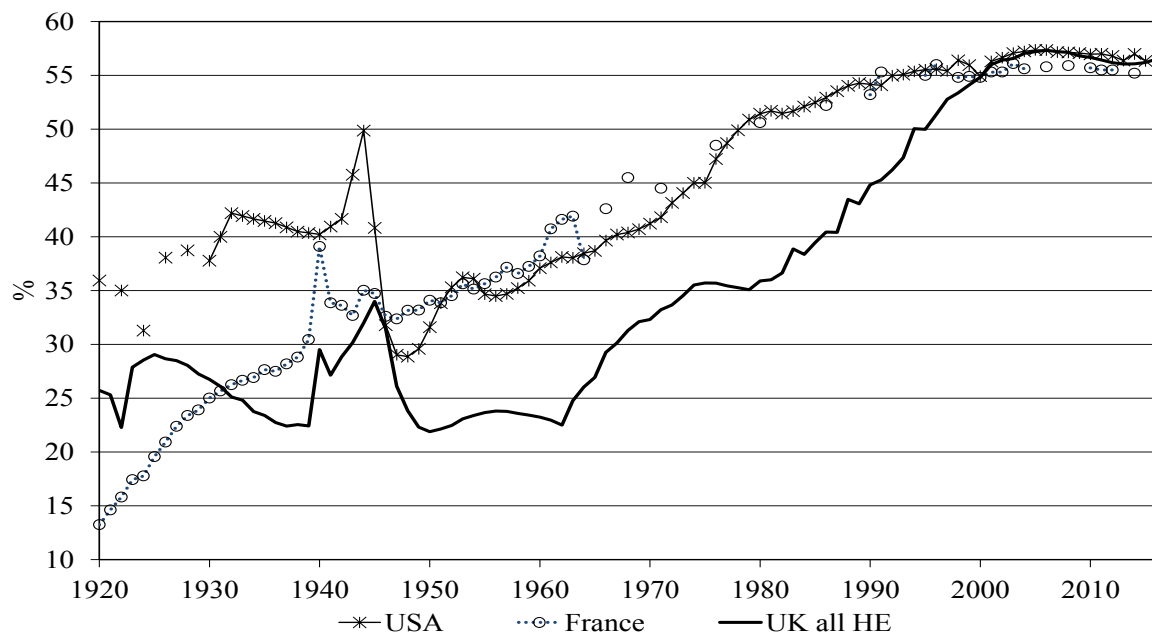
The first massification took place in a context of intense demographic pressure in the 1960s (absorbed as it will be shown by the post war prosperity driven by the construction of welfare states and strong public funding) (Carpentier, 2012). The expansion started early in the US driven by the 1944 GI Bill which guaranteed Veterans with access and funding to higher education. The UK and France followed in the mid-1960s. The interruption of the first phase of massification coincided with the economic downturn of the 1970s. This contrasts with the marginal effect of the downturn of the 1930s on enrolment, probably because it was then still an elitist system. The second phase of massification from the mid-1980s to the mid-1990s in the USA and France (Charle and Verger 2012) and the 1990s in the UK took place under much weaker demographic pressure and, as it will be shown, in a very different funding context. Again, it seems that the second phase of massification was interrupted after the crisis of 2008.

Thus, demography can explain only some aspects of the expansion. Other contextual factors are at work, including the ways in which expansion reflects or not a process of democratisation (3.2) which might be driven or constrained by the level and structure of resources mobilised to fund expansion (3.3).

### **3.2 Achievement and limits of democratisation: Intersectionality and the key role of gender**

A second trend regarding the historical expansion of higher education is that it is driven by a mix of democratic progress and persistent inequalities in access, participation and outcomes of the various social groups (class, gender, ethnic minorities, age) (Burke; 2012; Reay et al., 2005). Those advances and inequalities are intersected (Morley and Lugg, 2009) and will be looked at in each case study of differentiation in the next sections.

**Figure 5 Share of women students (full time and part time) 1920-2016**



Sources: *Annuaire Statistique.*; Prost (2010)

Figure 5 indicates the key role played by the inclusion of women in the historical expansion of enrolment over the whole period while revealing that this was not a linear process. Women's political struggle for equality, wider social justice agendas, and economic transformations contributed to women's access to secondary schooling, their school staying on rates and increasing numbers gaining the credentials to access higher education (Dyhouse, 2010). The proportion of women students in the USA was already at 40% before World War 2, well ahead of the UK and France. Noticeably, the downturn of the 1930s coincides with a drop in the proportion of women students in the USA. The drop is pronounced in the UK during the whole interwar years while France experienced a rather linear progression. World War 2 explains the sharp increase in the proportion of women during the conflict and its steep fall when veterans returned. From the early 1950s onwards, gender became the key driver of the first phase of expansion in the USA and France. The UK is surprisingly lagging behind with an increase in women's participation only taking off in the mid-1960s without closing the gap. The beginning of the second phase is also closely linked to the drive towards gender parity reached in the USA and France in the early 1980s and later in the UK which eventually closed the gap in the mid-1990s.

It is important to acknowledge, despite parity in numbers, the persistence of some forms of gender inequality related to access, participation, subjects and insertion in the labour market (Reay et al 2005) and, as will be shown later, to the type of institutions. The question of intersectionality is reflected in both expansion and differentiation of higher education systems mirroring the social structure of each society and their common and distinctive sites of inequalities. The sections dedicated to each country will show the extent to which differentiation might explain both progress and setbacks of various groups (between class, gender, ethnicity...) across history.

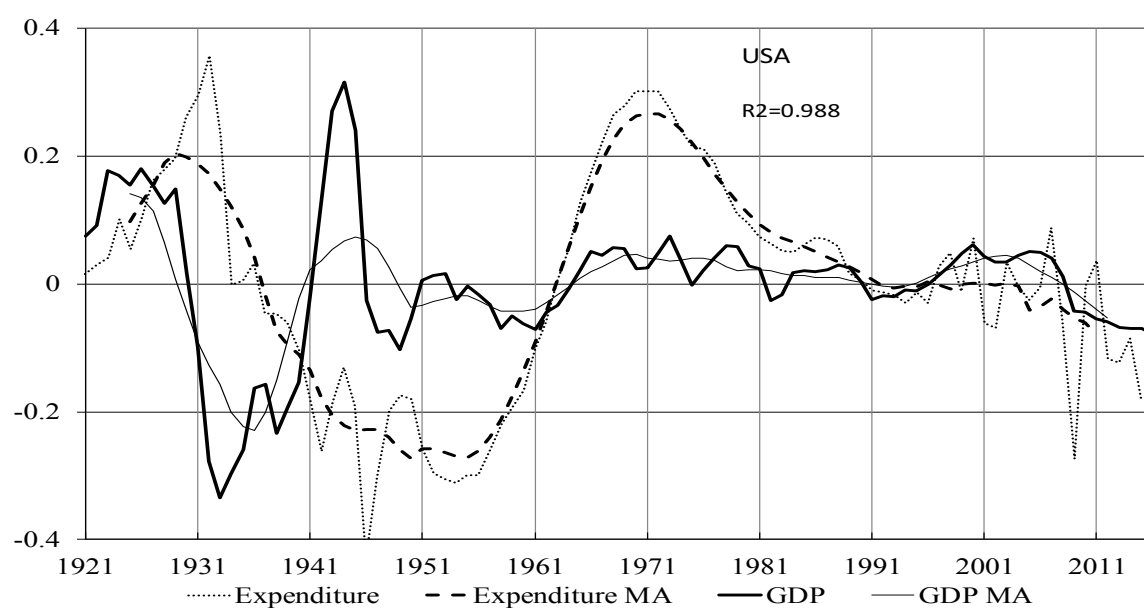
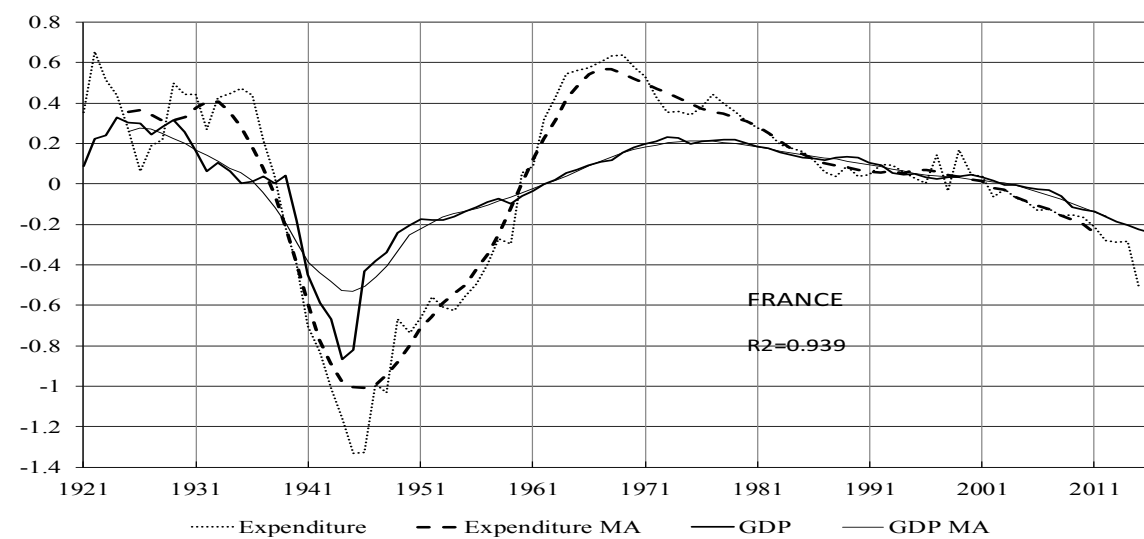
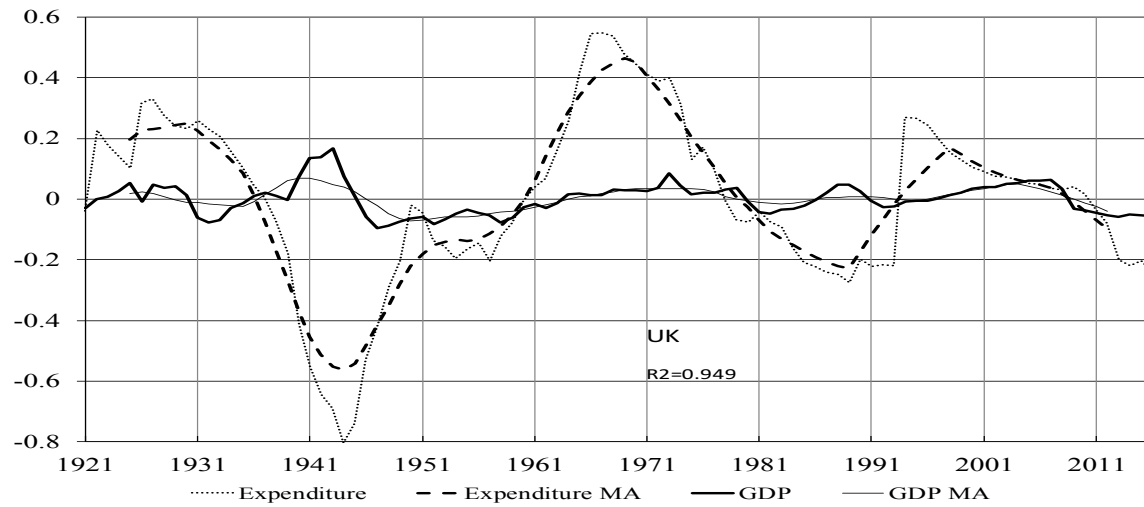
### **3.3 Models of funding of expansion and economic fluctuations: the crises of 1929, 1973 and 2008**

The third key characteristic of expansion which might influence its links to institutional differentiation is related to the historical changes of level and structure of funding of higher education systems.

#### **Funding and economic cycles**

Figure 6 shows that the phases of expansion of the 1960s and 1990s took place in very different economic and funding contexts. Importantly, it points to various degrees of correlation between the fluctuations of GDP and those of funding in higher education according to countries. The correlation is strong in France and less so in the USA. In the UK, the revival of spending in the 1990s is due to the integration of non-universities in the dataset. Of course, a correlation does not necessarily mean causality and does not tell us about the direction of the relationship. It is also important to recognise the multiplicity of non-economic factors which influences funding in higher education. Nevertheless, Figure 6 shows that the post-war Fordist era of 1945-1973 coincides with a substantial increase in funding. Similarly, higher education funding seems to be significantly affected by the economic crises that preceded and interrupted the Fordist model.

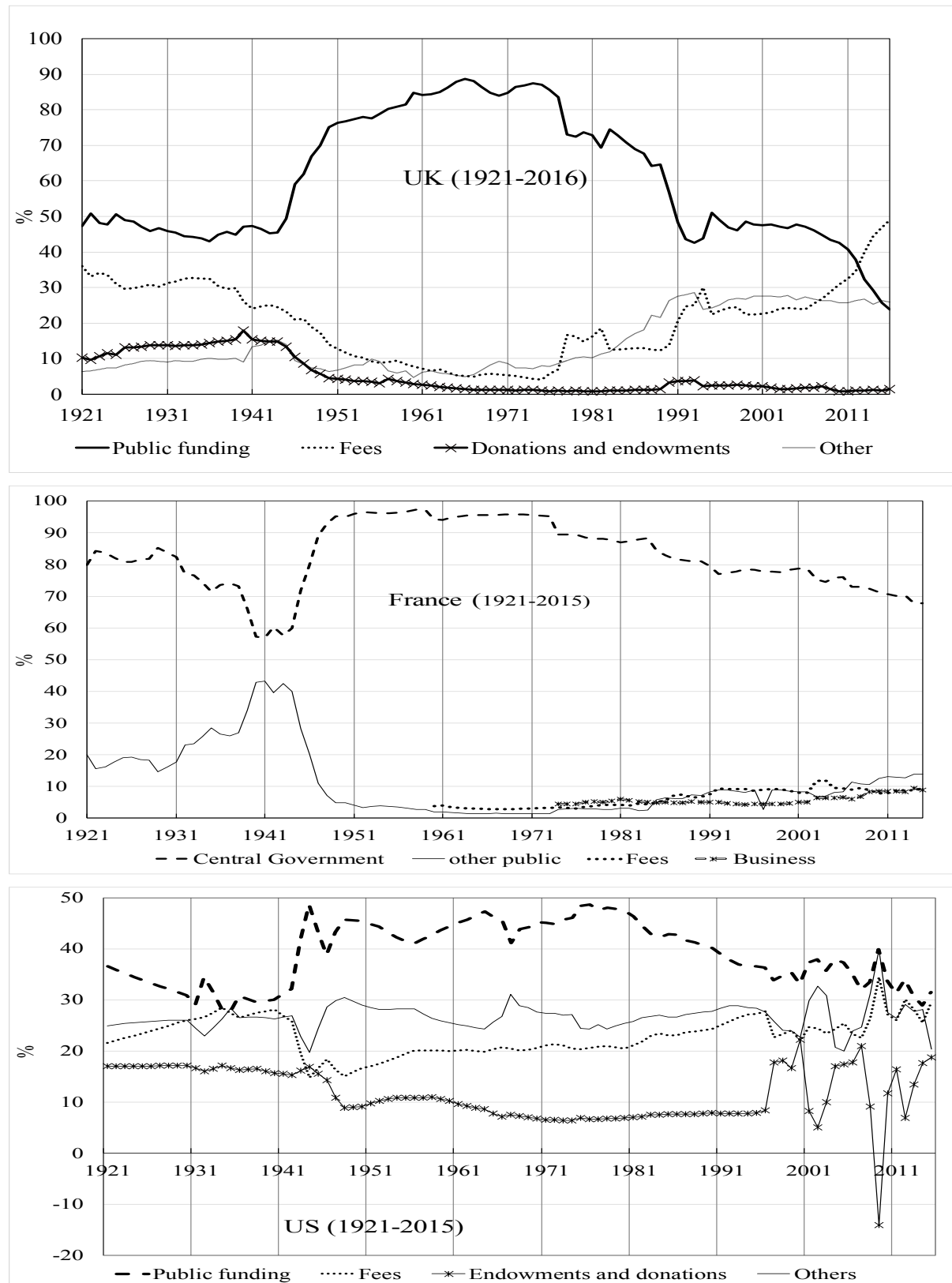
**Figure 6a, b, c Fluctuation of higher education expenditure and GDP (1990 Geary-Khamis\$) (2nd order deviation from the regression curve and 9-year moving averages-MA)**



## Fordism/post Fordism and higher education income structure

Figure 7 reveals the strong impact of economic cycles on the higher education income structure which shows that the two phases of expansion took place under radically different funding models.

Figure 7 a. b. c. Higher Education Income structure 1921-2016

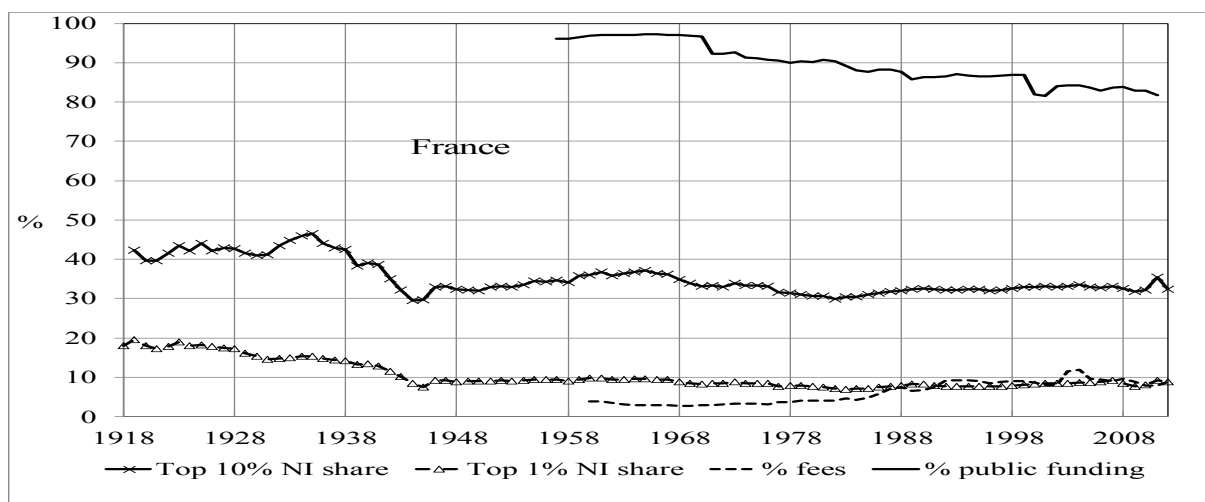
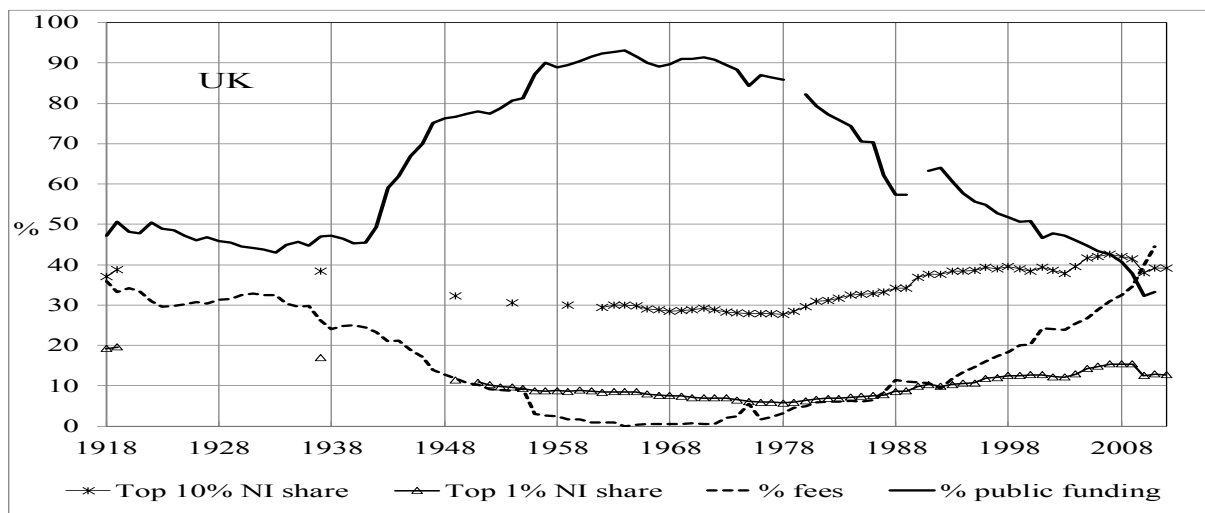
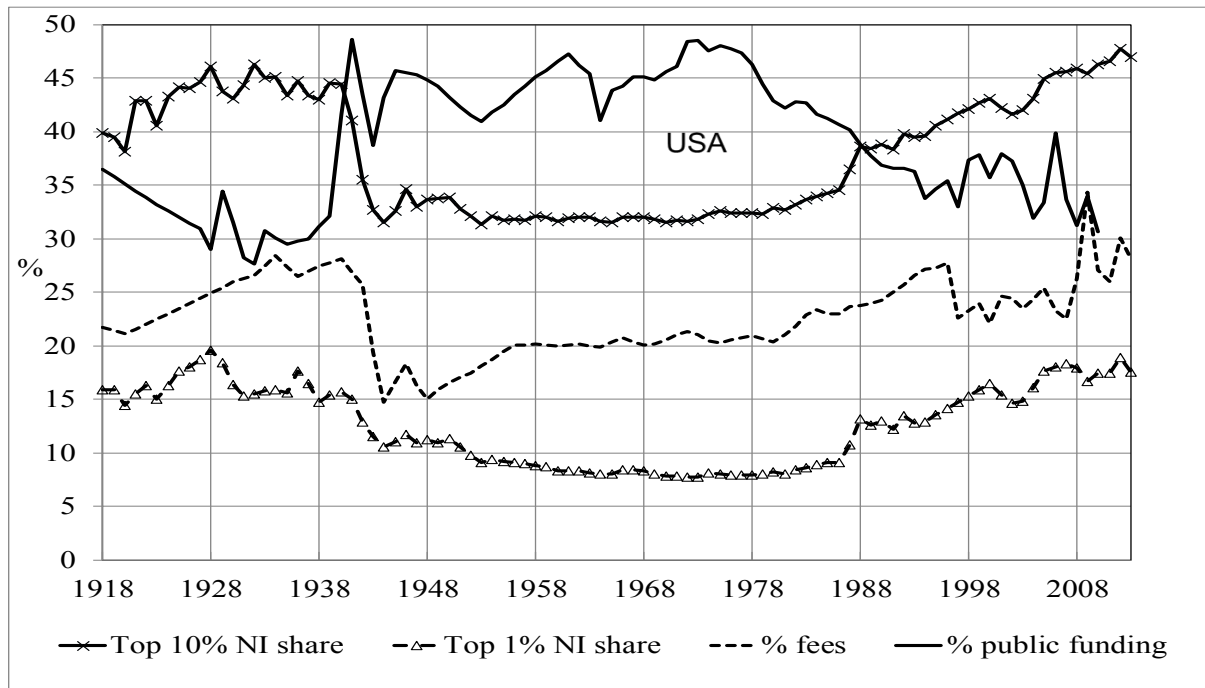


The downturn of the 1930s had a moderate effect on the income structure with a retreat of public funding in the UK and the USA and a decentralisation of public funding in France. By contrast, the post war Fordist model dramatically changed the funding structure of higher education in all three countries. The share of public funding rose from 50% to 90% in the UK and from 30% to 50% in the USA between 1945 to 1973. The French system experienced during that time a movement of centralisation of income with an increase from 60% to 95% of the share of central government funding.

The crisis of the Fordist model in the mid-1970s led to a dramatic reversal of those trends in the UK and the USA with the share of public funding shrinking to 30% today coinciding with increased marketisation (Brown, 2010; Komljenovic and Robertson, 2016). In the UK the sharp rise in private funding is strongly associated with cost sharing (Barr, 2003; Teixeira et al., 2006) which started with the introduction of differential fees (1967) and full cost fees (1981) for international students. Cost sharing occurred during the second phase of expansion extended to domestic students. £1000 upfront fees were introduced in 1998. £3000 deferred and income contingent fees supported by grants and government backed loans were introduced in 2006 (DfES, 2003). They were replaced in 2012 by £9000 deferred income contingent fees entirely supported by loans from 2016 onwards (BIS, 2011). Other private resources are driven by the increase in private funding for research and commercial activities. In the USA, the rise in private resources is driven by a notable increase in fees in the late 1970s, sustained income generation from commercial activities and more recently by a surge in donation and investment revenues. France's limited retreat of public funding results from a rise in the share of fees from students and contribution from employers to around 10% of overall income each.

