UNIVERSIDADE CATÓLICA PORTUGUESA

Comparative Analysis of the Finnish and Portuguese Education Systems

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April 2022

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Final Thesis Work presented to Universidade Católica Portuguesa to obtain a master's degree in Business Economics

by

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April 2022

Acknowledgments

To my family and friends.

Resumo

A educação ocupa um papel muito importante na sociedade contemporânea, enquanto garantia do desenvolvimento dos indivíduos para a vida adulta e na sua preparação para o mercado de trabalho. São vários os estudos que destacam a influência da escola nos rendimentos futuros dos indivíduos, desde o tamanho das turmas à qualidade dos professores, passando pela qualidade dos colegas da sala de aula. Além disso, existe um consenso científico crescente do papel da educação individual no crescimento económico dos países. Desta forma, interessa saber que sistemas de ensino preparam melhor os seus estudantes.

O sistema de ensino finlandês tem conseguido resultados impressionantes nos exames PISA, além de ter um ensino manifestamente marcado pela equidade entre os estudantes. Por outro lado, Portugal tem conseguido aumentar os níveis de escolaridade da sua população e subir consideravelmente os seus resultados nos exames PISA. No entanto, ainda não apresenta resultados ao nível da Finlândia. O intuito desta dissertação é fazer uma análise comparativa entre os dois sistemas educativos, de modo a perceber os motivos para a persistência de diferenças quer nas classificações propriamente ditas entre os dois países, quer nas desigualdades entre estudantes.

Para tal, procedeu-se a uma investigação intercalada pelo uso de metodologias quantitativa, por via do tratamento, análise e interpretação de dados, e qualitativa, por via do tratamento de informação documental, interpretativa, exploratória e descritiva. Por fim, conclui-se que o sistema de ensino finlandês proporciona aos alunos uma melhor preparação para a universidade e para a vida ativa, bem como, promove maior mobilidade social.

Palavras-chave: Educação; Sistema de Ensino; Portugal; Finlândia

Abstract

Education has a prominent role in contemporary society, ensuring the development of individuals into adulthood and preparing them for the workplace. Several studies highlight the impact of school on the future earnings of individuals, from class size to the quality of teachers to the quality of classmates. Additionally, there is increasing academic consensus about the role of individual education in the economic growth of countries. Thus, it matters which education systems prepare their students most effectively.

The Finnish education system has performed impressively well in PISA tests and its education is clearly defined by equity among students. Portugal, on the other hand, has managed to increase the levels of school attainment among its population and to considerably improve its results on the PISA tests. However, it still does not present results at the same level as Finland. The aim of this dissertation is to conduct a comparative analysis between the two education systems and to understand the reasons for the persistence of differences either in the grades themselves between the two countries or in inequalities between students.

To this end, we conducted a research investigation using quantitative methods, through the processing, analysis and interpretation of data, and qualitative methods, through the treatment of documentary, interpretative, exploratory, and descriptive information. Ultimately, we conclude that the Finnish education system provides students with improved preparation for university and working life, and promotes greater social mobility.

Keywords: Education; Education system; Portugal; Finland

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Introduction

The forthcoming decades of the 21st century are going to be shaped by a rapid intensification of automation, which will bring new challenges to the world of labor, amongst them further trends in earnings inequality (Duarte et al., 2019). Income inequality has been rising already over the past few decades in Western economies (Jaumotte et al., 2013; Piketty & Saez, 2014). Moreover, on one hand, Portugal has one of the highest levels of income inequality in Europe and one of the lowest levels of social mobility. On the other hand, Finland has one of the lowest levels of income inequality in Europe, while having one of the highest social mobility[1].

School is a meaningful part in the life of individuals, and a process of development and personal growth. The many experiences and learnings that occur in school shape individuals, making school a crucial organization in modern societies. School also has a defining influence on the future of individuals, taking into account the dynamics of modern societies (e.g. Chetty et al., 2011; Hastings & Weinstein, 2008; Humlum & Thorsager, 2020). After all, it is the school which, to a certain extent, ensures the selection of individuals in the several social positions so to speak (in essence, professional occupations).