Figure 8 suggests that those changes in the higher education income structure in each country mirrors broader changes in the socio-economic system related to the redistribution of growth (Piketty, 2014; Atkinson, 2015). The funding model of the first phase of expansion of the 1960s coincides with the redistributive post-war Fordist tax based model and leads to the increase in the share of income from public sources and a reduction of the share of fees (or stabilisation in the USA) which is contemporaneous with a reduction of the concentration of income at the top.

**Figure 8 Income structure in higher education and the distribution of wealth (national Income) 1918-2016**





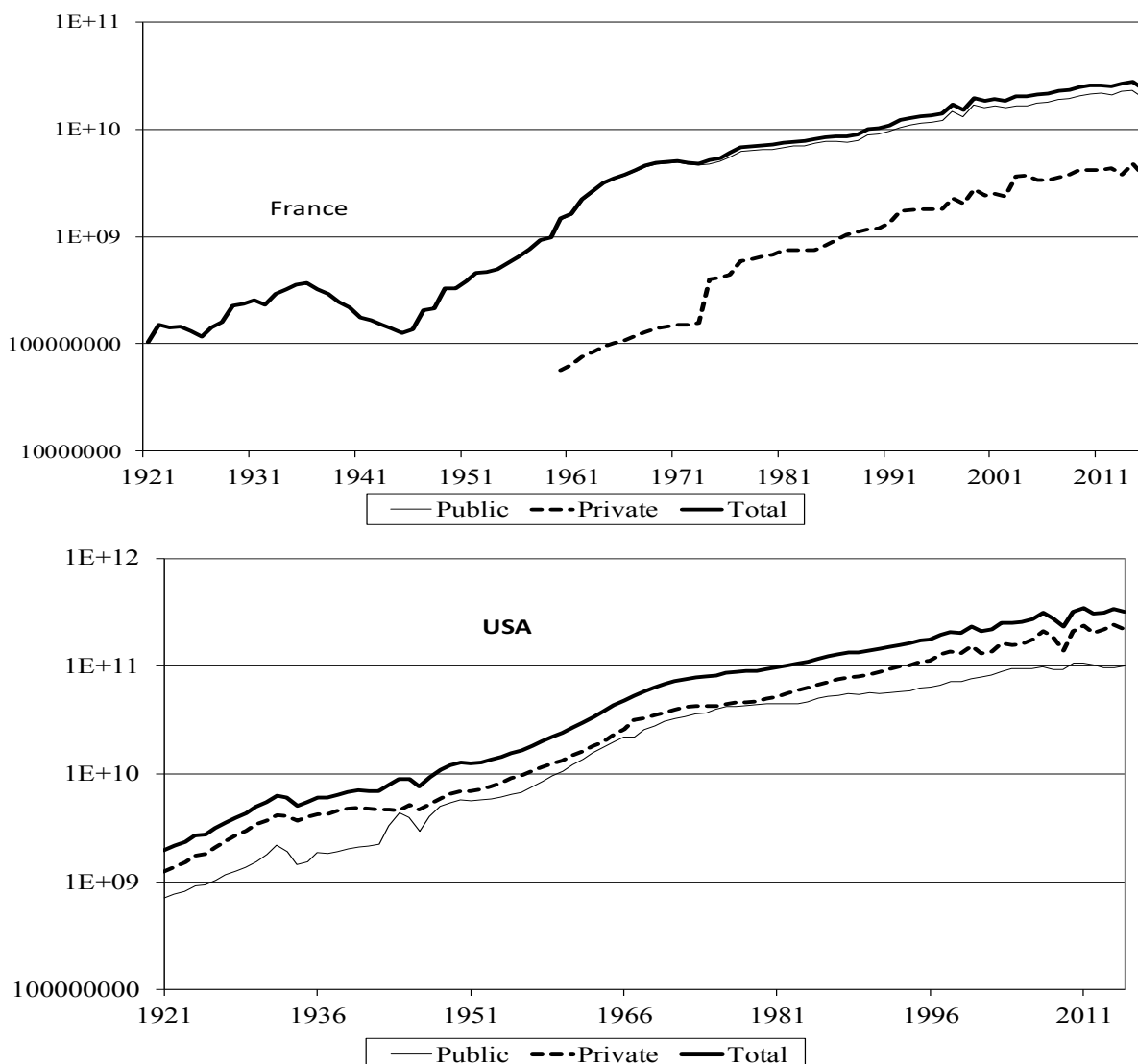
Sources: World income database, Carpentier

The second phase of expansion of the 1990s is contemporaneous with the Post-Fordist shift from a tax based to a marketised social system which started in the mid-1970s. In the UK and USA, the retreat of the share of public funding and the acceleration of cost-sharing policy based on fees and loans (rather than grants) coincides with a movement of re-concentration of income at the top (or a least a halt of the redistributive trends which started in the 1960s). In the case of France, this mechanism is quite limited although the trends in redistribution seem to be halted and private resources slightly increased since the mid-1970.

### Cost-sharing or public-private substitution?

The shift in income structure might have different consequences on overall resources. A key question is whether private resources might bring additional resources or substitutes for public funding.

**Figure 9 higher education public and private income (1990 Geary-Khamis\$) 1921-2016**



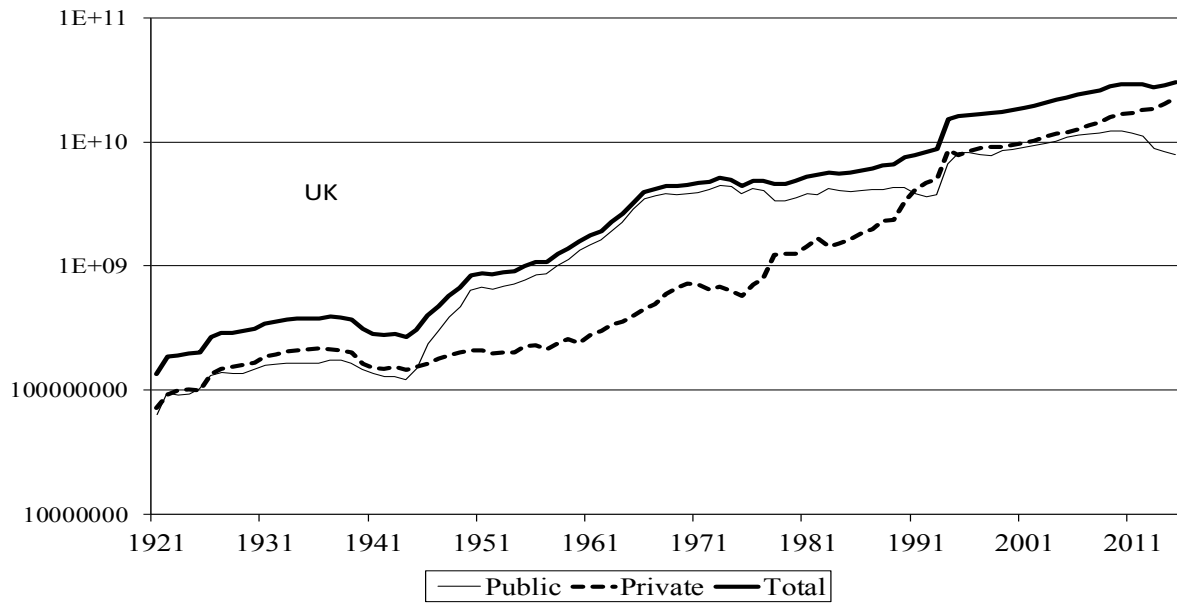


Figure 9 suggests a shift in the early 2000s when private resources start being substitutive rather additional resources in the US and the UK. This trend seems to be exacerbated by the crisis of 2008, which has not only intensified the deactivation of public funding due to austerity policies but has also struck private resources linked to financialisation (endowment) and private debt (fees). The French situation is different, as the revival in public funding is limited and is coupled with a moderate increase in private resources. This questions whether the 2008 crisis has marked the limit of the Post-Fordist model in the way that the 1970s crisis marked those of the Fordist model.

The difference between additional or substitutive resources might explain the connections and tensions between the trends in expansion and resources expressed by spending per student. However, the key drivers behind the changes in resources per student are difficult to disentangle as the indicator confronts both evolutions of funding or enrolment. An increased funding per student might be the result of a well-funded expansion or a shrinking system with constant or even declining funding.

**Figure 10 Expenditure per student (1990 Geary-Khamis\$) 1921-2015**

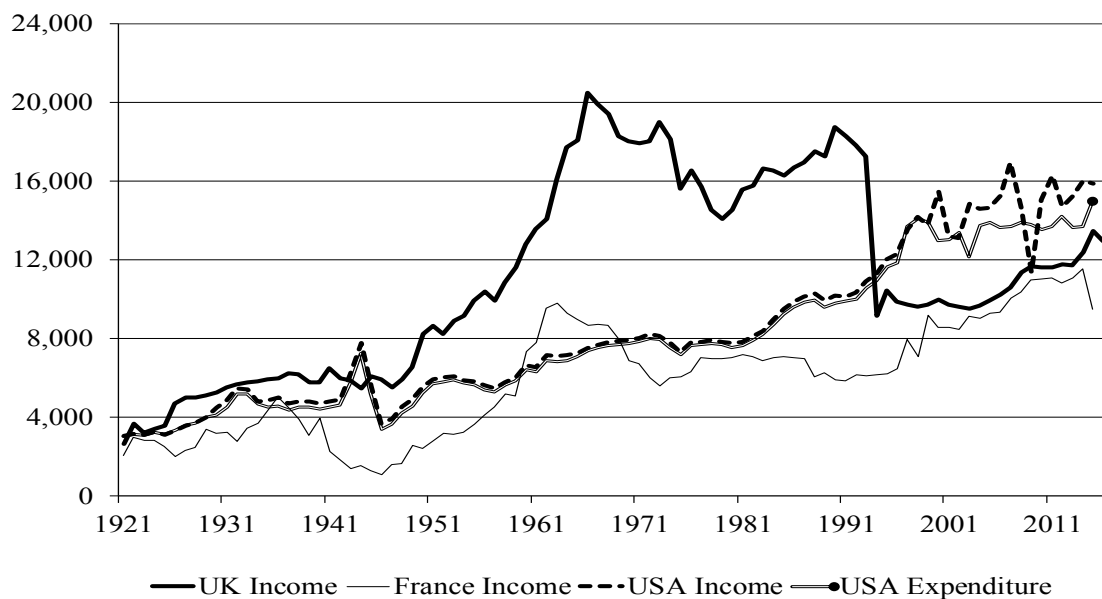


Figure 10 shows that the first phase of expansion of the 1960s was based on relatively harmonious trends in funding and enrolment in all three countries. The crisis of the 1970s put intense pressure on public funding leading to persistent underfunding in France and instability in the UK (although it will be shown that the increase in spending per student in the UK in the 1980s and France after the mid-1990s was due to a slowdown of enrolment rather than an increase in funding). Figure 10 shows resilient spending per student in the USA driven by the concomitant increase in public and private funding until the early 2000s. Afterwards, the stagnation of the spending per student suggests that the shift towards public/private substitution may have clashed with expansion. This was aggravated by the growing instability of the income per student before, during and after the 2008 crisis which brought to the fore issues about sustainability linked to public austerity, private debt and vulnerability of endowments to the financial crisis which started derailing the second phase of expansion. The concerns about public debt which have remained active since the downturn of the 1970s have been complemented by concerns about private debt after the 2008 crisis. This raises key questions of sustainability but also of equity with higher debt aversion by lower income groups which might further affect the social composition of the student body (Callender and Mason, 2017).

The crisis of 2008 revealed unresolved tensions between expansion and resources which are at the heart of the policy debates at the time of writing in all three countries. However, those trends explored above are related to aggregated data at the systemic level and do not reflect the institutional differentiation. Has differentiation played a role in both phases of expansion? Has it contributed to address, reproduce or increase inequalities? The following proposes to compare and contrast the dynamics of funding, expansion and differentiation in each country. What is the impact of those changes in income level and structure on the process of differentiation? To what extent were those changes produced by differentiation? Has differentiation played a role in those connections and tensions between funding and expansion and vice versa?

#### **4. The UK: the shift from a binary to a “unitary” system: changes and continuities**

Sections 4 to 7 compare and contrast the processes of expansion and institutional differentiation in France, the UK and the USA at the interface of three interconnected themes related to differentiation: structure, mission and (in)equalities.

The expansion of higher education in the UK has been driven by various types of institution, reflecting the philosophy behind their creation, their prestige, their historical links with local industry and religion, their access policy, their commitment to research and teaching, their academic/vocational orientations and their relationship with public authorities. Regional differentiation is of course a key lens to understand the expansion of UK higher education due to different traditions in England, Wales, Scotland and Northern Ireland.

Differentiation can be traced back to the creation of the university sector in medieval times with Oxford and Cambridge and the Scottish universities. A second phase started with the creation of the London University in 1826, a secular and utilitarian university which, unlike Oxford and Cambridge, accepted students outside the Church of England. The London University became University College London in 1836 and joined that same year the new federal University of London alongside Kings College (1829). Around the same time, the first university in the north was created in Durham

(1832). A third phase of differentiation was driven by university colleges and civic universities in the 19<sup>th</sup> century as responses to the middle classes' quest for higher social status and a curriculum addressing industrial needs (Sanderson, 1972). Most of those institutions eventually became universities, funded by the University Grants Committee in 1919. The line with triangles in Figure 11 represents their cumulative enrolments alongside those of the universities created since the 1960s and the higher education institutions which obtained university status in 1992.

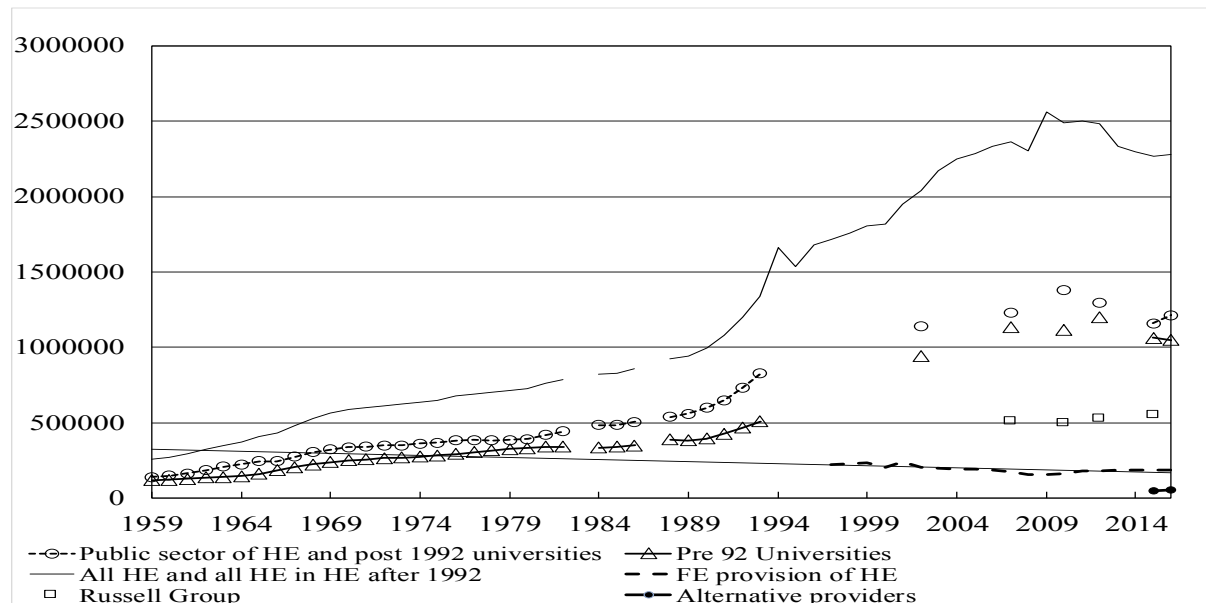
Enrolment in higher education outside the university sector (represented by the dotted line in Figure 11) also has a long history. It started with early forms of adult and higher vocational education such as the mechanics institutes, teacher education and later the higher technical colleges driven by the 1889 Technical Instruction Act (Sharp, 1987, p .3) and the Percy Report in 1945. Advanced further education included various types of vocationally orientated institutions including teacher training colleges, local technical colleges, and the colleges of advanced technology (created by the 1956 White Paper). The non-university sector which was run by local authorities developed considerably in the 1960s with the colleges of higher education and the development of the polytechnics after 1965 whose degrees became accredited by the Council for National Academic Awards. This growing local public sector of higher education formed alongside the autonomous university sector in what has been called the binary system which was instrumental in the first phase of expansion. Many of those institutions became universities under the 1992 Further and Higher Education Act, effectively ending the binary system. Other institutions remained in the local authority sector, often referred to as higher education in further education nowadays, and are represented by the continuous line in Figure 11.

The historical legacy of stratification is still present today when terms like Oxbridge, Russell group, redbrick, civic, polytechnics, pre/post 1992, 'new' universities or even 'new new' universities are still used and often reveal an explicit or tacit contemporary meaning in terms of rationale, mission, reputation and students. This mirrors Watson's geological analogy that "strata are laid down at different times, in differing ways, and for different purposes, but once there are irremovable" (2014, p. 1). The following proposes to cross three interconnected stories of higher education differentiation in the UK based on lenses of structure (autonomous sector and the LEA sector), mission (academic/vocational; teaching/research) and (in)equalities (elite/non elite).

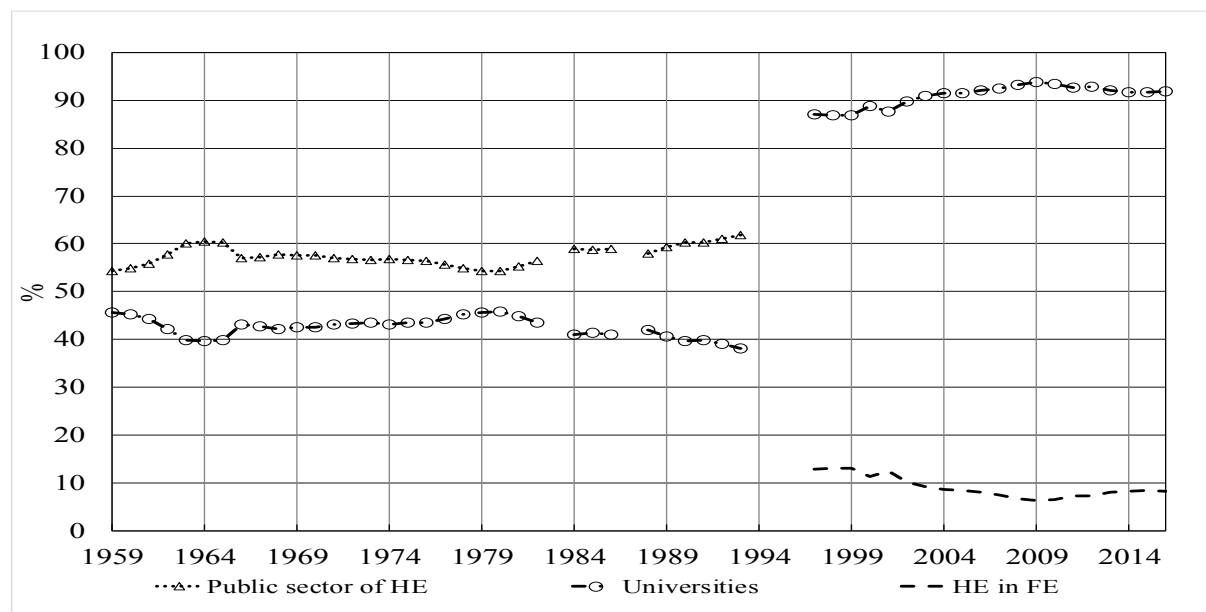
#### **4.1 Structure: the local/central dynamics and the rise and decline of the binary system**

Figure 11 and 12 underline the key role of the historical dynamics between the autonomous university sector and the public sector of higher education in driving the process of expansion. They also show that the public sector was key to starting each of the two phases of expansion.

**Figure 11 Enrolment by type of higher education institutions UK- 1959-2016**



**Figure 12 Share of enrolment by type of higher education institutions UK 1959-2016**



**The first phase of expansion: the key link between Fordism and binary system**

Figure 11 and 12 show that the first phase of massification of the 1960s was driven by the combined growths of the autonomous university sector (funded by the central government through the University Grants Committee) and the public sector of higher education (funded by local governments). This was the result of a public funding commitment characteristic of the Fordist model. Figure 7 shows that the share of the income of the university sector coming from public funding increased from 50% to 80% from 1945 to 1973. Similar financial data on the public local sector are difficult to find as many colleges combine further and higher education provision making it impossible to distinguish what specifically funds higher education. However, the increase in the share of the spending of local education authorities devoted to higher education from 6% in 1950 to 10% in 1960 and 20% in 1970 (Carpentier, 2003) gives an indication of

the increased financial commitment of the public sector over the period. This commitment is important as figure 11 shows that the public sector of higher education was key to absorbing the new influx of school leavers as the number of places in the university sector was limited and centrally managed. The expansion was initially driven by the creation of new colleges of higher education, the emergence of the colleges of advanced technology (CATs) in 1956 and the polytechnics in 1965. Only after 1965 did the share of enrolment in the university sector increase from 40 to 45% although this was not only due to the creation of new universities from 1963 to 1966 but also to the fact that the CATs were awarded university status in 1965.

Those trends illustrate the contrast between the consensus on expansion and the dilemmas regarding institutional differentiation (Scott, 2014). The 1963 Robbins Committee on higher education was clear about the need to expand higher education and the increase both in size and in number of universities but was far more equivocal about the role to be played by non-university institutions (Callender, 2014). In 1965, Anthony Crosland, who was minister for higher education, confirmed in his famous Woolwich speech the commitment to the expansion agenda while opting for a binary system in which universities will continue to grow alongside a dynamic public sector generated by the creation of new polytechnics from the mergers of colleges, funded and controlled by local education authorities (Pratt, 1997). Both sectors kept on expanding as shown by the stable structure of enrolment around 60/40 until the late 1970s. The impact of the 1970s crisis on public finance was felt much more strongly by the university sector than the polytechnics (Sharp, 1997). Shattock has shown that the university sector was particularly vulnerable to cuts in the 1980s (2012). Figure 7 shows that this translated into a rise in the share of overall enrolment in the public sector after 1979. The impact of the crisis is acknowledged by Parry who noted that “numbers in the non-university sector had grown significantly since the beginning of the 1980s, as the polytechnics took advantage of the reduction of university places following the 1981 cuts” (2009, p. 4).

### **Post Fordism and the 2nd phase of expansion: the end of the binary system and the impact of 2008**

The second phase of expansion of the late 1980s is driven by an increase in the numbers of school leavers gaining the necessary results to access higher education. Figure 11 shows that a large proportion of those school leavers were integrated into the public sector whose share of overall higher education enrolment rose from 58% to 62% from 1988 to 1992. However, this time, the polytechnics and colleges are not controlled any more by local authorities but are under the authority of the Polytechnics and Colleges Funding Council, following the 1988 Act. Thus, the second phase of expansion is again kick-started by the non-university institutions before the suppression of the binary system in 1992 that will give them the university status.

Figure 11 shows that the expansion of enrolment of the new unitary sector is driven by pre-92 universities which nearly matched the numbers of post-92 universities in 2006. This corresponds to the first fee increase in 2006 which seems only temporary as enrolment increased again in 2008. However the post 2008 crisis coincides with a stabilisation of enrolment provoked by the halt of the rise of the pre-1992 universities while post-1992 universities seem to have been protected. The real turning point in the decrease in overall enrolment follows the rise in fee levels to £9000 in 2012, which has impacted pre- and post-1992 universities equally. The pre-1992 universities seem to have recovered in 2016, unlike the pre-92 universities.

Alternative forms of provision have not developed substantially. The enrolment of higher education students in the remaining public sector after 1992 delivered in further education colleges and commonly referred to as HE in FE remained stable and does not seem to have been affected by the crisis or the fees increase nor to have taken advantage of opportunities presented by the difficulties of enrolment in universities. The various governments have, since 2008, attempted to widen institutional differentiation through the private sector which remains at the margins around 5% of total enrolment (Hughes et al. 2013).

Thus, the enrolment of the university and public sectors of higher education were key drivers of the Fordist system and were differently affected by economic fluctuations and funding policies. The public sector was particularly important to kick-start both phases of expansion and was relatively protective during periods of crisis. The shift of the structure of differentiation from the formal binary divide before 1992 to an informal stratification of reputation after 1992 is a key lens to understand the expansion of higher education.