Accordingly, education systems may have a significant contribution in narrowing inequalities and especially in fostering social mobility (Carneiro, 2008). The literature has so far addressed the determinants of success in an education system (e.g. Conboy et al., 2013; Sahlberg, 2007) while still few existing literature compares extensively different education models, especially the two chosen. Hence, the present dissertation aims to contribute to the understanding of the different education systems in analysis (Portuguese and Finnish) by

[1] Source: Eurostat

identifying their features and potential outcomes, with a special emphasis on social mobility. Our main goal in this work is to understand which educational system prepares students more successfully for either university or employment, and which and to what extent the different educational systems contribute to social mobility, in order to provide several recommendations. To undertake such endeavor, we resort to both quantitative and qualitative research methods through the processing, analysis, and interpretation of data and through the treatment of documentary, interpretative, exploratory, and descriptive information.

The structure of the thesis is organized as follows: Chapter 1 reviews the literature on Human Capital, Income Inequality and Intergenerational Mobility in a broad overview, highlighting the contribution of education (as reflected in the education systems of the countries) to the prosperity of a nation and to social mobility within countries; Chapter 2 presents the methodology employed in the subsequent sections; Chapter 3 presents a brief historical overview of Portugal and Finland and the two education systems in question; Chapter 4 provides a comparative analysis of both educational systems within the framework of several Western countries; Chapter 5 presents a discussion and analysis of the respective school systems and their outcomes; Chapter 6 draws the limitations, main conclusions, and policy recommendations.

Chapter 1
Literature Review

1. Human Capital, Income Inequality and Intergenerational Mobility

1.1 Human Capital and its Foremost Importance in Countries Prosperity

According to the definition presented by the World Bank (2019), "human capital consists of the knowledge, skills, and health that people invest in and accumulate throughout their lives, enabling them to realize their potential as productive members of society" (World Bank, 2019, p. 50). Based on this definition, one may apprehend that human capital behaves itself as an intangible asset in which can be whether appreciated (education, training, etc.) or depreciated (loss of faculties, etc.) during the course of life. Human capital is, for many authors, the engine that moves a society towards prosperity (e.g. Mankiw et al., 1992; Lucas, 1988 and Barro, 1991). For instance, in Romer (1990), human capital is the key to long-run economic growth.

One can perceive the first impressions of human capital yet in Adam Smith[2] theory, in which the individual's *fortune* such his "talents (…), study or apprenticeship" is also the *fortune* of the country to which he belongs (Spengler, 1977, p. 32-33). Alfred Marshall had also contributed to the foundations of the

[2] "The acquisition of such talents, by the maintenance of the acquirer during his education, study, or apprenticeship, always costs a real expense, which is a capital fixed and realized, as it were, in his person. These talents, as they made a part of his fortune, so do they likewise of that of the society to which he belongs", Adam Smith on *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776, p. 265-66).

concept of *human capital*[3] in his book *Principles of Economics* (1920), highlighting the importance of human beings in the productive process (Levitt, 1976). Schumpeter's contribution on entrepreneurship emphasizing the entrepreneur's role as the main promotor of economic development enlightened the importance of human resources for growth rather than natural resources (Piazza-Georgi, 2002). Several other economists had also approached the importance of the workforce to shape the notion of the utmost importance of human capital for nations[4].

However, it was only in the mid-20th century that the term *human capital* has spread in economic literature through authors such as Jacob Mincer, Theodore Schultz and Gary Becker (Goldin & Katz, 2020). Mincer (1958) studied the returns on education and the patterns of "life-cycle" earnings growth, giving pathbreaking contributions to the conception of the neoclassical theory of "human capital earnings function" (Kaufman, 2007, p. 548; Teixeira, 2007). According to Mincer (1958), both formal years of schooling and on-the-job training are the principal sources for human capital formation (Kaufman, 2007). Schultz (1960) proposed a shift in the way education was considered in economics. Instead of being recognized merely as a consumption good, Schultz (1960) suggested looking at education as an investment that contributes to the accumulation of human capital in individuals, and hence, of a country. The existence of capital inherent to human beings, from Schultz's standpoint, helps to understand why western countries recovered so rapidly from the damages caused by World War II, despite the implications predicted otherwise by economists at the time (Schultz, 1961). Whereas Becker (1962) emphasized the importance of health for the accumulation of human capital. In a nutshell,

[3] "The most valuable of all capital is that invested in human beings", Alfred Marshall on *Principles of Economics* (1920, p. 564).