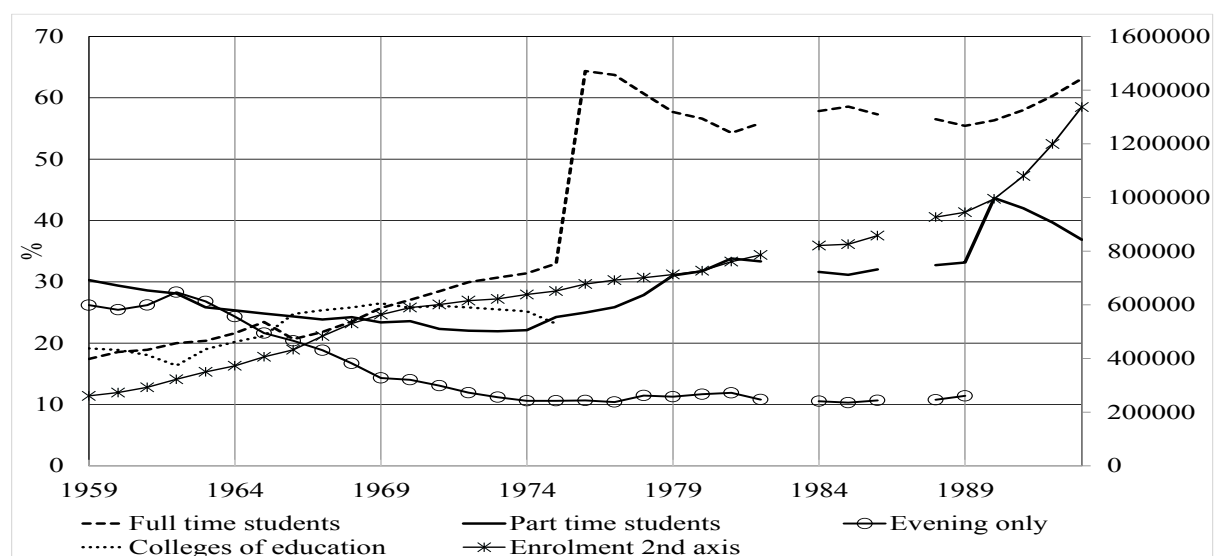
#### 4.2 Mission: between vocationalisation and academic drift

The binary system was, beyond the public sector/university divide, a way to offer “access to a different form of higher education and to offer it to different kinds of students” (Ross, 2003, p.49). The attempts to drive horizontal differentiation was driven by a distinctive institutional focus on academic/vocational education and teaching and research activities broadly reflected by their modes of enrolment. However, during the first phase of expansion, public sector institutions experienced significant changes in their mode of enrolment that reflect the tensions between, on the one hand, this traditional vocational mission and, on the other, a process of academic drift. These contradictory trends influenced the tensions at the heart of the second phase of expansion under the new unitary system and explain both the convergence and persistent differences between pre- and post-92 universities.

##### *From the Fordist needs of diversity to the slow drive towards academic drift*

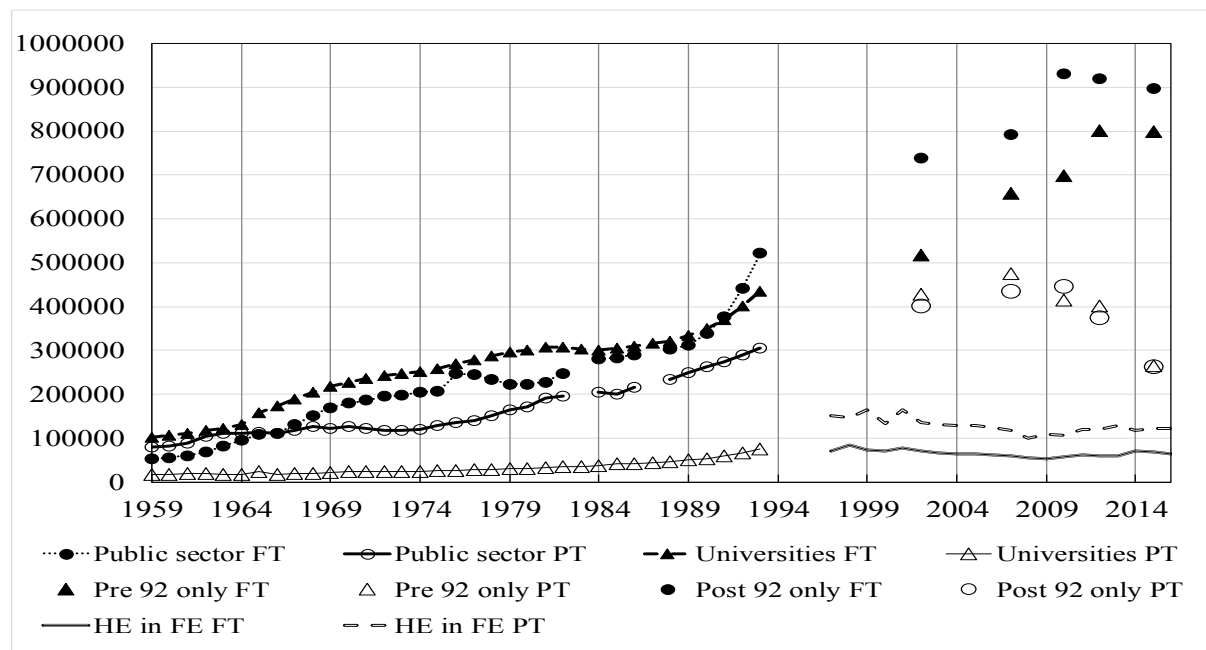
The structure of enrolment of the public sector of higher education mirrors the key role of the binary policy to fulfil the needs of the Fordist socioeconomic agenda for a more diverse higher education sector during the first phase of expansion.

**Figure 13 Distribution of enrolment in the non-university sector UK- 1959-1994**



The growth and transformation of the public sector responded to two key pillars of Fordism: the development of vocational higher education and the training of the teaching workforce to accompany the massification of secondary education. For example, Figure 15 shows that in the late 1950s, the proportion of full-timers was 90% in the university sector against 40% (if colleges of education are included) in the public sector, reflecting the vocational mission of the latter. Figure 13 shows that half of fulltime students in the non-university sector were enrolled in teacher training colleges before the latter became colleges of education and eventually integrated into the polytechnics after the 1973 James Report which led teaching to become a graduate profession (Robinson, 2014).

**Figure 14 Number of students per mode of enrolment: 1959-2016**



Although the proportion of part time students remains consistently higher in the public sector, the gap is reduced from the 1960s to the mid-1970s. Figure 15 shows that the rise in the number and proportion of full-timers in the public sector from 40% to 60% from 1959 to 1974 coincides with a slowdown of evening and part time students.



**Figure 15 Proportion of student enrolled full time per type of institution- 1959-2016**

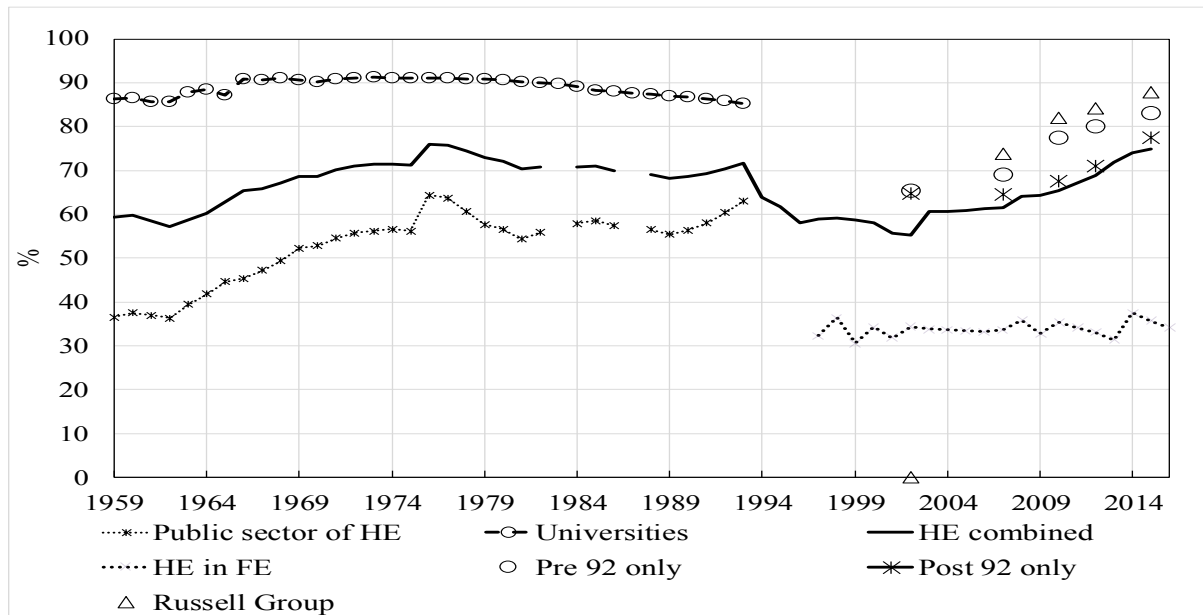


Figure 15 indicates that polytechnics and colleges were the key drivers of the overall increase in the proportion of full time students. Neave identified academic drift as “the gradual forcing out of part-timers from the public sector, coupled with a lukewarm attitude towards evening students, it has been argued, represents a major undermining of opportunity for students who have a vocational interest and who are in need of a second chance” (1979, 144). The shift towards fulltime studies (alongside other changes such as the increase in postgraduate population or shift towards non-vocational subjects and research) is a sign of an academic drift by which polytechnics seek to imitate universities (Burgess and Pratt, 1974), a trend that the binary was precisely supposed to avoid. This reflects the historical difficulties in developing vocational higher education (Bailey and Unwin, 2014).

### Post Fordism, the unitary system and the challenge on part-timers

Figure 15 shows that the downturn of the 1970s coincides with a substantial drop in the numbers of fulltime students in the public sector until the early 1980s followed by a stabilisation. The numbers of full-timers grew again sharply when the non-university sector became autonomous from the local authorities after 1988. Thus the public sector has already dramatically reduced the gap before the sector merged in 1992. The overall decrease in the share of fulltime students after the unification of the system does suggest that distinctive practices and missions of post- and pre-92 institutions survived dedifferentiation while higher education in further education kept a strong proportion of part-time intake. However, in the early 2000s a rise in the share of full-timers takes place across the board. This shows that post-92 universities increasingly mirrored the patterns of enrolment of pre-1992 universities and are actually nearly matching those. However, this is a convergence as the pre 92-universities also dramatically increased their share of part-timers through professional development and postgraduate studies. The historical changes in the mode of enrolment suggest that both sectors influenced each other. The polytechnics also influenced traditional universities (Pratt, 1997) producing a reversed academic drift (Watson, 2015).

The post 2008 world strongly impacted the new structure of enrolment with strong

implications in terms of mission. However, this started with the first increase in fees in 2006 which increased the gap in the proportion of full-timers between pre- and post-92. Figure 15 reveals that the overall decline of enrolment since the 2008 crisis and especially since the increase in fee levels in 2012 is mainly led by a sharp retreat of part time enrolment whose proportion fell from 40% in 2007 to 32% 2011 and 23% today. The decline took place in both post- and pre-92 institutions, while the ratio of part timers remained stable at 65% in further education colleges.

Thus the crises of 1970s and 2008 had a very different impact on the structure of enrolment leading respectively to an increase and a huge diminution of part time provision with a possible impact on mission and widening participation (Callender and Thompson 2018). This trend might represent a direct challenge to vocational higher education and the lifelong learning agenda. This is problematic as the patterns in the modes of enrolment which were responding to mission differentiation have been affected by changes in funding policy. Are the changes of both segments regarding their mission and activities reflected by changes in students? Does academic drift mean social drift?

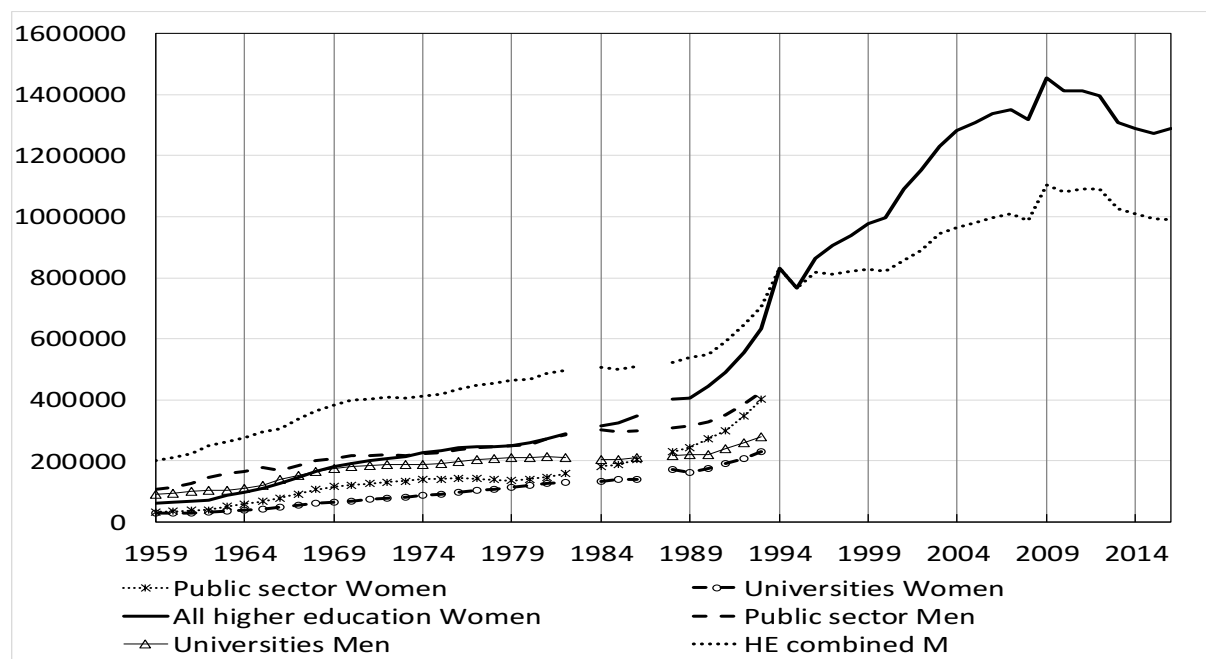
### 4.3 Democratisation and differentiation: inclusion and social drift

Has differentiation accelerated or constrained inequalities in UK higher education? The following explores how the historical changes in the compositions of enrolment across the various types of institutions might be connected to advances and setbacks in the inclusion of various social groups into higher education.

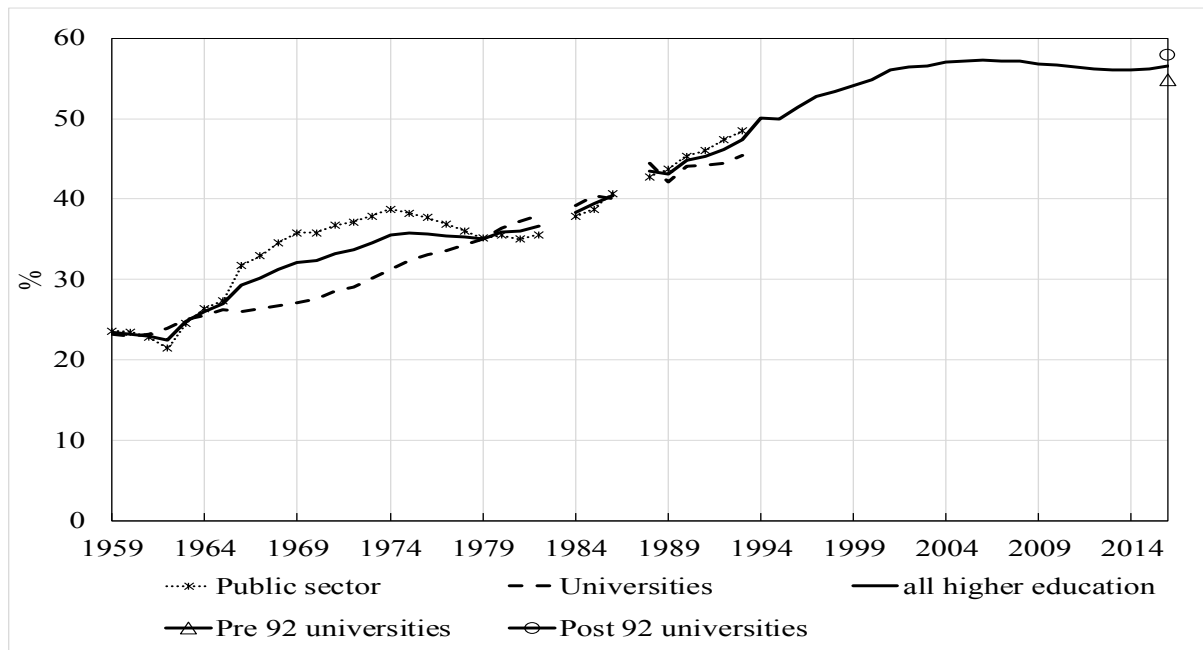
#### Gender parity and differentiation: the key role of the public sector

Figure 5 shows that gender parity was the key driver of the historical expansion of higher education. Figure 16 and 17 show that the public sector played a specific role in that process, enrolling a higher proportion of women than the university sector at the beginning of each of phase of expansion.

**Figure 16 Gender participation per type of Institution**



**Figure 17 Gender participation per type of institution UK 1959-2016**



The increase in women’s participation (from 25% to 40%) from the early 1960s to the mid-1970s was initially driven by the public sector whose proportion of female students was 10 points higher than the university sector.

**Figure 18 Proportion of women students. Distribution of enrolment in the public sector and university sector UK- 1959-1994**

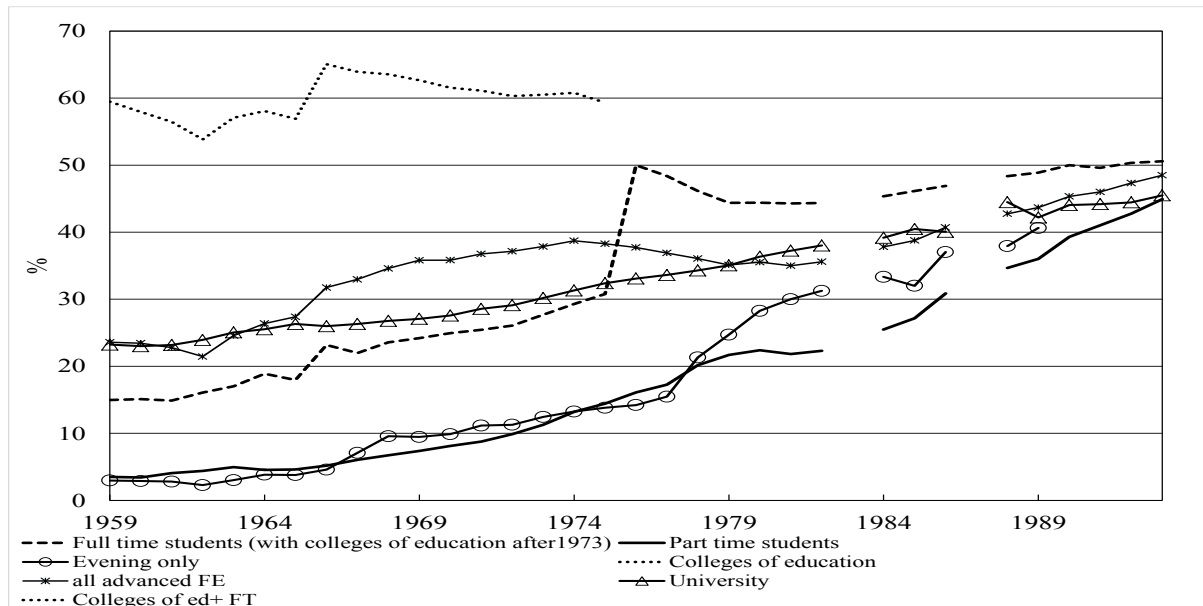


Figure 18 shows that the rise in gender participation took place across the whole public sector although the key role of the teacher training sector, traditionally dominated by women and integrated in the polytechnics in the 1970s, should be acknowledged. Another key factor is more about structural changes as the male dominated colleges of advanced technology became universities in 1966. After the crisis of the 1970s, the proportion of women in the public sector remained higher than in the university sector although the gap started to narrow. Figure 18 shows that the crisis coincides with an increase in the proportion of women in the public sector especially driven by part-time

and evening modes of enrolment. This new dynamic explains why the non-university sector was again at the forefront of the progression towards gender equity during the second phase of expansion. In fact, the public sector had, under the auspices of the local authority until 1988 and of the Polytechnic and Colleges Funding Council afterwards, nearly reached gender parity before the two sectors merged in 1992. Women's participation continued to expand under the post 1992 unitary system to reach up to 55% today although Figure 18 shows that the proportion of women is lower in pre-92 institutions.

Progress towards parity should not hide the persistence of some forms of gender inequalities related to access and participation across subjects (Reay et al 2010). The historical lens underlines the role played by institutional differentiation in driving gender equity with the key impetus provided by the non-university sector.

### **Class: the advances of democratisation and the question of social drift**

The link between social class and stratification (Reay et al. 2005) has a long history. The long term data that Egerton and Halsey (1993, p.186) extracted from the Labour Force Survey comparing the education attainment of the cohorts born in the mid-1930s, 1940s and 1950s underlines key tensions between class and institutional differentiation during the first phase of expansion.

**Table 1 Distribution of attainment in education by socioeconomic categories**

	No further education	Universities	Polytechnics	Colleges of Further Education	All
<b>Born 1936-45</b>					
Service	64.0	14.0	2.5	19.5	100
Intermediate	83.8	4.8	1.7	9.8	100
Manual	94.1	1.3	0.6	4.0	100
All	85.8	4.5	1.3	8.4	100
<b>Born 1946-55</b>					
Service	52.8	16.5	6.1	24.6	100
Intermediate	74.9	5.9	3.9	15.4	100
Manual	89.6	1.7	1.6	7.1	100
All	77.2	6.2	3.3	13.4	100
<b>Born 1956-65</b>					
Service	44.3	17.7	10.3	27.7	100
Intermediate	67.4	6.8	6.5	19.2	100
Manual	83.1	2.0	2.8	12.0	100
All	68.7	7.3	5.8	18.1	100

Sources: Egerton and Halsey 1993, p.186

Table 1 shows that the proportion of lower income groups with no further education decreased from 94% to 83% while their overall proportion accessing polytechnics and colleges has respectively increased from 0.6% to 2.8% and from 4% to 12%. Those encouraging figures contrast with a modest rise in the proportion of those accessing universities from 1.1% to 2%. This underrepresentation of lower income categories in

universities compared to polytechnics suggests that differentiation might have been both a driver and a constraint to democratisation during the first phase of expansion. This echoes a well-known dilemma on whether new institutions catering for underrepresented groups are emancipatory or a way to exclude them durably from elite institutions. The question of a displacement of inequalities from access to the kind of access is raised by the rise in the share of the proportion of higher income groups accessing universities (+3.7 pts) and especially polytechnics (+10pt).

**Table 2 Distribution of type of education by socioeconomic categories**

	No further Education	Universities	Polytechnics	College of Further Education
<b>Born 1936-45</b>				
service	12.4	51.6	32.9	38.6
Intermediate	30.8	33.5	42.5	36.8
Manual	56.8	14.9	24.6	24.6
All	100.0	100.0	100.0	100.0
<b>Born 1946-55</b>				
service	14.3	56.0	38.8	38.2
Intermediate	31.5	31.1	38.5	37.2
Manual	54.2	12.9	22.7	24.7
All	100.0	100.0	100.0	100.0
<b>Born 1956-65</b>				
service	14.9	56.1	40.9	35.3
Intermediate	34.0	32.4	38.8	36.8
Manual	51.1	11.6	20.3	28.0
All	100.0	100.0	100.0	100.0

Sources: Egerton and Halsey 1993, p.186

Ultimately, Table 1 suggests that after two decades, the growth of enrolment in polytechnics was more beneficial to the middle class than the working class although the gap is higher for universities. The idea that the higher number of working class students enrolled by polytechnics seems to be more driven by demography than inclusion is consistent with the argument that the public sector did not contribute to the narrowing of the participation gap between social classes (Ross, 2003, p. 51). Ross argues that the academic drift in the early stages of the development of the polytechnics was accompanied by a social-class drift (Ross, 2003, p. 62). Brennan and Williams note the similar academic admission requirements of universities and polytechnics meant that they were “fishing in the same admission pool” (2008, p.233). Table 2 shows that the social compositions of enrolment in universities and polytechnics has not changed much over the three decades except for the colleges of higher education.

The movement of dedifferentiation that drove the second phase of expansion does not seem to have altered this trend of stratified democratisation. Indeed, the suppression of the binary divide and the shift from horizontal to vertical differentiation coincide with persistent differences regarding social intakes between pre- and post-1992 universities (Boliver, 2015; Raffe and Croxford 2013) and among the elite institutions (Wakeling and Savage, 2015). The proportions of under-21 entrants from intermediate and working class are respectively 30% and 45% in pre- and post-92 universities in 1996 and 35% and 50% in 2010 (Croxford & Raffe, 2014, p. 86). Boliver concludes that “qualitative inequalities in the odds of enrolment in more prestigious higher education programmes and institutions, that is on degree programmes and specifically those at ‘Old’ universities, proved persistent throughout the expansion of both the 1960s and the early 1990s” (2011, 240). Table 3 shows an even bigger gap, with further education institutions recruiting twice as many higher education students from disadvantaged background than higher education institutions.

**Table 3 Percentage of higher education students from low participation neighbourhoods**

	Further education institutions	Higher education institutions
2011	21.7	10.4
2013	20.1	11

[http://www.hefce.ac.uk/media/HEFCE,2014/Content/Pubs/2016/201601/HEFCE2016\\_01.pdf](http://www.hefce.ac.uk/media/HEFCE,2014/Content/Pubs/2016/201601/HEFCE2016_01.pdf)

The long term lens shows a differentiated contribution by institutions to widening participation. It shows a mixed picture where differentiation might simultaneously lead to more inclusion and increased stratification. Recent statistical data are needed to explore the effect of the 2008 crisis and the recent increase in fees on the socioeconomic composition of students in pre- and post-92 institutions.

### **Ethnicity and differentiation**

Historical data on ethnic minorities are relatively more recent. Intersectionality must be taken on board. Statistics in the UK show an increase in participation rates for ethnic minorities with notable persistent inequalities based on countries of origin (Basit and Tomlinson 2012) and notable institutional differences (Boliver, 2016). Modood shows the overrepresentation of ethnic minorities in certain polytechnics in 1991 (in five polytechnics 40% or more admissions are minority ethnics) (1993). Recent data shows that the proportion of black students is 2.1% in Russell Group institutions, 3.6% in pre-92 institutions and 7.4 in post-92 institutions and 8.9% for the whole sector (HESA 2016). Equivalent data for Asian students are all around 10%, except 9% in pre-92 (HESA 2016).

Therefore, the historical lens offers a mixed picture where differentiation during the first phase of expansion under the binary system has simultaneously driven and constrained democratisation which one might refer to as a stratified democratisation. The second phase of expansion under the unitary systems appears to have maintained social differentiation under the informal pre-92/post-92 divide and especially under the Russell Group. Brennan argues that “the differentiation of higher education in the UK allows the performance of an elite reproduction within a mass system” (2013, p.194) recognising social mobility but also the key importance of the

vertical differentiation.

#### 4.4 Inequalities of resources under binary and unitary systems: a reflection on missions or an uneven playfield?

Differentials in resources between institutions might give an indication of a healthy or unhealthy differentiated system although it is important to acknowledge that funding is a necessary rather than a sufficient driver of equity and quality. What is meant by healthy here is a sustained differentiation which reflects a diversity of mission without a stratification of inequalities.

**Figure 19 Expenditure per student at 1990 prices, UK, 1921-2016**

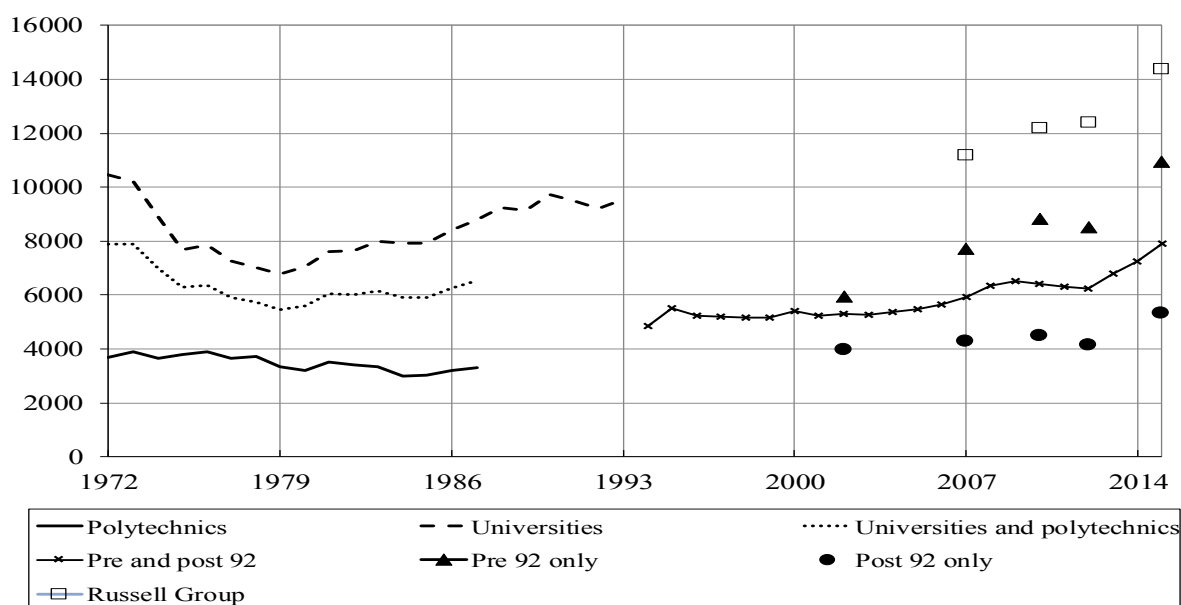


Figure 19 shows that resources are unequally distributed across the binary system with universities constantly benefitting from higher income per student compared to polytechnics. Many reasons might explain this, including the changes in the numbers and structures of enrolment, research funding, endowments, but also different financial pressures at central and local levels. This might also be the result of differences in the mission as reflected by the modes of enrolment (Figures 15 and 19 point to a negative correlation between the proportion of part time students and spending per student). The increase in the gaps in resources per student between the two sectors after the 1980s coincides with a decrease in the number and share of fulltime students in the public sector, probably the cause and effect of a pause of the academic drift that started in the 1960s. Although all institutions were affected by the crisis of the 1970s, it is interesting to note that its effects were felt much more strongly by universities. Moreover, the revived spending per student in universities after 1979 should be put into perspective as it seems largely due to a slowdown in enrolment (Figure 11) rather than an increase in resources (Figure 6a).

Figure 19 also shows that the second phase of expansion driven by the unitary system coincided with persistent differences in resources between pre- and post-92 institutions and especially the Russell Group institutions. The gap widened after the increase in fees in 2006 and the deactivation of public funding produced by the crisis of 2008. Interestingly, the rise in fee level after 2012 seems to have led to an overall increase in resources per student which stabilised the differential between institutions.

This might be due to the fact that post-92 institutions' income are traditionally more dependent on fees. However, it should be noted that the increase in funding per student coincided with a decline in the number of students after 2010 and even more after 2012, provoked by the stagnation of full-timers and the strong decline of part-timers (Figure 11 and table 4). Therefore, the rise in spending per student might reflect a downsizing of the system.

**Table 4 Key characteristics of the various types of institutions**

		Public Funding	Fees	Research	Donations and Endowment	other	Total	Enrolment	Spending per student 1990 prices	% FT Students	% of Post Graduate
2002	All	39.3	23.0	16.8	1.8	11	100	100	5182	56.6	22.5
	Pre 92	34.7	20.4	23.0	2.2	19.6	100	56.8	5928	50.3	26.4
	Post 92	45.8	27.2	7.7	1.1	18.4	100	43.2	3975	62.4	19.3
2007	All	37.7	25.4	15.9	1.8	19.2	100	100	5939	61.4	23.7
	Pre 92	33.1	21.6	22.2	2.2	21	100	48	7731	58.5	26.9
	Post 92	50.6	26.2	15.9	1.3	6	100	52	4283	64.6	20.6
	Russell	30.4	18.9	25.7	2.5	22.5	100	22	11179	73.7	30.9
2012	All	29.6	34.7	16.2	1.0	18.5	100	100	6107	68.9	22.8
	Pre 92	26.3	29.4	22.5	1.2	20.5	100	48	8508	66.7	26.3
	Post 92	35.9	44.6	4.2	0.6	14.8	100	52	4127	76.1	19.4
	Russell	24.5	25.7	26.5	1.4	22	100	21.1	12393	84.2	31.6
2015	All	15.9	46.3	18.2	1.1	18.4	100	100	7996	76	23.4
	Pre 92	16.7	36.9	25.0	1.3	20.1	100	47.3	10932	75	27.7
	Post 92	14.5	63.3	6.0	0.6	15.5	100	52.7	5303	78	20.1
	Russell	14.8	34.4	28.2	1.2	21.3	100	25.1	14381	87.8	31.7

Table 4 shows that the post 2008 context has radically transformed the income structure of institutions and increased the differences between them in relation to income generation from teaching and research. Post 1992 institutions are now much more dependent on fees and less on research. The key distinction between teaching and research-intensive institutions is more than ever reflected by the differences between their income structure after the crisis of 2008 and the 2012 new funding regime, although in theory their mission has not shifted.



The historical development of differentiation in the UK can be understood at the crossroads of key debates about mission (the domination of the academic over the vocational), about structure (the tensions between central/local governments), and about (in)equalities (a highly differentiation structure of society). The historical lens led to identify the following trends and issues:

- The key role of the public non university sector during each phase of depression and resilience during crises. Post-92 institutions are still playing that role.
- The tension between the local missions and vocationalisation and the academic drift. This raises a question of whether what is defined as academic drift is a positive driver of the right for all to engage with research and academic knowledge or a barrier to take seriously the development of quality vocational higher education.
- The contribution of the non-university sector to inclusion despite a tendency towards social drift.
- Key differences in the structure and inequalities in the level of funding between the various types of institutions and the absence of transfer between those subsystems.

The crisis of the 1930s created a context for the post war emergence of the binary system under the public sector. The economic downturns of the 1970s marked the beginning of the end of this public funded Fordist model of higher education. At the same time the non-university sector has shown more resilience than the university sector in absorbing the crisis of 1970 and the funding cuts in the 1980s. The situation was different in 2008 under the unitary system without a distinctive public sector to absorb the combined shock of fees and lower public funding. Table 6 shows that the crisis of 2008 and policy reforms has widened the existing informal differentiation shown by wider variations in income structure with heavy reliance on fees for post-92 and public research funding from the pre-92 universities. The importance of the historical context is key to understand those variations as Scott suggests that the upgrading of the polytechnics in 1990s took place when inequalities were increasing while the upgrade of the CAT and new universities took place in the 1960s when inequalities were reducing (2012).

## **5. The USA stratified higher education system(s)**

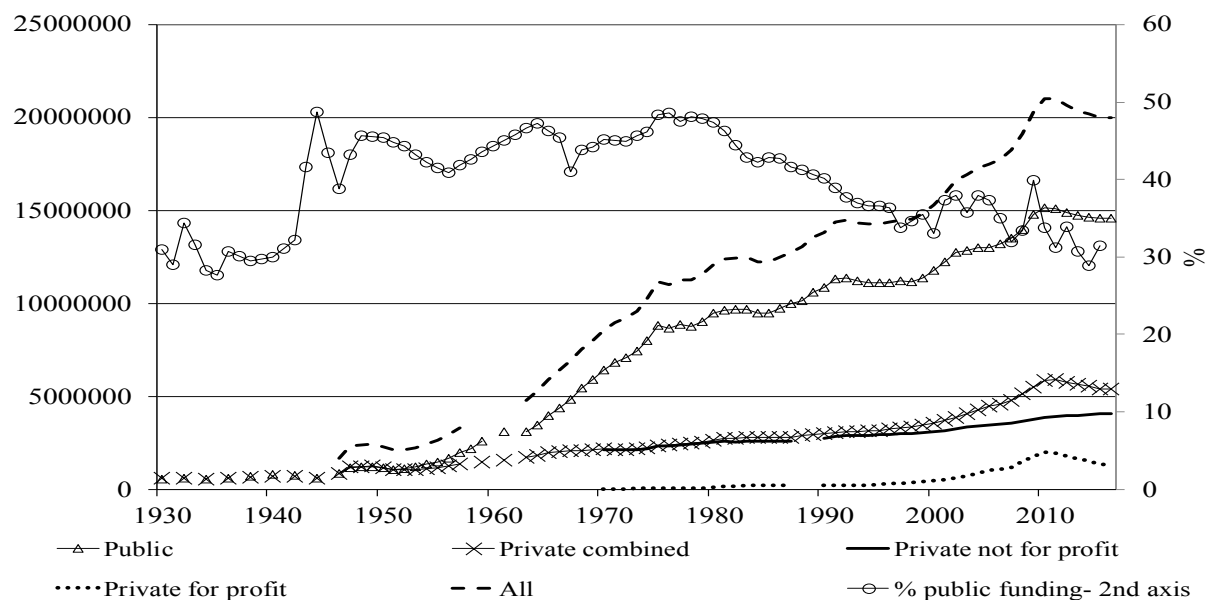
Differentiation is a key lens to explore the massification of US higher education. This can be traced back to the foundation of the colonial universities which were private institutions resourced via public and private funding. Religion was a key reason behind the creation of these universities, which altogether represent 7 out of the 8 members of the prestigious Ivy League, underlining the reward of being first in the world of higher education. A second phase of differentiation in the 19<sup>th</sup> century shifted towards a democratisation rationale with the establishment of female colleges and historically black colleges. The third phase responded to the need for new missions in the mid-19<sup>th</sup> century with the liberal arts colleges and the normal schools whose training of teachers was crucial to the expansion of compulsory education. The fourth phase of differentiation was driven by the rise of the public sector with the Morrill Acts of 1862 and 1890 organising the land grant movement which funded vocationally driven institutions such agricultural and army colleges. The fifth stage of differentiation started

in the early 20th century with the development of short vocational studies offered by junior colleges and later community colleges to widen access while offering opportunities to transfer to universities. Those layers have produced today's stratified system of 2- and 4-year public and private institutions which is explored below from the 1920s onwards.

### 5.1 Emergence and demise of Fordism and public/private divide

The US higher education system is diverse and highly decentralised with key differences across States. Tierney and Ward refer to a “non-system” of American higher education (2017). Figures 21 and 22 show that until the early 1950s, enrolment in US higher education was equally divided between the public and private sectors (although a decline of the latter is noticeable from 1930 to 1939). Since then, the proportion has evolved across time although it is important to note that the majority of students have remained in the public sector to this day.

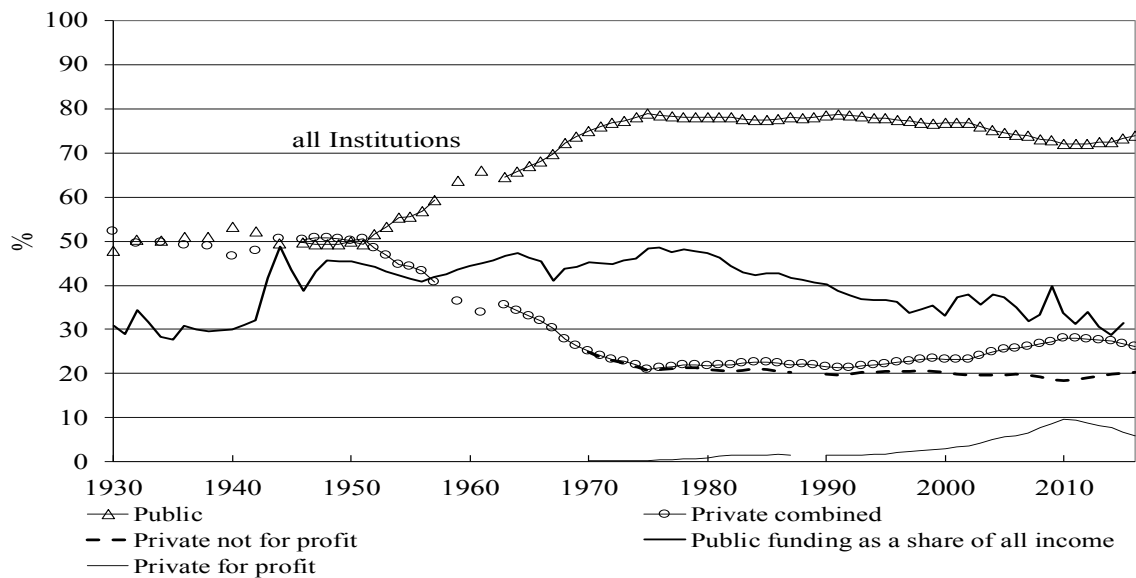
**Figure 20 Expansion of enrolment by ownership across the sector- 1930-2016**



#### ***Fordism and the post war consolidation of state systems***

Although the great depression led to a limited transfer of enrolment to the public sector (Levine, 1986, p. 191), it is the post war period from the early 1950s to the mid-1970s which represents the significant expansion of the public sector whose proportion of enrolment increased from 50% to 80% (Figure 21). This first phase of massification coincides with a substantial increase in the proportion of public funding to the unprecedented level of 50% with a rising contribution from the States from 22% to 32% (Figure 7). This increase in public investment was triggered by an alignment of economic, social, geopolitical and cultural rationales.

**Figure 21 Distribution of overall enrolment in higher education by ownership 1930-2016**



The Fordist model and its acceptance of taxation and consideration of higher education as a public investment for growth combined with important policy seeking to resolve internal social tensions regarding gender, social class and ethnicity. Higher education was a key driver of that progressive agenda with the landmark 1965 Higher Education Act by which the federal state offered legal and financial means to its underrepresented population. The Act was key to driving the civil rights agenda in and through higher education (Gilbert and Heller, 2016). These socioeconomic considerations combined with external drivers such as 1944 GI Bill which gave veterans the right and financial means to access higher education (Figure 20 reveals the sharp increase in public funding after the war). The Cold War was also key with the Commission on Higher Education for Democracy in 1947 whose productive and social justice agenda suggests that the Fordist model was also seen as an alternative to communism. The panic caused by the launch of Sputnik in 1957 led to a second surge of public enrolment following the 1958 National Defense Education Act. Those various rationales crystallised into key policy efforts to develop public provision. This is according to Cohen and Kisker a period during which “States that had not developed a public sector...hastened to catchup” (2010, p. 199). The period generates key innovations regarding the development of State systems of higher education with the 1960 Californian Master plan developed by Clark Kerr (Marginson, 2016b) as a key template. The Master Plan is based on three sectors: the community colleges (vocational associated degree with possibility of transfer), the California state university system (bachelor and Master degrees) and the university of California system (research university).

### ***Post Fordism and the revival of private provision until 2008***

The crisis of the 1970s transformed both the structure of funding and provision and interrupted the dynamics of the first phase of expansion. The reduction of the share of public funding from 50% to 30% from 1973 to 2016 (Figure 7) coincided with a slowdown of the dynamics of public provision which stabilised at 80% of overall

enrolment. The crisis of the Fordist model affected both private and public sectors at first but particularly the latter from 1973 to 1980 (Figure 23). As a result, the second phase of expansion of the mid-1990s took place under a different form of public/private differentiation. The public sector remained dominant but its share of enrolment dropped from 80% to 70%. This left a much stronger role to the private sector which until then was dominated by not for-profit institutions. The situation changed as the private sector became equally shared by not for-profit and for-profit institutions due to a surge of the latter which increased its share of overall provision from 1% to 10% from the early 1990s to the eve of the 2008 crisis.

Figure 20 and 21 show that the new post Fordist model of funding and provision was strongly impacted by the virulence of the 2008 crisis. Interestingly, the crisis affected both public and private (especially for-profit) enrolments. This might be explained by the fact that, as Figure 9 suggests, the 2008 crisis has, unlike the crisis of the 1970s, affected both dynamics of public (austerity policy) and private resources (endowments and donations affected by the financial crisis, fees linked to private debt and a relative slowdown of the private returns from investment in education). This double hit suggests that initial cost sharing might have turned into public/private substitution (Carpentier, 2012). This shift to substitution might explain why, on the one hand, the public sector was unable to mitigate the effect of the 2008 crisis on the private sector as it did in the 1930s and why, on the other hand, the private sector could not compensate for the public sector as it did in the 1980s.

Thus, both public and private sectors are quite vulnerable to economic fluctuations. Interestingly, the crises of the 1929, 1973 and 2008 had different implications in term of public/private differentiation of the US system of higher education. The 1930s led to the post war expansion of higher education under the public sphere. The 1970s led to the slowdown of the public sector and to the (re)emergence of the private sector with a stronger for-profit component. The 2008 crisis has led to a decrease in overall enrolment in most sectors with the notable exception of the 4-year not for-profit sector. The understanding of the public/private differentiation can be refined by the consideration of another key type of differentiation based on mission and articulated to the key distinction between 2- and 4-year institutions.

## **5.2 Missions: the 2/4 year distinction and the questions of transfer and vocationalisation**

Beyond their duration of study, 2-year and 4-year institutions can be distinguished by the degrees they award (associate degree and bachelor degree and doctoral degree), their admission process, their research and teaching activities, their academic/vocational orientations and their career prospects. It is worth noting that 2- and 4-year institutions are heterogeneous groups.

**Figure 22 4-year and 2-year degree granting institutions in the US 1932-2016**

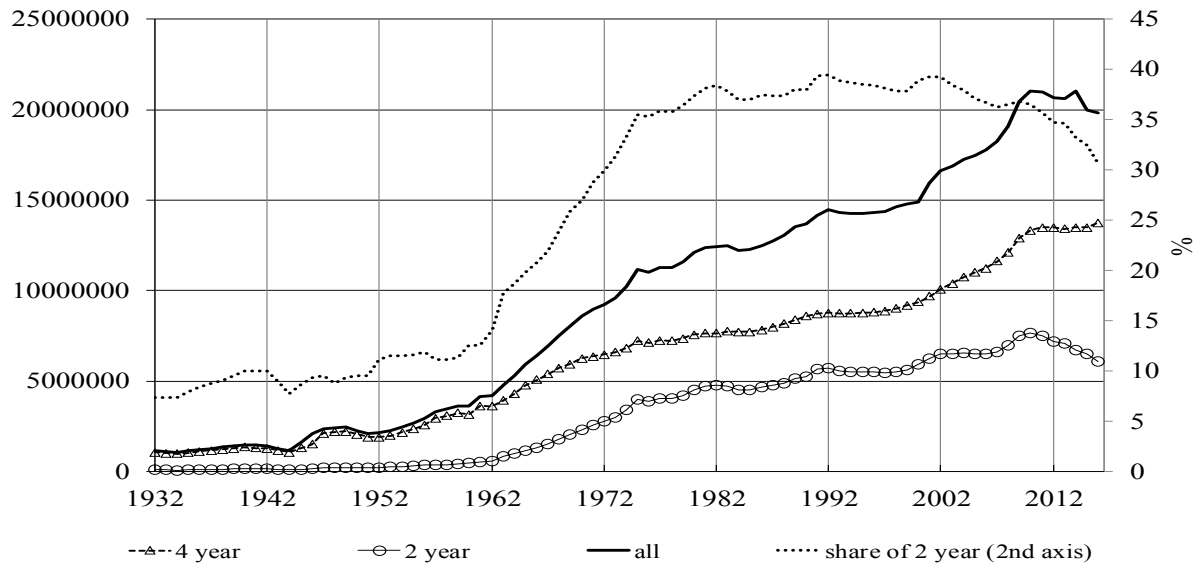
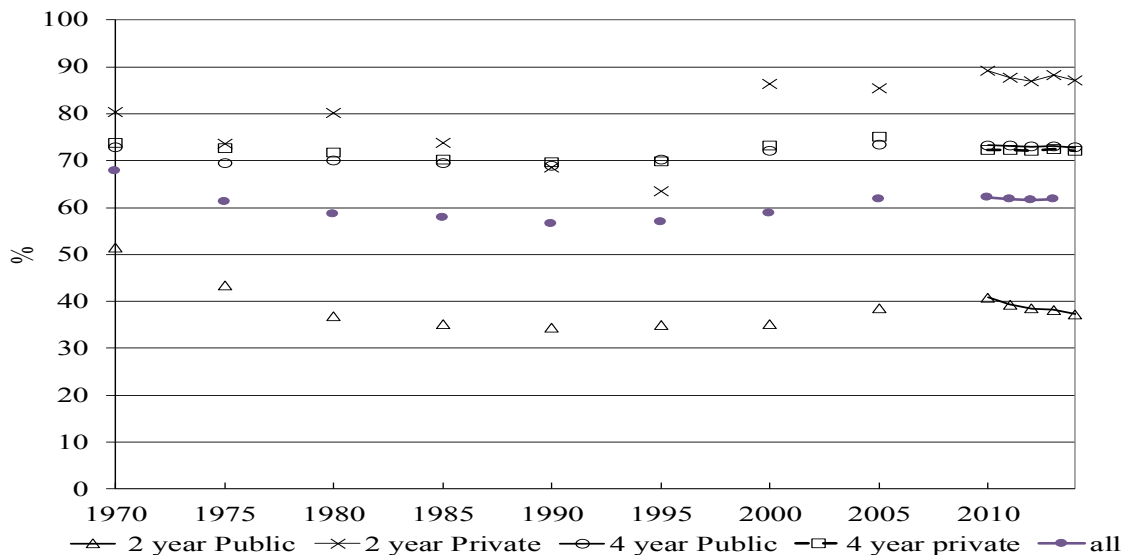


Figure 22 shows that until the first phase of expansion of the 1960s, the US higher education system was largely dominated by 4-year institutions. The post war expansion was based on a substantial progression of the 2-year institutions or community colleges which stabilised in the early 1970s and declined since the early 2000s. The following shows that those trends reflect the connections and tensions between their public nature and their missions as transfer or lifelong learning institutions.