[4] See Kiker (1966)

according to Schultz (1961), human capital relies on formal education, on-the-job training, health, and migration.

Nevertheless, it was more recently, from the nineties onwards, that economists started to explore further the topic of the accumulation of knowledge within societies and, consequently, literature on human capital has been vastly expanded since then (Goldin & Katz, 2020). The recognition of human capital has, however, the impasse of being immeasurable – human capital is interpreted in a broad sense and therefore it is not possible to quantify precisely given its intangible nature. Neoclassical economics have been trying to provide causalities between human capital and economic prosperity through proxies of educational attainment, predominantly measuring *years of schooling* (Le et al., 2003). According to Hanushek and Woessmann (2020), education is proposed to affect economic growth in different ways. On one hand, the increase in labor productivity from improving human capital through education brings economic growth (e.g. Mankiw et al., 1992). On the other hand, economic growth is spawned from the development of new technologies, in which education plays the central role to increasing the innovative capacity of the economy (e.g. Lucas, 1988; Romer, 1990). Finally, other authors (e.g. Richard R.Nelson & Edmund S.Phelps, 1966; Benhabib & Spiegel, 1994) suggest economic growth can be promoted by education that favors the diffusion of knowledge, necessary to implement new technologies.

As mentioned previously, several studies (e.g. Barro, 1991; Mankiw et al., 1992; Hanushek & Kimko, 2000) have concluded that economic growth is strongly explained by human capital accumulation while others (e.g. Pritchett, 2001; Benhabib & Spiegel, 1994) find no relationship whatsoever. In consequence of the ambiguous conclusions among studies, cross-countries comparative measures have been critically questioned by some authors (e.g. Jones, 2014; Sianesi & Van Reenen, 2003), whilst others (e.g. Barro & Lee, 1993; Barro & Lee,

1996; Barro & Lee, 2001; de la Fuente & Doménech, 2006; Cohen & Soto, 2007) have attempted to improve.

Furthermore, other determinants have been examined in order to understand the patterns of economic development. Generally, neoclassical growth models are complementary to one another (Moral-Benito, 2012), which highlights a myriad of possible determinants to explain growth and differences of economic development among countries. Barro (1991) emphasizes the effects of government consumption and physical investments, whereas Gallup et al. (1999) point the importance of geography on growth. Hall and Jones (1999) emphasized the role of *social infrastructure*[5] for economic differences among countries. Indeed, output per worker tends to be smaller in "countries with corrupt government officials, severe impediments to trade, poor contract enforcement, and government interference in production" (Hall and Jones, 1999, p. 86), which suggests that a positive role of institutions and the effectiveness of government policies stimulate economic growth and hence, differences of output per worker among countries.

1.2 Education as Human Capital Formation

Education plays an essential role in contemporary societies, allowing the enrichment of the human being as a member of the community. Indeed, a person's development goes hand in hand with the education to which he or she has access (OECD, 2018). Besides, there seems to be an increasing acknowledgement that kindergarten and school are crucial for the development of individuals (OECD, 2018). Several studies have been carried out in order to understand the importance of these degrees, at a very early stage in life, in the

[5] According to Hall and Jones (1999, p. 84), *social infrastructure* consists of "institutions and government policies that determine the economic environment within which individuals accumulate skills, and firms accumulate capital and produce output".

future of individuals (e.g. Card & Krueger, 1992; Chetty et al., 2011; Kirabo Jackson et al., 2016). One of the aforementioned studies was Project STAR[6]. The initiative carried by the State Department of Education involved over 7,000 students in Tennessee from kindergarten to third grade (K-3). Studies suggest that class size reduction have both short-term and long-term effects on students (Chetty et al., 2011). Classes with smaller student-teacher ratio influences outcomes positively on "completed education, wages, and earnings" (Fredriksson et al., 2013, p. 249) , outweighing the costs incurred.