**Figure 23 Proportion of full time students in each sector 1970-2016**



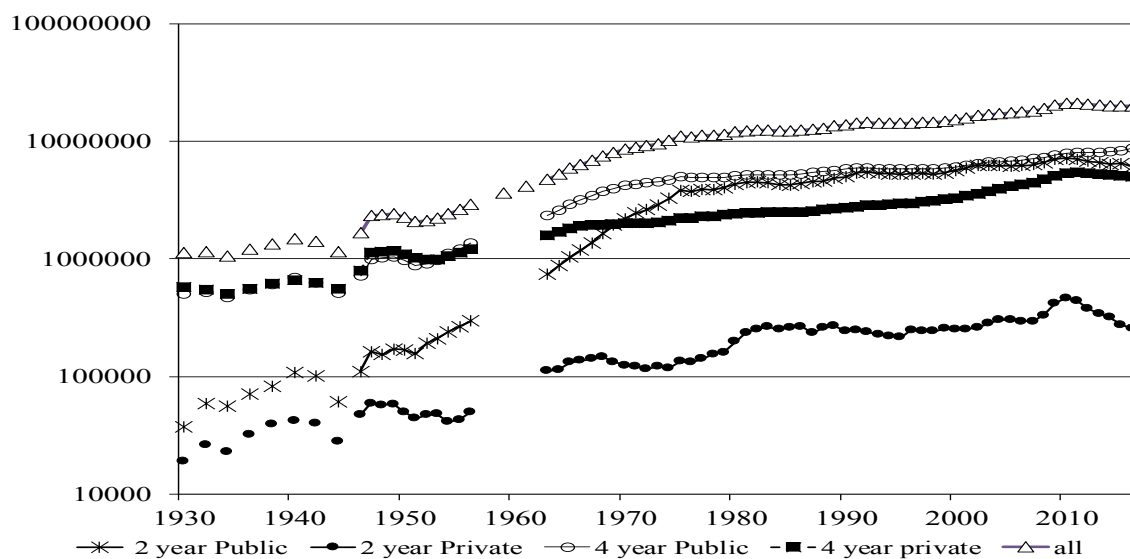
The creation of junior and community colleges was connected to a variety of rationales such as an extension of school, the building of a sense of community, a vocational purpose (Cohen and Braver, 1989). Community colleges were initially conceived as transfer institutions before operating a partial vocational drift after the 1960s which will be linked to Fordism below. This change in their mission is evidenced by their higher (although) diminishing proportion of part time students shown in Figure 23. The

proportion of undergraduates over 29 years old is 16% on average, 22% in community college and 33% in private 2-year institutions (NCES Digest 2017).

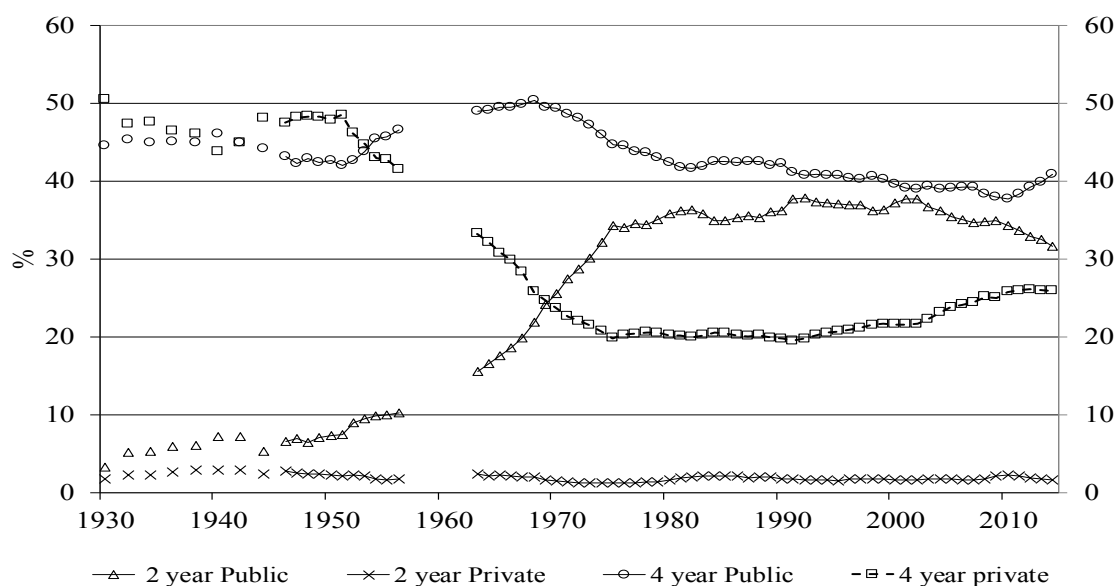
### ***Fordism and the rise of the community college***

Until the Second World War, 4-year institutions were the norm, concentrating 90% of overall enrolment equally distributed between the public and private sectors. This structure will be transformed by the first phase of massification which is still dominated by public 4-year institutions but increasingly driven by the growth of public 2-year institutions whose share of enrolment grew from 10% to 35% from the late 1950s to the mid-1970s.

**Figure 24 Distribution of enrolment across the sector 1930-2016**



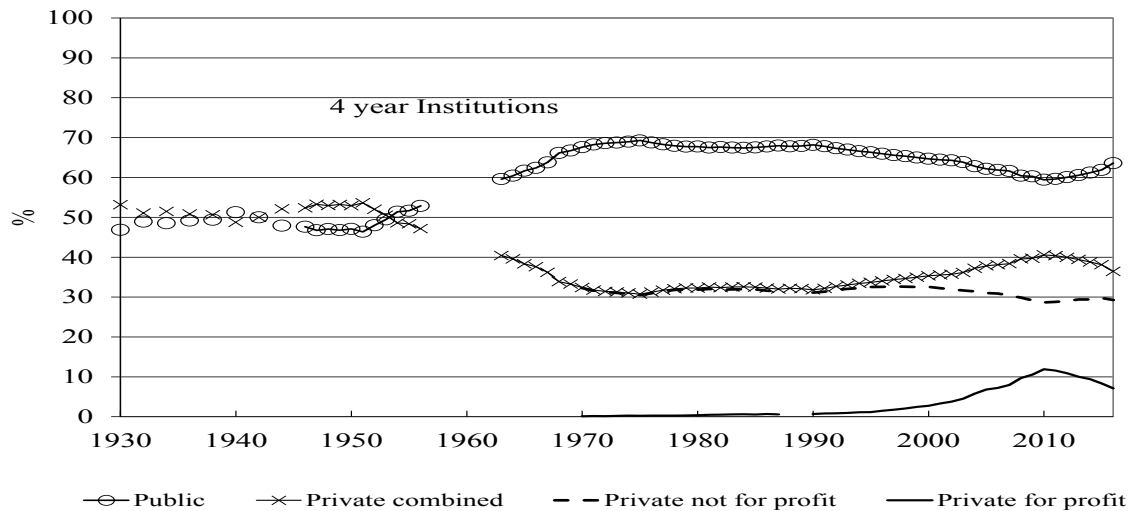
**Figure 25 Distribution of enrolment across the sector 1930-2016**



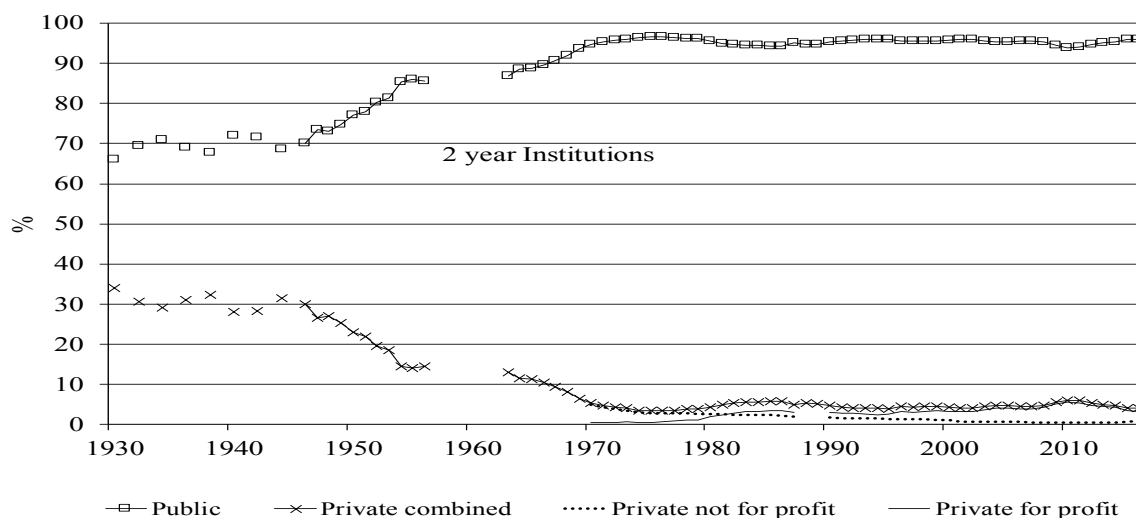
There is a strong correspondence between the dynamics of public/private differentiation and mission differentiation. Figure 27 shows that community colleges which are closely associated with the principle of a public funded vocational higher

education at the heart of the Fordist model increased their share of the overall 2-year sector from 70% to 95% from the early 1960s to the mid-1970s. Their growth is part of a wider expansion of the public sector as shown by the increase of the share of public institutions in the overall 4-year sector from 50% to 70% over the same period (Figure 26).

**Figure 26 Distribution of enrolment in 4-year institutions by ownership 1930-2016**



**Figure 27 Distribution of enrolment by ownership across the sector 1930-2016**



The synchronised progressions of 2-year and 4-year public institutions mirror the various translations across the country of the Californian master plan for higher education and its division of labour in relation to teaching and research and vocational and academic knowledge between research universities, state universities and community colleges (Marginson, 2016b). The public sector has expanded its size and extended its missions simultaneously.

**Post Fordism and the retreat of 2-year institutions**

The retreat of public funding that followed the crisis of the Fordist model in the 1970s coincides with a slowdown of all 2-year institutions, particularly those from the public

sector. This explains why the second phase of massification of the mid-1990s is increasingly driven by the growth of 4-year private institutions whose share of overall enrolment rose from 20% to 28% (with a noticeable rise in the share of for-profit institutions from negligible to 12%) in the 2000s.

Those trends were abruptly interrupted by the 2008 crisis which negatively affected enrolment across the board. The 4-year sector was relatively spared (except for the 4-year private for-profit institutions whose recent and novel increase was reversed by the crisis) compared to the 2-year sector which declined both in absolute and relative numbers. The crisis raises a perfect storm of public and private funding for the 2-year sector with funding cuts directly hitting community colleges and indirectly private 2-year provision, whose students' loans depend on federal aids. Geiger noted that although community colleges were key in times of crisis they were more at risk of reduced public funding (2010). Figure 25 suggests that this indeed happened.

The historical lens shows the dependence of all sectors on economic fluctuations. The impact of economic crises on funding on both 2- and 4-year institutions is simultaneously problematic for States' public systems. This threatens the balance of the Californian model which Douglass sees as highly dependent on sufficient funding (2005, 9). The 2008 crisis might have serious consequences as Marginson argues that "the political and fiscal conditions supporting the Master Plan have now evaporated" (2017, p.1).

### ***The questions of transfer and vocational drift***

The impact of economic fluctuations on funding and enrolment of both 2-year and 4-year institutions questions the mission differentiation within the system. A key issue is the connection and potential tension between the transfer function, the community function and the vocational and continuing education function of community colleges. Trow argues that "the only major structural change in American higher education over the past century was the invention and spread of the community colleges, linked easily and casually to 4-year institutions through credit transfer and, in some places, through strong encouragement to strengthen those ties by state and local governments" (2006, p. 270).

Long term data on transfer rates, which are scarce and should be treated cautiously because of methodological issues (Townsend, 2002), show important historical variations regarding the transfer from 2- to 4-year institutions. The high proportion of students transferring from 2- to 4-year institutions from 1907 to 1940, between 60% and 70% (Friedlander, 1980, p. 1), confirms that community colleges were initially used as a transfer function rather than a technical and vocational function (Thelin, 2004, p. 250). The ratio remained high in the 1950s at around 65% as universities could not cope with the post war growth, the junior college "provided the first two years of bachelors' degree curriculum" (2004). However, the percentage of transfers from community colleges to state universities started to decline during the intensification of the first phase of expansion in the 1960s (Thelin, 2004, p. 301) reflecting a "shift in two-year college enrolments away from transfer programs into occupational, developmental, continuing, and community education started during the late 1960s" (Friedlander, 1980, p.1). This vocational drift was in line with the Fordist needs for shorter vocational higher education. Lombardi argues that there are "considerable evidence that transfer education is also losing its pre-eminence as the Principal



function of the college” (1978, p. 4). This trend has not been reversed as shown by various studies from 1972, 1994 and 2009 which estimate stable transfer rates at 25% (NCES, 1972, p.13; 2001, p. 24). The shift away from transfer toward vocational and continuing education is consistent with the increase in the share of part time students from 50% to 62% since the early 1970s (Figure 23). Dougherty’s expression of the contradictory college due to the shift from transfer institutions to vocationalisation is particularly telling (1994).

It is difficult to know whether the ongoing consequences of the 2008 crisis will maintain the current low transfer rates untouched or reverse the trends. Cohen and Risker argue that the surge in community college graduates and the limitation of universities to welcome new students in their first year has led to an increase in the transfer ratio to between 30 to 35% in the early 2010s (2010, 449). Recent data suggest an increase of the transfer ratio to 30% (Shapiro et al., 2017, p.10). Many factors influence the intensity of transfer rates such as the proximity of colleges, institutional practices, States’ policy and the strategy from students to reduce their cost for the first two years. The influence of the economic crisis on transfers might be crucial as they have found to be correlated to socioeconomic categories and ethnicity (Dougherty and Kienzl, 2006).

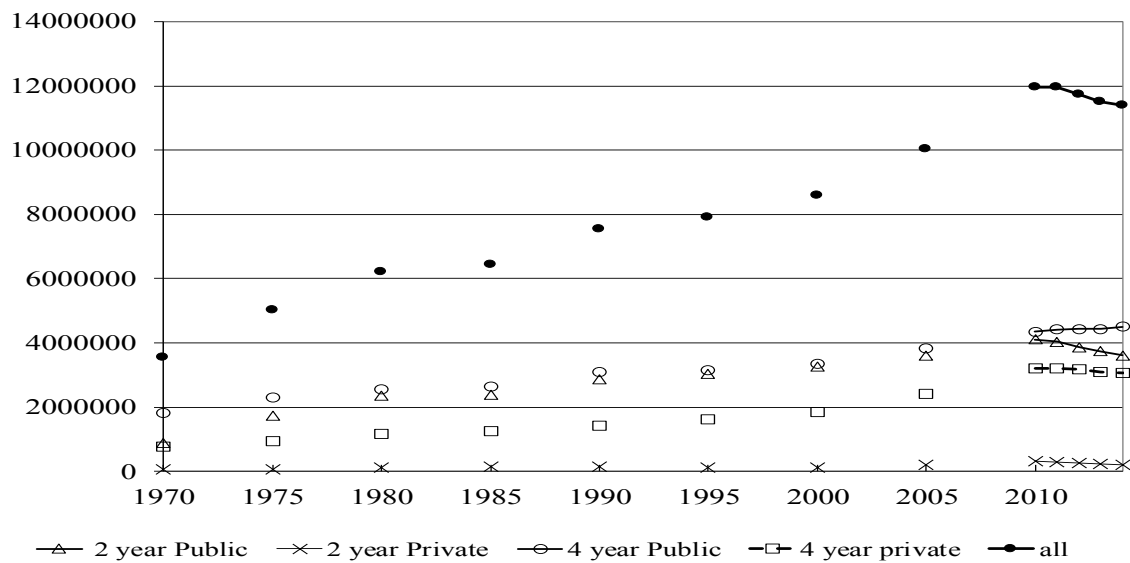
### **5.3 A stratified democratisation?**

Selection in US higher education varies significantly according to institutions and includes a mix of academic standard (SAT exams) and extracurricular activities as well as affirmative actions. Some institutions like the community colleges have open admission while others such as the Ivy League universities are extremely selective. This variety of practices invites us to explore the role of differentiation in integrating the historically underrepresented groups. Was this integration historically contingent and influenced by economic fluctuations? It is worth noting that inequality and progress that distinguish overrepresented from underrepresented groups are intersected and as a result difficult to disentangle. Moreover, most data that disaggregate a student’s characteristics and background by the type of institution are not available before the 1970s and do not cover the first phase of expansion.

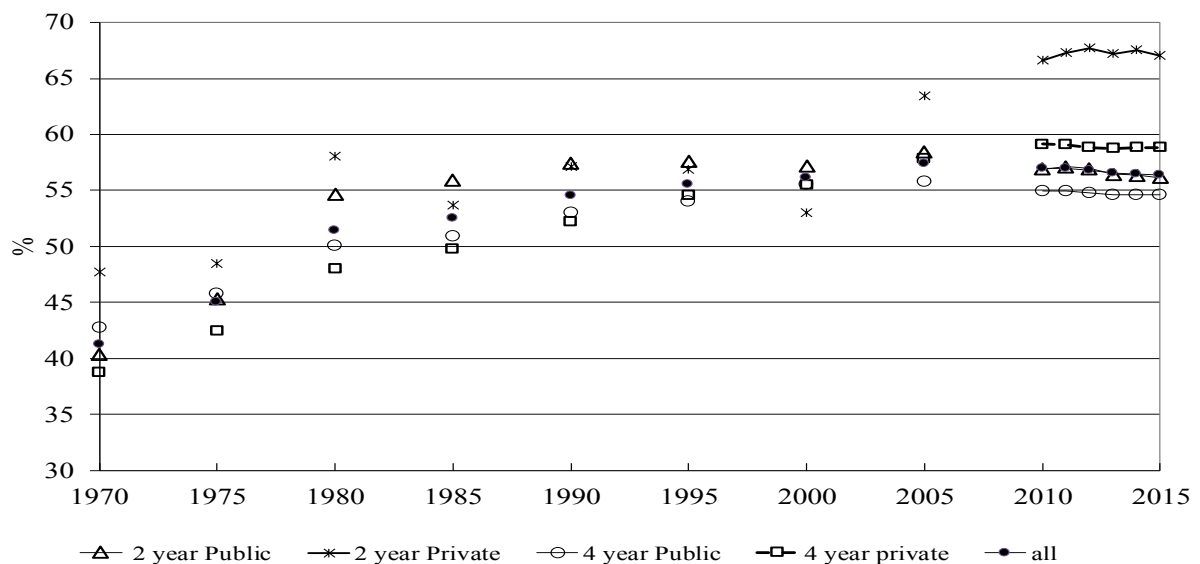
#### **Gender and democratisation**

The first women’s colleges were created in the mid-19<sup>th</sup> century. But it is the gradual development of coeducation (Thelin, 2004, p.55) that led to gender parity in the 1980s (Figure 5). Figure 28 shows that the historical increase in the overall proportion of women students was not shared equally by institutions.

**Figure 28 Distribution of female enrolment across the sector**



**Figure 29 Proportion of women in each type of institutions: 1970-2015**



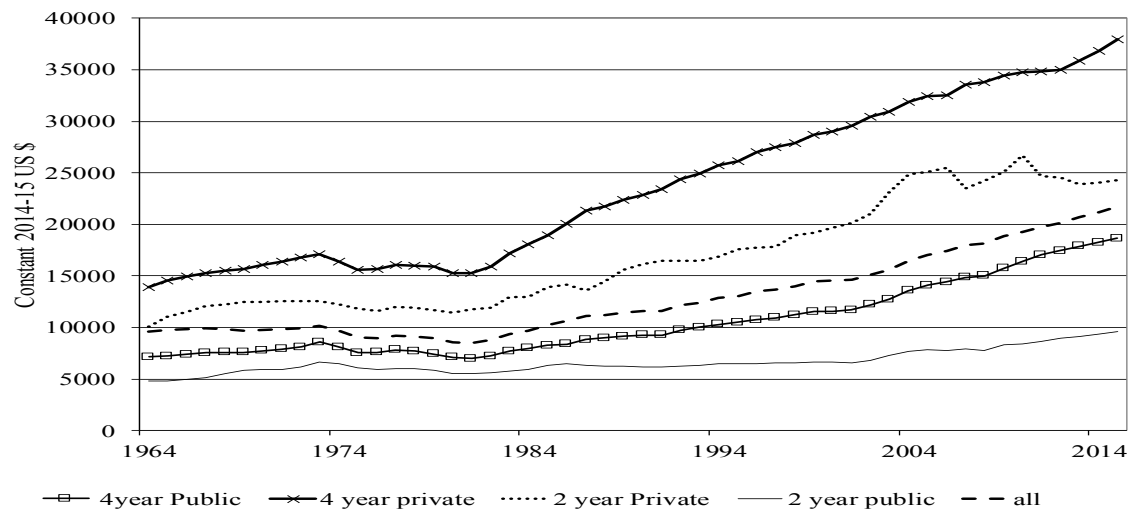
The majority of women students are enrolled in the public sector over the whole period. Public 4-year institutions were the key driver of gender parity during the first phase of expansion complemented by community colleges in the mid-1970s. The contribution of 4-year private institutions to gender parity increased significantly in the second phase of expansion of the mid-1990s to the point that they are currently the institutions with the highest proportion of women students (Figure 29). The very high proportion of women enrolment in 2-year private institutions and its significant increase in the 1970s and post 2000s are worth noting although they have, due to their small size, a limited overall effect. The impact of the 2008 crisis was felt across all sectors although Figure 28 shows that women were not more affected than men.

### **The connections between socio-economic background and differentiation**

Historical data on the socioeconomic background of students in the USA are limited. The Federal financial aid based on income (mainly the Pell Grant) is often used as a

proxy for socio-economic categories. The financial context is of course an important lens to explore access to various institutions by socio income categories. Figure 30 shows that the increase in fees is highly differentiated and affects not only who is going to higher education but also who is going where. The variations in fees according to institution make the support systems through grants and loans a very important influence on the social composition of students in each segment of the sector.

**Figure 30 Average undergraduate tuition fees for full-time students in degree-granting postsecondary institutions: 1964-2015**



Sources: (NCES 2015 p.700)

The steep increase in fees since the early 1980s is largely driven by 4-year private institutions. Fees in 2-year private institutions also increased around the same time but stabilised after the mid-2000s. Fees in 4-year public institutions have kept on increasing but are still at half the level of those in private universities. Community colleges are by far the more affordable institutions and their fees have remained stable until a modest increase can be observed since the early 2000s. Table 5 shows that those differentials in fees mirror the structure of the student population of each sector. Community colleges welcome a high share of lower income categories. However, the difference between public 4-year and private not-for-profit 4-year institutions is not as big as the differences in fees would imply. Moreover, the sector with the highest proportion of lower income category is the for-profit sector whose fee level is relatively high. Those differences between fee level and access point to the importance of the financial student support through grants and loans.

**Table 5 Proportion of undergraduate students from family with income of less than \$30,000**

Public Two-Year	Public Four-Year	Private Non-Profit Four-Year	For - Profit Total	All
31	22	18	46	25

Sources: NCES, 2012. National Postsecondary Student Aid Study (NPSAS).

Figure 31 shows substantial differences in the proportion of students supported by a Pell grant according to the type of institutions which gives an idea of the social composition of their student body. Figure 31 shows an overall increase in the numbers of students supported by a Pell Grant. Nearly half of students are supported. However, it is important to acknowledge that the Pell grant is means tested and that students receive a different proportion of the maximum allowance depending on their income. As a result, it is not a precise indicator of socio-economic status. It is also important to keep in mind that the Pell Grant is designed for full time study. Figure 23 shows that 40% of students are enrolled on a fulltime basis in community colleges. Thus “community college students receive a disproportionately small share of Pell Grant funds because a large portion of these students work full time and attend college part time, limiting their eligibility for grants” (King, 2003, p. viii). This is made very clear in table 5 which shows that community colleges are the second to largest proportion of students from low income categories in relative terms and the first in absolute terms.

**Figure 31 Full-time, first-time degree/certificate-seeking UG students enrolled in degree-granting postsecondary institutions receiving federal aid**

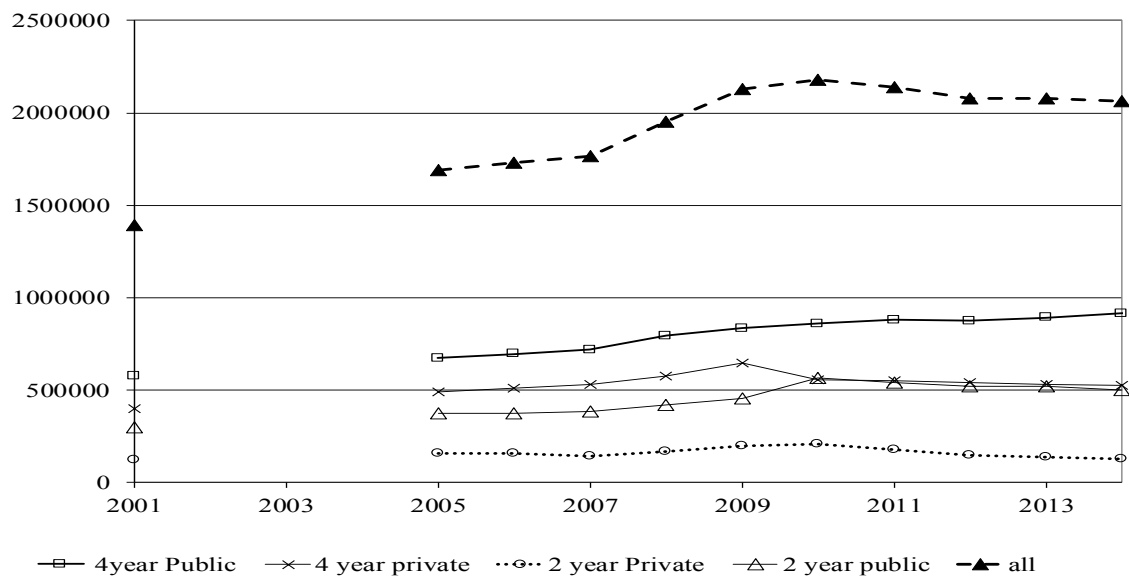
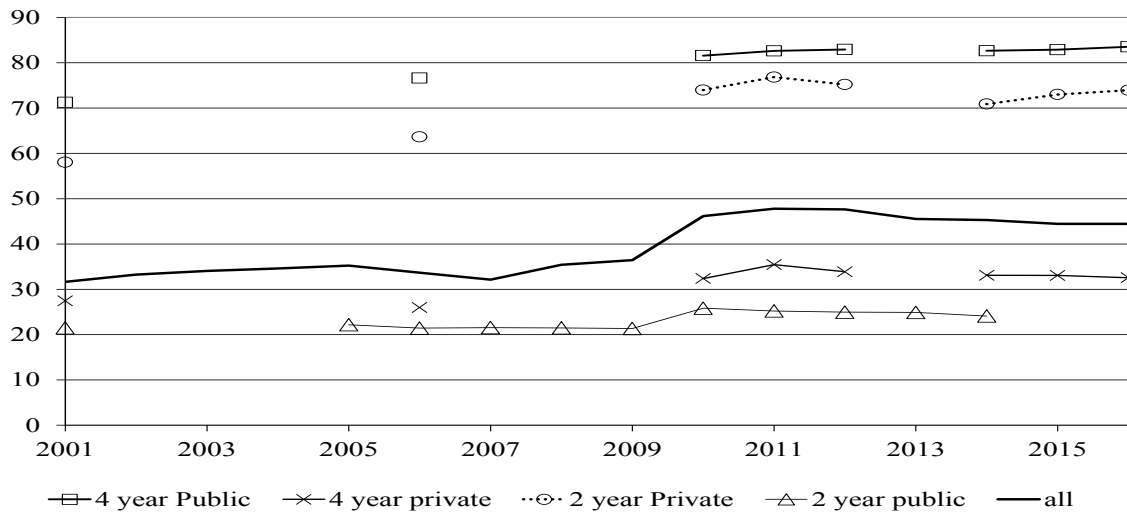


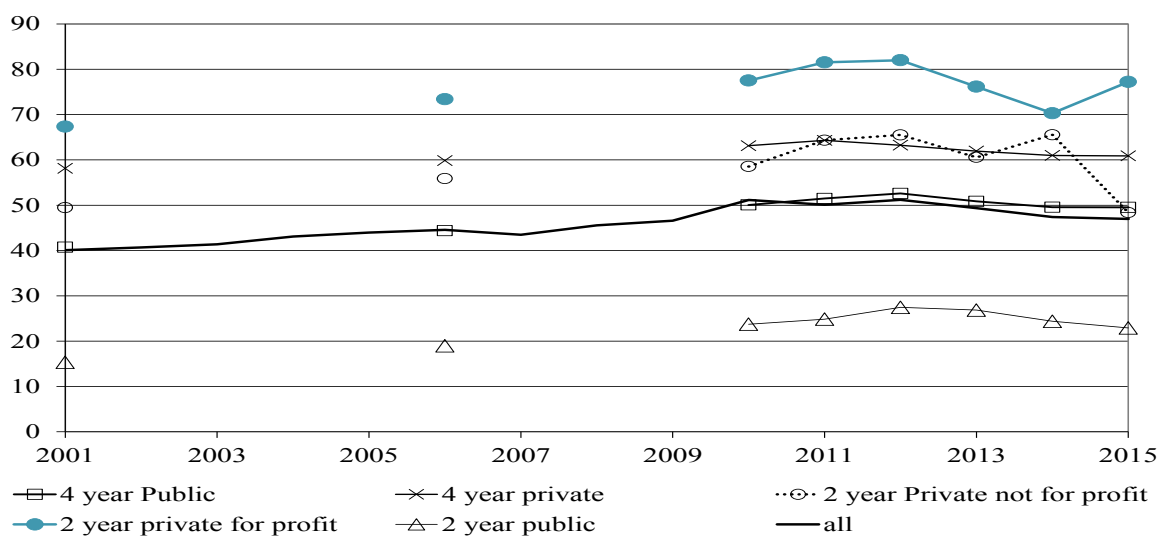
Figure 32 underlines the key role of the 4-year public universities as key recipients of financial aid although table 5 shows that the sectors with the largest proportion of students receiving the Pell Grant are 2-year for-profit providers.

**Figure 32 Full-time, first-time degree/certificate-seeking UG students enrolled in degree-granting postsecondary institutions receiving federal aid-2001-2015**



The proportion of students with loans is far higher in the private sector and especially in the for-profit sector. This explains why the differentials in fees are not totally mirrored by access according to socioeconomic categories. One of the key contemporary debates in higher education policy is the link between government subsidized loans to both public and private institutions and recent reforms which have put in place some restrictions on the eligibility of private institutions to enrol students benefiting from federal loans. The decline of the proportion of loans in for-profit private higher education is the combined effect of the 2005 Higher Education Act and the 2008 crisis (it should be noted that the increase in the percentage of students with loans in for-profit institutions in 2015 is due to a sharp drop in their enrolment as shown in Figure 26).

**Figure 33 Full-time, first-time degree/certificate-seeking undergraduate students enrolled in degree-granting postsecondary institutions receiving Loan 2001-2015**



Recent data shows an increase in the value of loans rather than in the numbers of students taking them, a trend that might problematic for a more vulnerable population

in some segments of the sector. According to the U.S. Department of Education, “default rates ranged from 6.3% for the private non-profit four-year sector and 7.6% for the public four- year sector to 15.8% for the private two-year sector and 19.1% for the public two- year sector” (2016). Stratification led to the inclusion of lower income groups while at the same time raising issues about the vulnerability of those groups of individuals to debt, as well as concerns about systemic sustainability.

**Ethnicity and the key role of differentiation**

The importance of ethnicity in shaping the American society (Cohen and Kisker, 2010) is reflected in the institutional differentiation of higher education. Looking back in time shows a mix of progress and inequalities. Historical trajectories of the dynamics of ethnicity inclusion and differentiation have changed across time and differ according to various groups. Those trends should be interpreted cautiously because of intersectionality regarding ethnic, gender and socioeconomic categories.

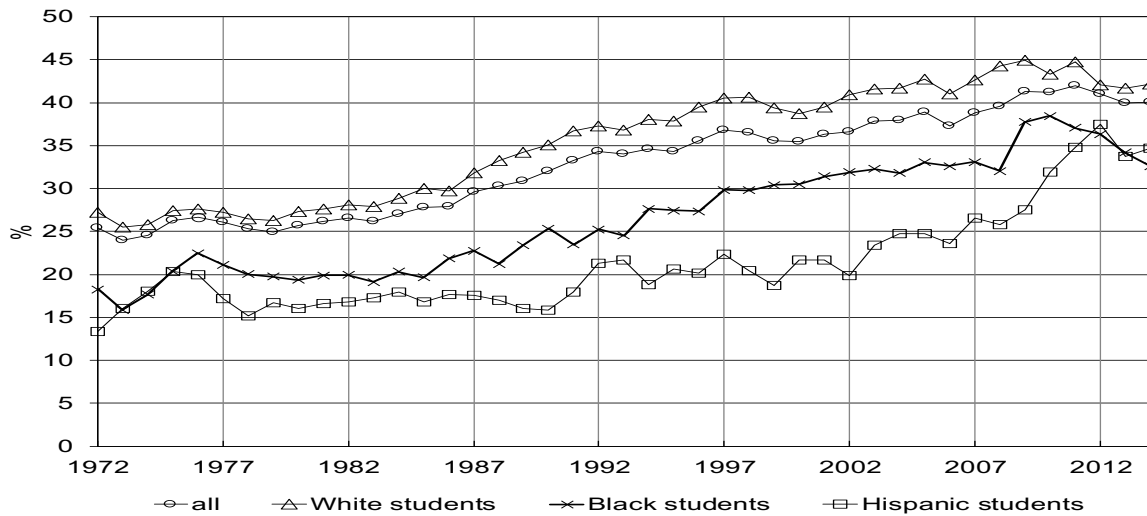
**Table 6 distribution of total population by ethnicity**

		White	Black	Hispanic	Other	All
1980	All population	79.6	11.7	6.4	2.3	100
	HE	80.4	9.16	3.9	5.6	100
2015	all population	62.2	13.2	15.3	9.3	100
	HE	54.6	13.4	16.5	15.4	100

Sources Statistical abstract of the US

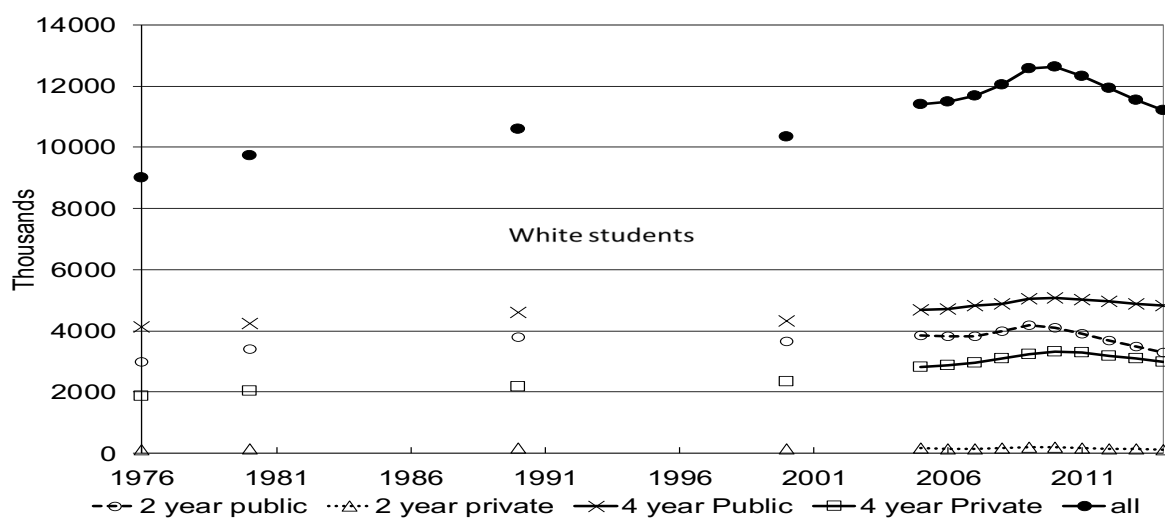
Table 6 shows that the changes in the distribution of the overall population by ethnicity are broadly reflected by those regarding the student population. However, a closer look at participation rates of 18 to 24-year-olds offers a different picture. Figure 34 shows that participation of white students has been constantly higher than the other groups (except for Asian students) since the 1970s. However, the gaps between groups fluctuated over the years and an increase in participation is noticeable in early 1990s for black students and in the early 2000s for Hispanic students.

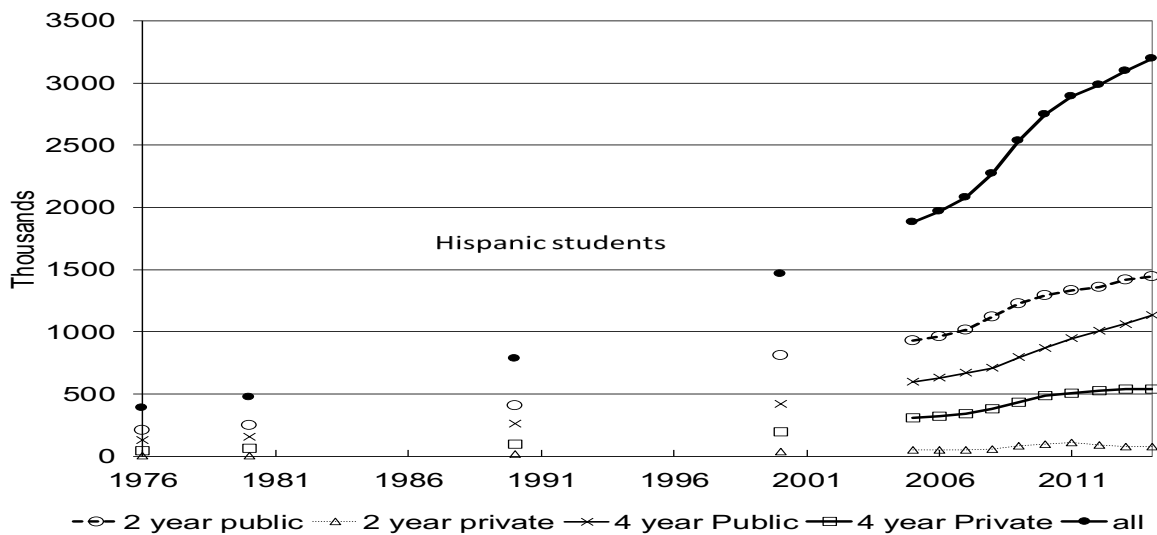
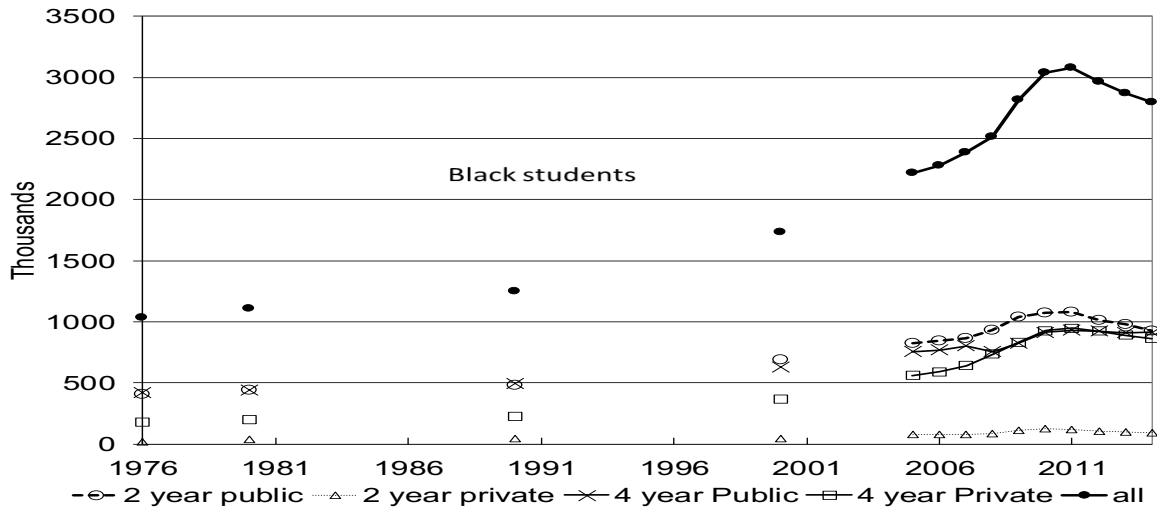
**Figure 34 Percentage of 18- to 24-year-olds enrolled in degree-granting postsecondary institutions within in each group by ethnicity**



The graph also suggests that economic crises had distinct impacts on ethnic groups. The 1970s downturn coincides with a sharper fall in the participation of black and Hispanic students while the 2008 crisis seems to have affected every group, but especially black students. Institutional differentiation offers a useful lens to explain those trends and look at the specific and common constraints and opportunities associated with the various ethnic groups. Figure 35 shows that white students are predominantly enrolled in 4-year public institutions although a growing proportion of them have gained access to 4-year private institutions, slowly catching up with enrolment in community colleges while their enrolment in 2-year private institutions remains limited. The long-term lens shows a rather stable representation in all sectors until the 2008 crisis led to a decline of overall enrolment across the board but particularly in community colleges.

**Figure 35 a, b, c Numbers of students across the sector by ethnicity**





The expansion of enrolment of black students was historically based on the public sector. In 1970, 80% of black students were equally enrolled in 2- and 4-year public institutions until the early 2000s. Afterwards, the proportion of enrolment of black students in the public sector started to decline much more sharply than the whole population and any other ethnic group, to reach 65% today (75% overall). Thus, although the enrolment of black students during the second phase of expansion continues to be driven by the public sector, it became increasingly driven by 4-year private for-profit institutions which enrol more black students than 4-year public universities. The expansion is also driven by non-selective institutions beyond community colleges with an increase in enrolment in 2-year private institutions (black students account for a third of 2-year private for-profit enrolment). This might be the combined results of policy regarding grants and loans, affirmative action regarding admissions policies as well as wider transformations such a rise of a black middle class. The impact of the 2008 crisis on 2-year and 4-year private for-profit institutions as well as community colleges had a negative effect on the enrolment of black students.



**Figure 36 a, b, c Proportion of students in each sector by ethnicity**

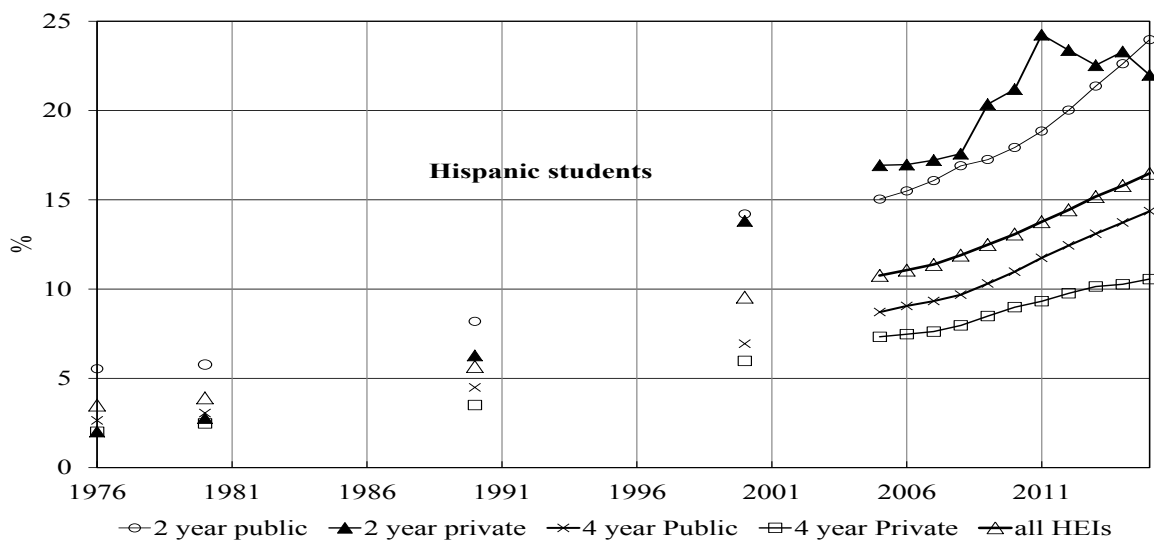
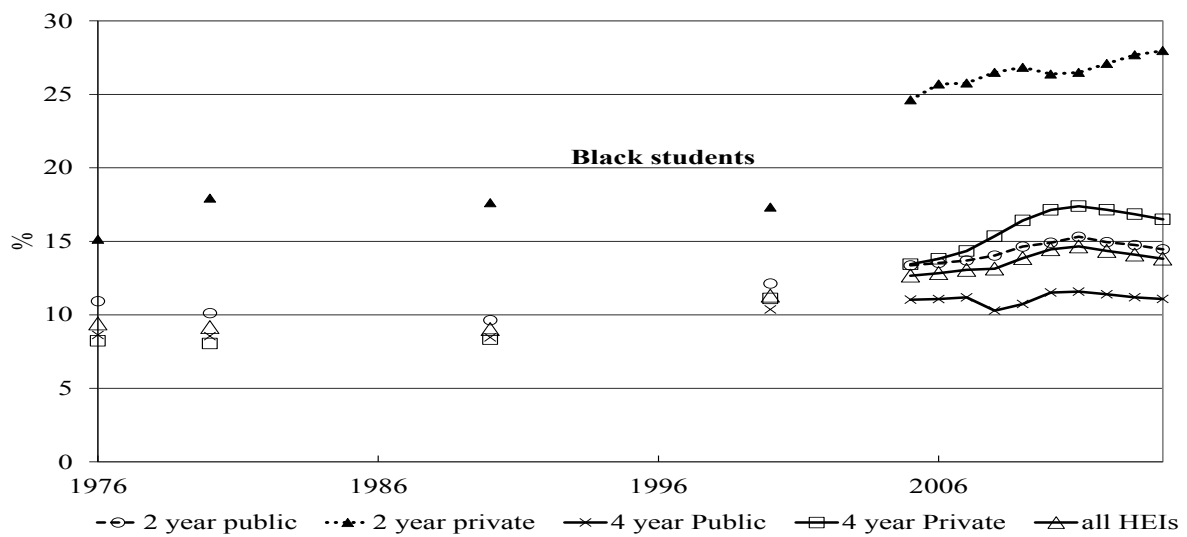
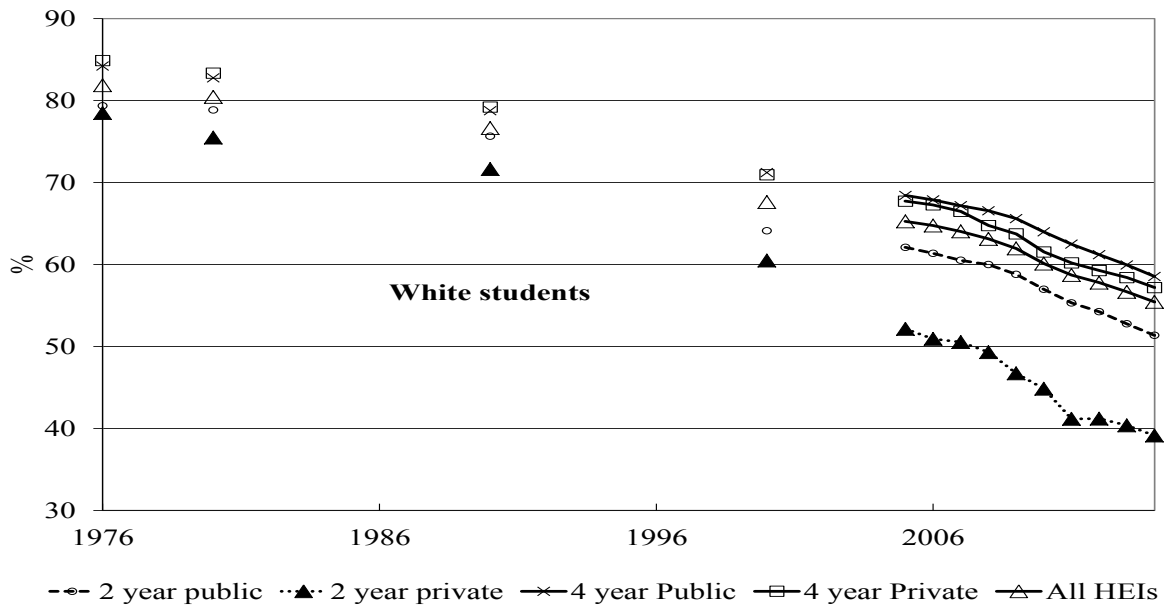


Figure 35c points to a significant increase in the numbers of Hispanic students in all types of institutions although this remains mainly centred in the public sector until this day. The expansion took place mainly in community colleges although enrolment in 4-year public institutions has significantly increased since the early 2000s. Figure 36 c shows that Hispanic students are still underrepresented in 4-year private institutions and overrepresented in 2-year private institutions. The 2008 crisis has not affected the overall enrolment of Hispanic students and their enrolment in all type of institutions except in 2-year private institutions. The public sector and the 2-year sector (especially the community colleges) were key to the integration of ethnic minorities. 82% of Hispanic students are in the public sector and 47% in 2-year institutions. 66% of black students are in the public sector and 35% in 2-year institutions. 72% of white students are in the public sector and 30% in 2-year institutions. The public sector was less prominent for all groups after the 2000s, although the proportion of Hispanic students remained high.

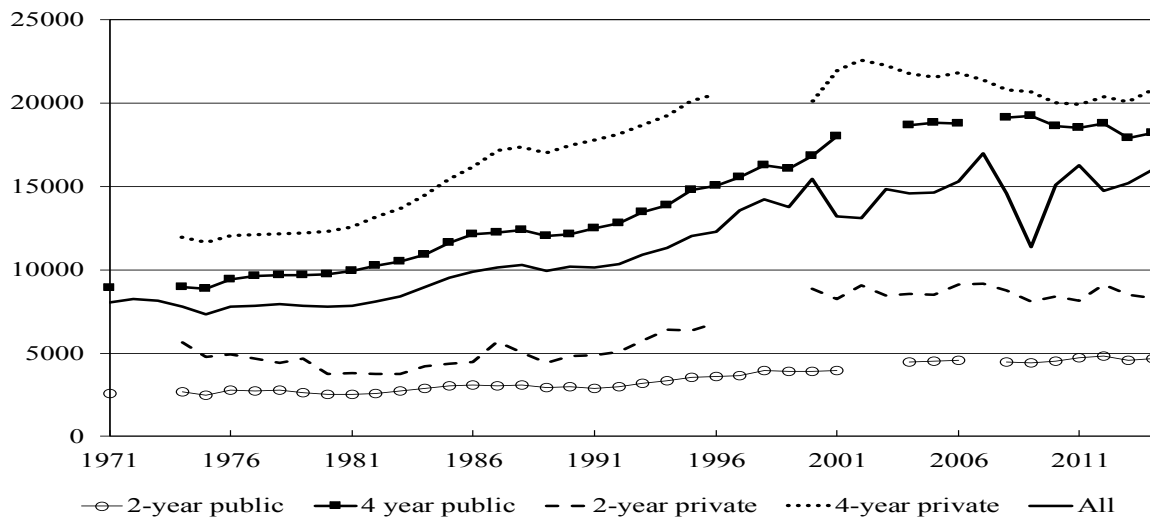
50% of Hispanic students, 40% of black students and 30% of white students are enrolled in the 2-year sector. So the system remains stratified. Altogether black students and Hispanic students represent 30% of the overall student population, 50% of enrolment in for-profit 2-year HEIs and 40% of enrolment in community college. The 2-year private sector is limited in size but disproportionately recruits some groups. Access to elite institutions remains challenging for black and Hispanic students (Posselt et al., 2012).

Differentiation has offered a mix of opportunities and constraints to underrepresented groups. The public sector and especially community colleges were crucial means of democratisation during the first phase of expansion as key drivers of the Fordist model. The 4-year private institutions started to play a bigger role during the second phase of expansion alongside the 2-year private for-profit institutions which remain a small sector but recruiting specific groups disproportionately raising financial issues for individuals and sustainability especially revealed by the 2008 crisis.

#### **5.4 The gaps in resources and the unequal differentiation**

The potential of institutional differentiation to generate or address inequalities might be influenced by the differential in resources among institutions (inequalities between institutions) and among their students (inequalities between students). The two are obviously linked with a cumulative effect if wealthiest institutions recruit the wealthier students.

**Figure 37 Expenditure per student (undergraduates and postgraduates) by types of institutions (1990 Geary-Khamis\$)**



The twofold increase in overall expenditure per student since the early 1970s masks significant and persistent inequalities between institutions. Overall, the 4-year institutions are the best resourced. Not-for-profit 4-year private institutions are consistently benefitting from higher resources per student although those have decreased since the early 2000s. On the contrary, the 4-year public institutions have remarkably improved their financial position since the early 1990s and despite being hit by the 2008 crisis they have narrowed the gap. 2-year private institutions are far less resourced, mainly depending on fees which have plateaued. However, the community colleges are consistently under resourced over the whole period and have never managed to reduce the huge gap separating them from all the other institutions.

It is worth noting that spending per student remained stable since the early 2000s and that no catching up between institutions has taken place. The highest fees in public universities raise questions about integration and the disparities with community colleges raises questions about transfers within state system. Beach argues that community colleges in California are overburdened and underfunded (2011, p. 115) while Marginson argues that “they are pulled between immediate graduate employability and the academic requirements of transfer...but they are not fully funded to play either role well” (2017, p.57). The crisis of 2008 has not led to an acceleration of the decrease in spending per student as the cuts in resources have coincided with a fall in enrolment in all sectors (Figure 24). This questions whether the system is shrinking, and if that was the case, what would be the role of differentiation in that process.

The connections between economic fluctuations and the structure of differentiation in the USA are particularly strong. The crisis of the 1930s and the Second World War contributed to the emergence of growing public sector with a key role played by community colleges whose mission became increasingly orientated toward the Fordist agendas of vocational education and massification rather than transfer institutions. In that sense the first phase of expansion became increasingly stratified while welcoming previously underrepresented groups. The crisis of the post Fordist model in the 1970s transformed the structure of the second phase of expansion of the 1990s and led to the increase in private provision alongside the still dominant but retreating public provision. However, since the 2000s a movement of public/private substitution of

funding generated by a continuous increase in fees and stagnation or instability of other resources has led to a slowdown of expenditure per students without reducing the inequalities in resources between sectors. The pressure of the 2008 crisis on both public and private funding has revealed those tensions between structure, mission and inequalities. The slide towards public/private substitution has sharpened differentials in funding while impacting both public and private enrolment and vulnerable groups. Geiger stated a year after the 2008 crisis: “the race to lower costs has increased demand for places at regional public universities and community colleges at a time when their resources are being reduced” (2010, p. 10).

## **6. The case of France: differentiation, achievements and tensions within the Republican ideal**

Differentiation in French higher education is the product of historical, political, economic and social forces that slowly shaped today’s tripartite system (Moreau, 2012) of free non-selective universities, selective public and private higher schools including the elite *Grandes Ecoles* and the selective 2-year vocational higher education provision by the *Higher Technical Sections (STS)* in Lycées and the *University Institutes of Technology (IUT)* in Universities in 1966. The historical evolution of the tripartite system is at the crossroad of key debates regarding differentiation in relation to structure (public/private provision), mission (vocational/general training) and contribution to (in)equalities.

### **6.1 Mission, selection: vocational/academic mission horizontal differentiation with vocational as elite and non-elite**

The connections and tensions between selection and mission are key lenses to explore the historical and contemporary debates regarding expansion and differentiation in the French republican model of higher education.

#### ***Expansion, the Bac and stratification and selection/non selection divide***

The French version of meritocracy is strongly associated with examinations (Charles, 2017). In that sense, the baccalauréat (Bac) serves a key function in the historical expansion and differentiation of the Republican model of higher education. Created in 1808, the Bac is not only the exam that sanctions the end of secondary education but also the first higher education award. As a result it offers automatic access to public universities with important implications for both expansion and differentiation of higher education.

**Figure 38 The baccalauréat: % of age group and distribution by type of Bac**

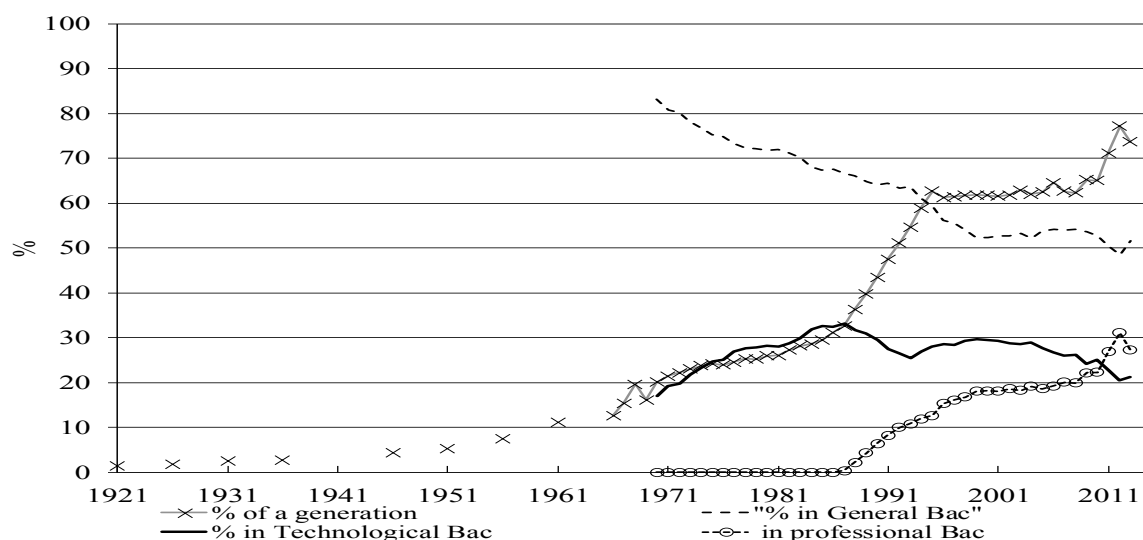


Figure 38 shows that the Bac remained for a long time awarded to a small elite before recording a steep and continuous progression reflecting the historical massification of secondary education. Indeed, the target of 80% of the age group with a Bac set by the government in 1985 is nearly reached. However, this is an aggregated ratio which reflects undeniable progress but also masks persistent inequalities between social groups. First of all, 84% of children from professional backgrounds are Bac holders against only 57% from working class backgrounds (DEP, 2016a, p.227). Secondly, although gender parity was achieved, women (alongside lower income groups) are underrepresented in the most prestigious *Scientific Bac* which tends to maximize access to higher education (Duru-Bellat and Kieffer 2008). Thirdly, the rise of the Bac has been driven by differentiation as the share of the *Bac General* (general academic Bac) has decreased from 80% in the early 1970s to 50% leaving space for two new routes. The first phase of expansion coincided with the expansion of the *Bac Technologique* (Technological Bac) created in 1968 whose proportion grew to 30% by the mid-1980s. The second phase of expansion of the 1990s was driven by the *Bac Professionnel* (Vocational Bac) whose share rose from 6% to 29% today (INSEE, Various years). This change in structure has, beyond the vocational/academic divide, important social implications. Recent data show that 76% of children from professional families are enrolled in the general Bac and 46% of professional working class children are enrolled in the Vocational Bac (<https://www.inegalites.fr/L-inegal-acces-au-bac-des-categories-sociales>).

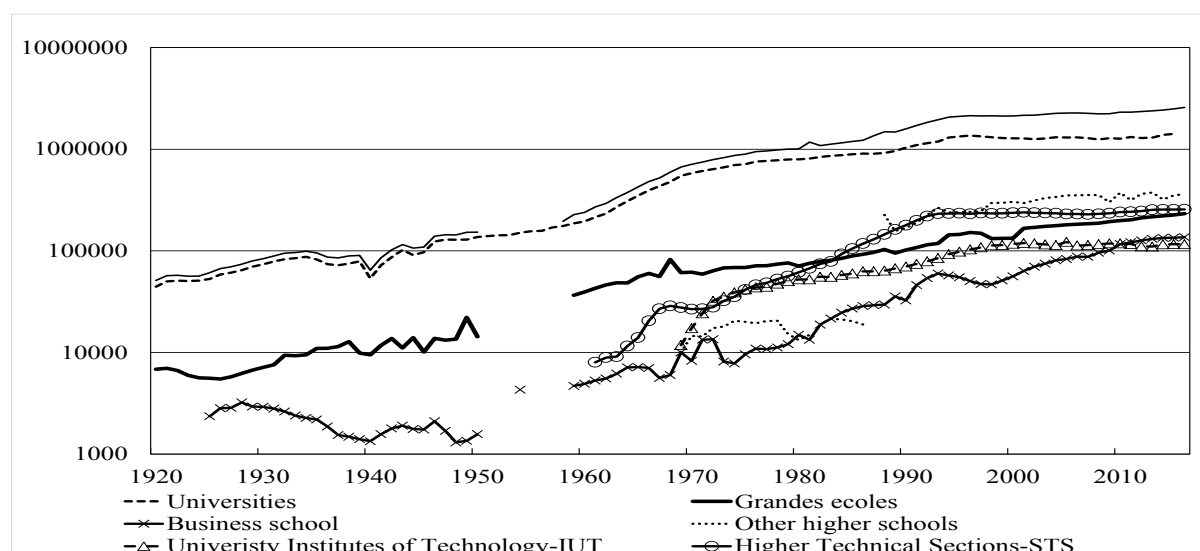
This hierarchy between the Bacs is key to understanding the integration into higher education by the various social groups (Beaud, 2002) through the channel of institutional differentiation. The holders of a Bac make a number of choices regarding their transition to HE. They are first served in the public university of the region of their domicile and can access universities from other regions if there are still places available. However, the university is becoming increasingly the default position as many decide to apply for selective routes at both ends of the system. Holders of General Bac with the best results tend to apply to *Classes Préparatoires aux Grandes Ecoles* which are located in Lycées and prepare for the competitive exams giving access to Elite Grandes Ecoles. Other selective Ecoles such as business schools and

other art or professional schools are also accessible through applications. The other options are the 2-year vocational routes such as the *Higher Technical Sections (STS)* and the *University Institutes of Technology* which also operate some forms of selection. Holders of Technological Bac are more likely to enrol in selective short vocational programmes such as *University Institutes of Technology (IUT)* while holders of Vocational Bac traditionally enrol in less selective 2-year programmes such as the *Higher Technical Sections (STS)* and increasingly in non-selective universities where they experience difficulties as shown by low data on retention and success (Bodin and Orange, 2017).

Those tensions between the democratisation of the Bac and selection in higher education are at the heart of policy debates today. A demographic boom in the early 2000s is currently having an impact on the numbers of Bac holders and points to a third phase of expansion of higher education which will further challenge the republican model and especially its non-selective universities struggling to balance funding, equity and quality.

Overall, Figure 40 reveals a mix of changes and continuities in the tripartite system. The big picture shows that although non-selective public universities remain the majority, the decline of their share of total enrolment from 82% in the mid-1970s to 59% in 2016 leaving space for other selective providers at both ends of the system: elite and non-elite vocational higher education. This happened for different reasons and at different pace.

**Figure 39 Enrolment by French higher education institutions 1920-2016**

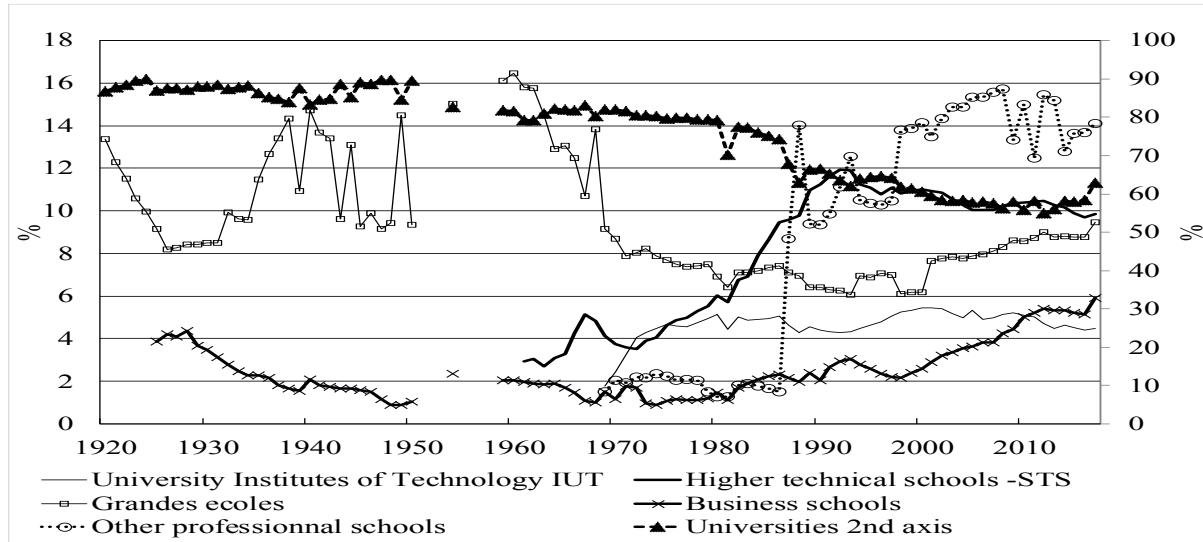


***The first phase of expansion: the Fordist agenda and the development of non-elite vocational higher education***

The first phase of expansion of the 1960s is the result of the acceleration of enrolment in all segments of the higher education system combined with significant structural changes. The expansion was largely driven by universities which still concentrated 80% of enrolment (although they record a drop of 10 percentage points compared to the early 1950s). The Grandes Ecoles and Classes préparatoires remain the second type of destination although their share dropped from 16% to 8%. The key change is related to the rise in the 2-year vocational higher education with a steep increase in

the numbers of the *Higher Technical Sections* (STS) in the early 1960s and the rise of enrolment in the *University Institutes of Technology* (IUT) in the mid-1960s. Their combined enrolment reached more than 10% of all higher education enrolment in the mid-1970s.

**Figure 40 Enrolment by French higher education institutions 1920-2014**



This change in institutional differentiation of the French higher education system responded to the Fordist model and its needs for expansion and vocationalisation. Lemistre argues that the Fordist regime in France is based on pre-vocationalisation by higher education institutions via initial training followed by professional training on the job. This is complemented by shorter forms of vocational higher education responding at the same time to the needs for middle technicians and the pressure for democratisation of higher education (Lemistre, 2015). In a way, this trend prolonged and completed the Napoleonic tradition of a stratified system with a rigid vocational/academic divide based on universities providing general education (and research alongside the national research centres) complemented by an elite vocational higher education training the engineers in Grandes Ecoles and business schools and a non-elite vocational higher education with two year vocational programmes training the technicians.

### **The crisis of 1970s, the retreat of the universities and the development of elite and non-elite vocationalisation**

The turbulent years from May 1968 to the economic crisis of the 1970s had significant effects on both the expansion and differentiation of French higher education. Figure 6b and Figure 7b clearly shows the impact of the crisis on higher education funding and a slow but real retreat of the State. The socio-economic crisis also coincides with significant shifts in the trends in enrolment. First of all, Figure 43 reveals the acceleration of the decline of the university sector's share of enrolment from 80% in the mid-1970s to below 60% today. The crisis is also contemporaneous of a further expansion of the 2-year vocational higher education provision driven by a new dynamics of a twofold increase in enrolment in *Higher Technical Sections* (STS) from 6% to 12% of overall enrolment and a stagnation of University institutes of Technology (IUT) at 5%. One interpretation might be that the former is a more affordable form of vocational higher education offered in Lycées compared to the latter run in universities.

At the other end of the system, the proportion of elitist Grandes Ecoles remained the same over the whole period. Instead, the expansion is increasingly driven by a continuous growth of business schools (Blanchard, 2014) and a mix of selective public and increasingly private professional schools connected to the arts, engineering, paramedical and social sectors. This increased differentiation will be a key driver of the second phase expansion of the post 1990s. Thus, the non-selective university still has a key function but has left space for selective elite and non-elite forms of vocational higher education at both ends of the spectrum. Bodin and Orange suggests that the university, as the nonselective institutions have a key role to regulate the system (2017).

### ***Convergence: Academic and vocational drifts***

Presented like this, it seems that the post Fordist model transformed the mission of differentiation by accelerating the slowdown of the academic universities, leaving space for more professional forms of education. This interpretation is correct but needs to be complemented by a recent, albeit weak, process of widening of missions. This trend is the combined product of a vocational drift operated by universities and an academic drift operated by non-university institutions. The vocational drift from university is linked to a transition from the Fordist regime in which graduates used to be trained on the job to a financialized regime characterised by the vocationalisation of higher education diplomas under the pressure of employability (Lemistre, 2015). This professionalisation of university is evidenced by the increase in the share of the number of professional BA: the share of BA students in apprenticeships grew from 1% in 1995 to 6% today (Carpentier, 2017). On the other hand, some institutions from the segments of the non-university are experiencing an academic drift in order to increase their research credentials in an increasingly competitive and international environment led by reputation and league tables. For instance, the Grandes Ecoles and business schools increasingly moved to the provision of Masters and PhDs and are slowly developing their research capacity (Orange, 2017; Blanchard, 2014). Some of the short vocational programmes *University Institutes of Technology* are increasingly playing beyond their vocational mission a role of transition to universities (Agulhon, 2018). Around 25% of *University Institute of Technology* students join a BA in universities. Similarly, the Grandes Ecoles seem to be using universities as a way of recruiting students at a later stage. The increased connections, transfers and borrowing of practices between institutions is relatively new and remains the exception rather than the norm in a system that remains stratified around mission and selection. They show the blurring between missions and selection: Are missions the result of the selection process? Or is the selection process shaping missions? Is it both? This process of convergence seems to be pushed forward by the state seeking more collaborations between Grandes Ecoles, universities and research centres in what Musselin qualifies a “Jardin à la Française” (2017).

So the key aspect is that the phase of expansion has slowly led to the increase of the selective sphere of higher education. This was moderate during the first phase of expansion of the 1960s and mainly based on the expansion of a 2-year vocational system and a controlled growth of Grandes Ecoles with a clear difference between general and vocational missions. The second phase of expansion led to an increase of the selective sphere at both ends of the system. Universities are because they are non-selective under intense pressure in terms of access, participation and success of their students. At the same time, some argue that universities are key to the system



and that the drop outs are actually part of a university's function to regulate the flow of first generation students (Bodin and Orange, 2017).

## 6.2 Post Fordism, stratification and hidden privatisation?

A key surprising aspect of differentiation in French higher education is the structure of public/private provision which has experienced dramatic changes over the years. In 1969, private provision catered for less than 5% of higher education against 18% today.

**Figure 41 Enrolment in private institutions- 1969-2016**

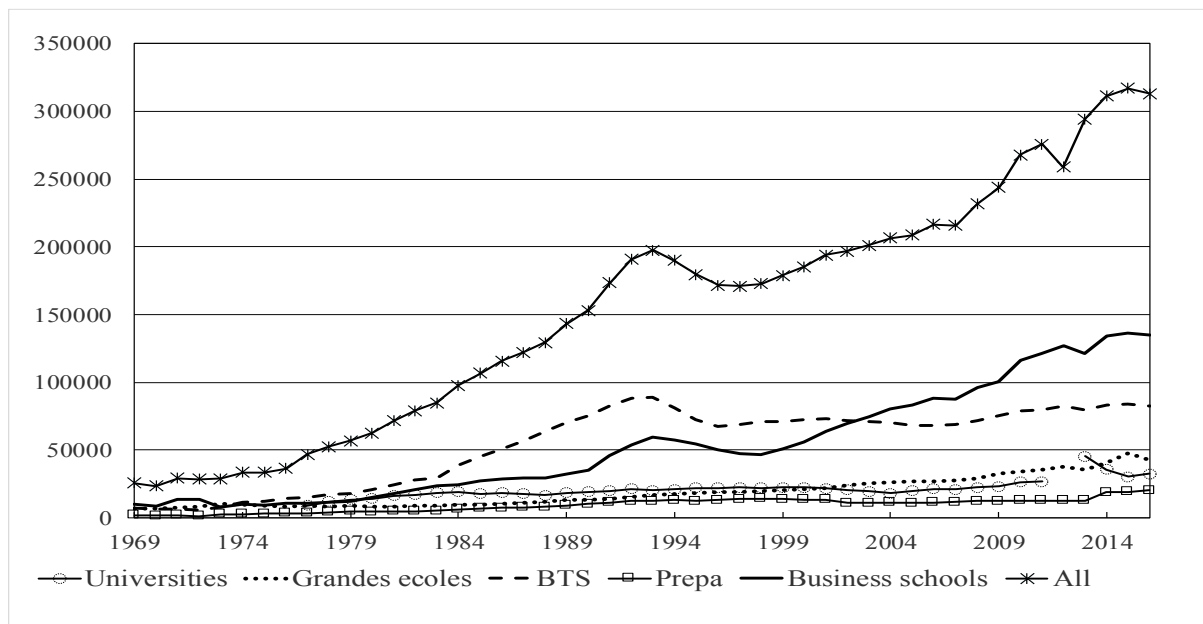


Figure 41 and 42 show that economic fluctuations coincide with the public/private differentiation. The impact of the crisis of the 1970s is substantial, provoking an increase in the number of private enrolment whose proportion of overall enrolment rose from 4 to 13% from the mid-1980s to the mid-1990s. The growth has taken place in most sectors but is dominated by 2-year Higher Technical schools (STS) which are provided in private Lycées.

**Figure 42 Proportion of private enrolment in each type of institution 1969-2016**

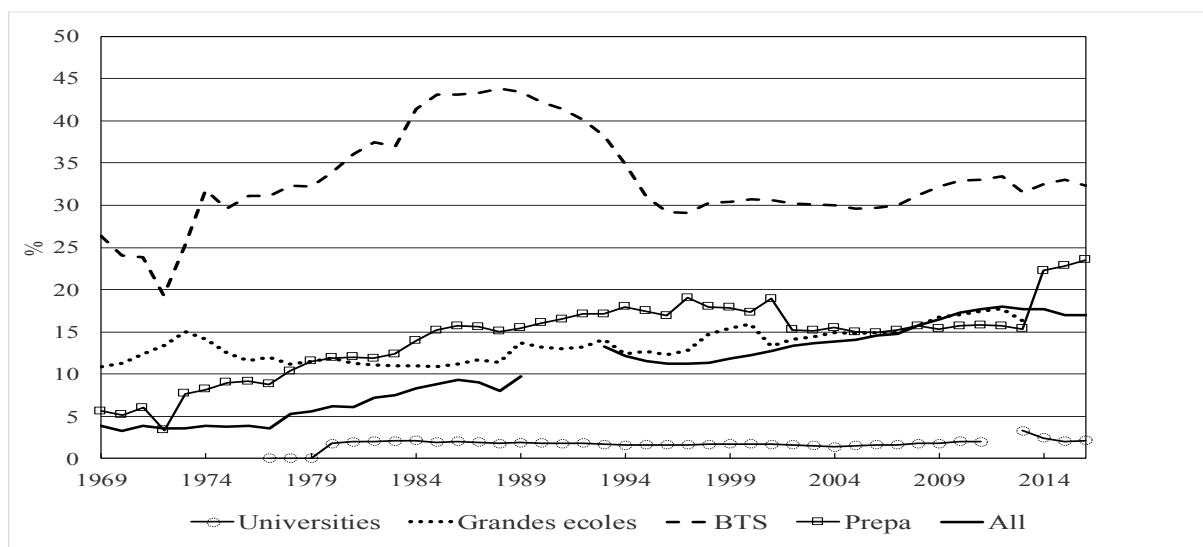


Figure 43 shows that the second phase of expansion led to a second growth of private

provision whose share grew from 13% in the early 1990s to 18% today. Business schools which are nearly all private have become since the early 2000s the largest segment of private provision representing 40% of overall private enrolment today. They are the key driver of the second phase of expansion alongside the private higher technical schools whose share of enrolment has stagnated since the mid-1990s. The enrolment of private Grandes Ecoles is relatively stable over the whole period.

This reinforced the idea that the key impact of economic fluctuations on public funding has transformed the structure of public/private provision. The growing pressure on employability has also led to the development of a new demand for a private sector. The implications are difficult to estimate. According to Casta and Levy, for-profit institutions were rare in the early 2000s but now concentrate between 25% to 50% of enrolment in the private sector. This can be connected to a change in mission too as past private higher education in France which would have been equated to Catholic institutions or professional associations, is now increasingly connected to business (2016, p.31). Private higher education is slowly and discreetly growing and is becoming increasingly diverse.

### 6.3 Academic and social distinctions and the republican model

The question of structure, mission and selection cannot be separated from the question of inequalities. Has differentiation contributed to increasing or mitigating inequalities? The following explores the connections between differentiation and social class and gender. Statistics on ethnicity are not available in France where ongoing debates oppose those who see such data as breaking the mould of the *République* to those who see them as a pertinent lens to understand and address inequalities (Galland et al 2006).

#### **Gender and differentiation**

Although gender parity in higher education was reached in the 1980s, the lens of institutional differentiation reveals persistent inequalities. Women are overrepresented in universities but underrepresented in Classes Préparatoires aux Grandes Ecoles and in *University Institute of Technology* and their advance has declined in higher technical sections.

**Table 7 Proportion of women across the sector**

Year	University	Grandes Ecoles	University Institute of Technology	Higher Technical Sections (STS)	All
1970		24.1		41.1	44.5
1975		28.3		49.1	48.5
1980		29		46.9	50.6
1985	52.2	31.8		53.7	52.2
1997	57.5	38.3	37.5	49.8	54.8
2011	57.2	41.9	39.9	51	55.5
2017	58.2	40.6	39.8	49.3	55.1

ANF (various years) and DEP (2001 and 2016)

### **Social class and differentiation**

Table 7 indicates a strong correspondence between socioeconomic reproduction and institutional differentiation (Van Zanten and Maxwell, 2015; Brown et al. 2016)

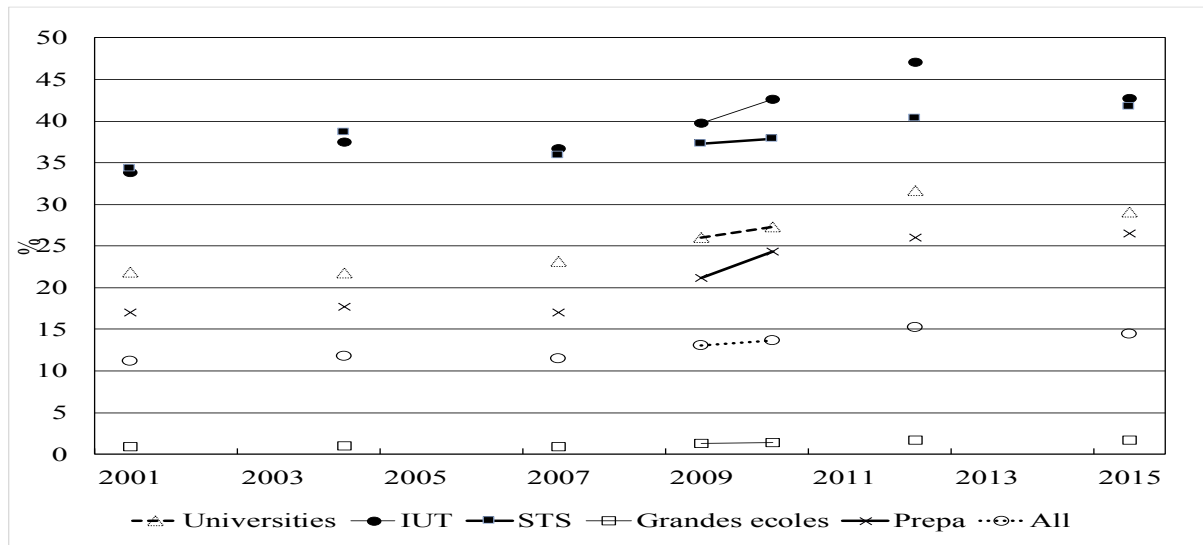
**Table 8 Distribution of enrolment of each sector per socio-income categories**

Year	University		CPGE		University Institute of Technology		Higher Technical Sections (STS)		All population	
	% of unskilled labour	% of Professions	% of unskilled labour	% of Professions	% of unskilled labour	% of Professions	% of unskilled labour	% of Professions	% of unskilled labour	% of Professions
1962	6.4	28.5								
1975	12.6	32.9			24.3	14.6				
1980	13.4	34			25.3	16.1			32.3	9.6
1985	12.2	30.2			21.1	20.2				
1990	14.1	30.3	5.6	47.3	20.2	21.7			29.5	12.1
2001	10.9	32.7	5.4	51.4	16.2	26.5	23	15.1	26.2	12.5
2015	10.8	30	6.4	49.5	14.6	28.8	20.4	13.8	16.4	22.1

Anf 1980 1991 DEP (2001 and 2016)

The decrease of the proportion of the students from unskilled labour groups is only partially explained by the diminution of their proportion in the overall population. Indeed, a closer look at the institutional differentiation shows that students from lower income categories are underrepresented in universities and elite institutions and overrepresented in shorter vocational programmes. They represent 10.8% of university enrolment and only 5.4 % of Classes Préparatoires for Grandes Ecoles. The equivalent ratios are 30% and 50% for higher income categories. The difference between selective short studies is noticeable. Lower income categories are underrepresented in University Institute of Technology and overrepresented in *Higher Technical Sections (STS)*. The reverse is true for high-income categories. *Higher Technical Sections* are considered as the mass selection sector providing local higher education as an obvious choice for working class students (Orange, 2013). It is important here to make a connection with the vocational Bac which is mainly held by working class students who are overrepresented in higher technical sections. What is striking is that social reproduction has been increased by the crisis of the 1970s, a movement that was not reversed during the second phase of expansion of the 1990s.

**Figure 43 Proportion of students receiving mean tested grants in each type of institution 2001-2015**



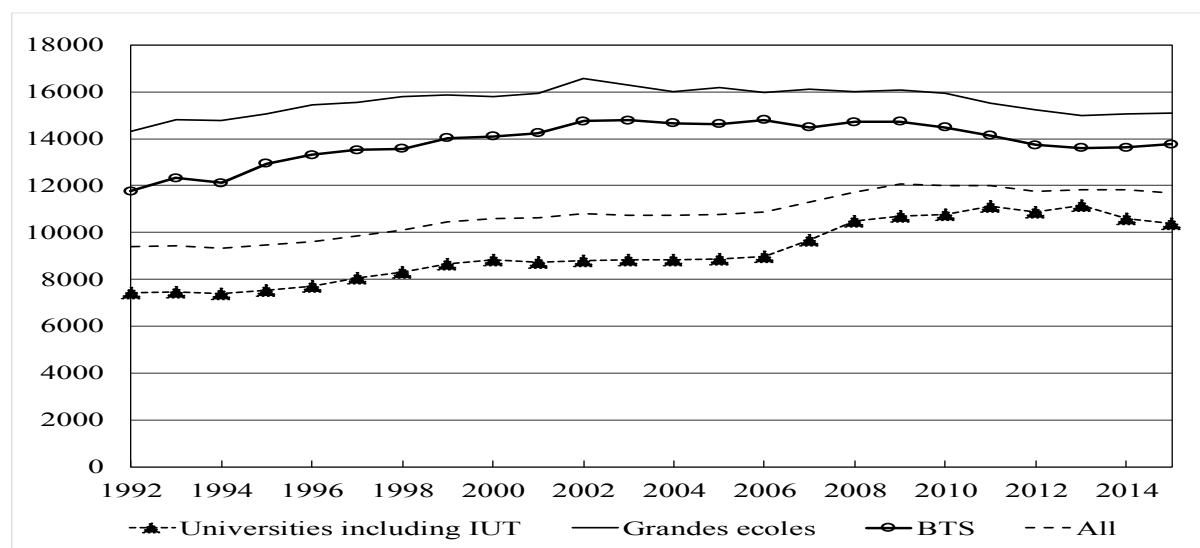
Sources: DEP (2001 and 2016)

The link between income categories and differentiation is confirmed by the proportion of students receiving a means tested grant which is negligible in Grandes Ecoles, average in universities and very high in 2-year vocational higher education. This confirms the idea of the overrepresentation of students from lower socioeconomic backgrounds in short vocational courses. The differential remains very high and the absence of evolution from 2000 to 2015 is striking. Institutional differentiation remains a strong driver of social reproduction. There are also differences in access across social classes between universities (Frouillou, 2014).

### 6.4 Differential in resources, inequalities and stratification

Figure 47 shows that the differential in resources per student between groups of institutions have been reduced since 1995 (both as result as a lower spending per student in elite institutions and higher spending in universities and University Institute of Technology) but remains substantial. The Grandes Ecoles used to spend twice as much as universities in 1995 against 1.5 today. The higher technical schools are better resourced than universities.

**Figure 44 Funding per student by type of institution (Euros 2014) 1995-2014**



These uneven levels of resources between institutions raise some significant issues as inequalities are not only about access but also participation and experience. This raises questions about the persistence of inequalities as vulnerable groups have more chances to access some sections of the system benefiting from fewer resources. Drop out is notoriously higher in universities than in other higher education institutions, and especially for students with a vocational Bac. Orange and Bodin argue that drop out in university is actually a mechanism of regulation of massification (2017).

In the French republican model, differentiation reflects both missions and selections and the tensions between the two have marked the limit of the meritocratic system, in a context of high differentials in resources. However, the tensions have migrated across history. In theory there is no limit to expansion as the Bac gives automatic access to universities. However, the expansion and stratification of the Bac has both mirrored and reinforced a social stratification putting pressure on non-selective and underfunded universities. Those crisis between the missions and selection are exacerbated by the lack of public funding to nonselective public provision. The absence of cost sharing policy has not been followed by sufficient public investment leading to endemic underfunding in universities and the development of a discreet but stronger private provision.

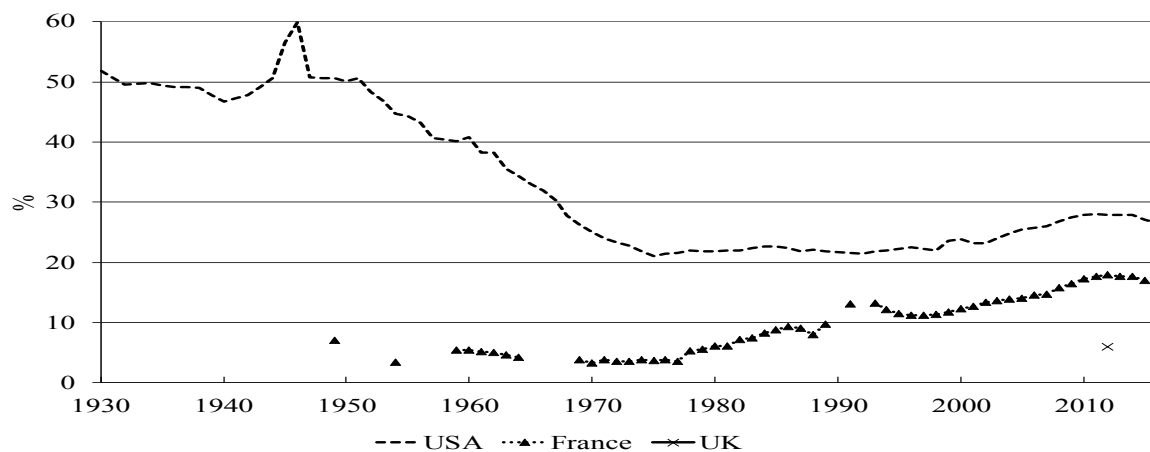
The current debates about the proposed reforms of the Bac and the introduction of prerequisites to the entry to university show that the republican model is still at the centre of tensions regarding social selection and meritocracy. The key issue is the lack of success of students from traditionally underrepresented groups. The plan from the French government to set requirements including a preparatory course for those students seeking to enrol in universities is presented as a progressive measure seeking to tackle a disguised selection by the drop out of vulnerable students. The reform is highly contentious – which has generated social protests in various campuses at the time of writing – and is criticised as a masked introduction of selection in universities contrary to the republican ideal. Criticisms are based on the idea that the new forms of applications and choices made under the reforms will actually be a form of social selection because they do not address the inequalities at the society and school levels. The reforms are also criticised for the lack of resources necessary to support those students. A key question is whether the support offered to students going to universities is matched by additional public resources to ensure the right to

all students from all backgrounds the same chance not only to access but to success.

## 7. Discussion and conclusion

In sum, there is strong association between expansion and differentiation in the three countries. This association seems to be historically contingent and related to socio-economic transformations although correlation does not mean causality. This distinction is particularly important when so many political, economic, social and cultural factors are at work to define the strength and shape of higher education and its institutional differentiations. However, economic crises create multiple challenges to expansion and differentiation of higher education systems. First of all, they impact the funding models of expansion and differentiation. Secondly, crises tend to exacerbate the various forms of inequalities across society to which higher education institutions, their students and their staff are confronted. Thirdly, crises intensify the various individual and social economic demands to higher education in terms of growth and (un)employment. The three cases explored show that economic crises were all key turning points for expansion and differentiation but with distinctive implications.

**Figure 45 Private provision as a share of all enrolment 1930-2016**



First of all, the historical lens reveals the key impact of economic fluctuations on public and private funding and, as a result, on the public/private provision of higher education systems in the three countries. The crisis of the 1930s is key to understanding the post war consensus which led to the expansion of higher education under public provision in all countries. The first phase of expansion of the 1960s was driven by the developments of State systems and increased federal support in the USA, the universities and 2-year programmes in France and the development of the public sector and the increase in the public funding of the university sector in the UK. The crisis of the 1970s led to a new funding model combining the reduction of public funding and the increase in private resources. This model transformed the structure of differentiation which is contemporaneous with the second phase of expansion of the 1990s. The progression of the public sector was halted offering more space for private provision in the USA and France. Private provision remained limited in the UK where the key changes related to a decrease in public funding and a movement of recentralisation towards the merger of the local public sector and university sectors into a unitary system. The 2008 downturn differed from previous ones in the sense that it combines a crisis of public funding with a crisis of private resources. This double concern questions the modality of the second phase of expansion. All types of institution seem to be exposed as shown by the slowdown in enrolment in both public

and private sectors in the USA, by the struggle of the non-selective French universities increasingly challenged by the lack of public resources and by the difficulties of both British post- and pre-92 institutions despite their significantly distinct structures of income. Enrolment is affected in the UK and the USA but not in France. Those impacts of economic cycles and funding changes on the level of expansion and the structure of differentiation are not without consequences on the respective missions of the institutions as well as their contribution to democratisation or inequalities.

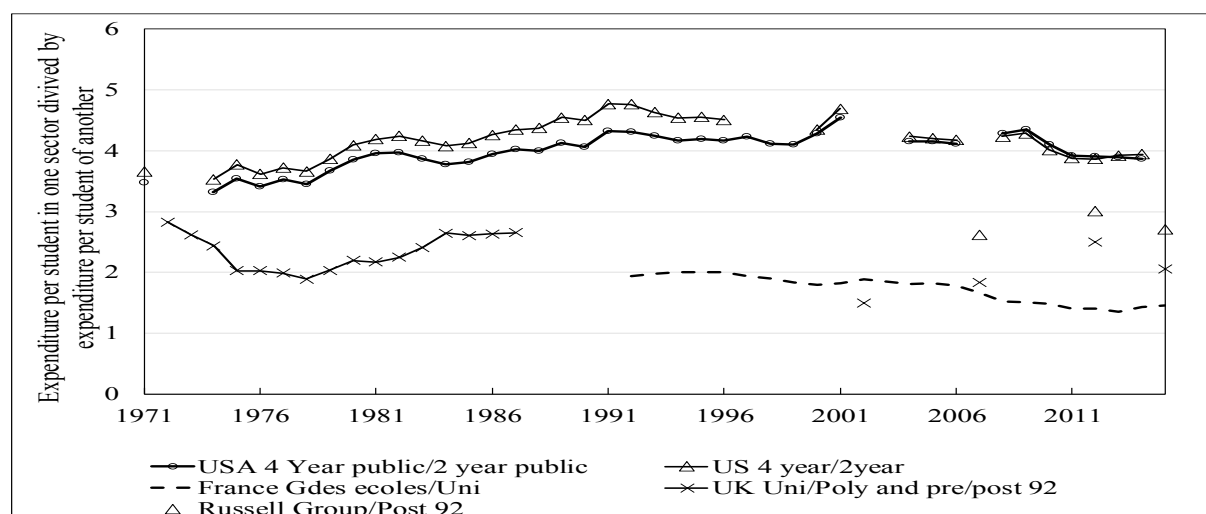
The historical lens shows that in the three countries, institutional differentiation was a key driver of inclusion of underrepresented groups at the beginning of each phase of expansion. Proactive policy in terms of admissions and funding were key to ensuring the integration of women, lower income categories and ethnic minorities in new or growing institutional segments of higher education systems. However, in the longer term, differentiation tends to constrain social mobility as shown by the stability of the composition of the student body of the various types of institutions. The fact that the French Grandes Ecoles, the British pre-92 institutions and the 4-year not for-profit institutions in the USA have not seen radical changes in their student composition points to a stratified democratisation. In all three systems, some form of formal or informal selection is taking place at different points of the study cycle.

The third point relates to the historical changes and continuities in the missions of the various types of institutions. The 1960s expansion of higher education systems of all three countries has been driven by the growth of non-elite vocationally orientated institutions such as the American community colleges, the French 2-year vocational programmes and the local public sector in the UK. The effect of the academic/vocational divide on compartmentalisation remains very strong but has been eroded for various reasons by interesting and sometimes unexpected movements of recomposition of missions. The first phase of expansion led to the development of academic drifts from the university institutes of technology in France and polytechnics in the UK seeking to emulate the elite institutions. In the USA, the community colleges operated a drift away from their original mission of transfer institution towards a greater contribution to vocationalisation and widening participation functions. Some consider the danger of academic drift to turn into social drift excluding the underrepresented population of a sector to which they were supposed to cater. Others welcome it as a democratic break from the traditional academic/vocational divide which denied the newly integrated categories of students to access academic knowledge. The strengthening or loosening of the divide between missions is therefore linked to questions of social mobility. The second phase of expansion of the 1990s coincided with vocational drifts of various institutions linked to new economic conditions and new funding models. This includes the French universities which, under pressure from high unemployment, developed vocational programmes as well as the British pre-92 universities seeking to emulate the vocational practices of ex-polytechnics in order to respond to pressure on employability generated by higher fees and student debt. There have been examples of academic drifts from the French elite vocational institutions such as the Grandes Ecoles and business schools seeking develop their research capacity to gain academic credibility and to be visible in leagues tables. This is evidenced by the variations of the transfer rates from one sector to the other across time and space.

Those historical trends suggest a strong relationship between mission differentiation and social reproduction. They also incite us to think about the conditions that may influence the extent to which differentiation might represent a sectorial division of

labour rather than a distribution of inequalities through different quality. The first area is about changing the cultural heritage which tends to undervalue vocational higher education. A second area is related to the transfers across the various parts of the system which could encourage social mobility. However, such mobility is quite low in the UK and France and has declined in the USA. A third area to consider is the differential in resources per student which is a proxy of how stratification might reflect or impact the variations in quality and equity across the system. The index presented below roughly estimates differential in resources between elite and non-elite institutions. It must be read cautiously as it summarises evolutions in funding and enrolment with various meanings. The categories used here are key segments and not groups of elite institutions like Ivy leagues, Russell Groups or leading Grandes Ecoles: so it underestimates inequalities.

**Figure 46 Differential in expenditures per student in elite and non-elite institutions 1971-2016**



The differential in resources are very high in the USA where 4-year institutions consistently spend between 3 and 4 times more per student than 2-year institutions. The US stratified model faces a double crisis of public and private resources which affects the enrolment of both state systems and private providers. The slowdown of investment after the 2008 crisis raises some key issues about the capacity of the stratified model to maintain the expansion of all the components of the system. In the UK, the differentials in resources between pre- and post-92 institutions remain substantial. The move from the binary system to the unitary system has led to vertical differentiation between institutions which have in theory the same missions but different student intakes and unequal resources. In France, the reduction of the differentials in resources is rather due to difficulty experienced by the elite sector than a resolution of the underfunding of universities. The French republican model is strongly challenged by tensions between its meritocratic ideal and the differentials in funding between the institutions. The public universities are particularly vulnerable as non-selective institutions whose low budget contrasts with the range of missions they have to fulfil.

The 2008 crisis has in all three countries uncovered key long standing issues between expansion and differentiation to be settled which requires a reflection on how institutional differentiation impacts and is impacted by the connections and tensions between funding, equity and quality at the systemic level.



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