According to Kirabo Jackson et al. (2016), the US school reforms made in the seventies that included decreases in student-teacher ratios and more school years had positively affected individuals' outcomes, contributing to wage increases, less adult poverty and more completed years of education, mostly in low-income households. Nevertheless, Jepsen and Rivkin (2009) made aware of the perverse effects associated with class size reduction. Jepsen and Rivkin (2009) argued that the California class-size reduction program[7] unintentionally forced schools to hire teachers with no prior experience nor full certification and besides, with much of these teachers going to schools where exist higher levels of poverty and minorities enrolment.

Chetty et al. (2011) emphasize the effects of kindergarten and first years of school in long term effects, such as earnings, college attendance and other outcomes. Greater quality classrooms, measured by classmates' end-of-class grades have positive effects on individual's earnings and college ingress rates, which suggests that the relationship and nearness with peers at young age affects children's development and their future earnings accordingly (Humlum & Thorsager, 2020). Furthermore, mandatory school affect positively the future wages on individuals who otherwise would drop out school earlier (Angrist &

[6] For further information, follow this link: https://dataverse.harvard.edu/dataset.xhtml?persistentId=hdl:1902.1/10766

[7] For further information, follow this link: https://www.cde.ca.gov/re/pr/csrk3.asp

Keueger, 1991) and according to Deming (2011), improving school quality seems to reduce crime and days incarcerated. Card and Krueger (1992) had also analyzed the impact of school quality on individuals' outcomes, concluding that schools with better quality affect positively individuals' earnings.

1.3 Income Inequality within Countries

Income inequality can be defined as the disparity in the distribution of earnings among individuals, groups, countries, etc. (OECD, 2021b) and it has been rising in most western countries in recent decades (OECD, 2015; OECD, 2017). The Gini coefficient is the most-commonly used internationally and varies from 0 to 1 which describes perfect equality and perfect inequality, respectively (Heshmati, 2004). Besides, other indicators are used frequently such as the Lorenz curve, Palma ratio, Atkinson index, Theil index, etc. (R. N. Costa & Pérez-Duarte, 2019). As Cingano (2014) notes, understanding the patterns of earnings inequality is important to western democracies since inequality can bring political instability and may affect economic growth.

Kuznets (1955) argued that as economic development took place, income inequality first increases and then decreases. The well-known Kuznets curve describes that, in a first stage, inequality widens due to the investments in new opportunities being made essentially by the asset owners who see their profits growing up as the rural population migrates to urban areas in order to seek better-paid jobs and thus creating pressure on salaries to keep them low. In a second phase, the narrowing in income inequality results "from the process of growth and constitute a re-evaluation of the need for income inequalities as a source of savings for economic growth" (Kuznets, 1955, p.9), hence there is a rise of welfare state to redistribute incomes.

Indeed, income inequality - measured by top wages share - has drastically fallen in the United States during World War II. Moreover, the economic impacts

of World War II as in Great Depression seem to have had a permanent effect on income, particularly in top wages shares (Piketty & Saez, 2003). The same conclusions were reached for France and United Kingdom, although the negative impact was even greater due mostly to the huge loss of physical capital (Piketty, 2003; Atkinson, 2005). Notwithstanding, long-run trend of income inequality appears to hold stable for both France and the United States, with the decline in the first half of the 20th century being merely accidental (Piketty, 2003; Piketty & Saez, 2003). From Piketty's standpoint, Kuznets underestimated the impact of both wars on income inequality in the first half of the 20th century. In the own words of Piketty and Saez (2014, p. 842-843), "inequality does not follow a deterministic process. In a sense, both Marx and Kuznets were wrong. There are powerful forces pushing alternately in the direction of rising or shrinking inequality. Which one dominates depends on the institutions and policies that societies choose to adopt".

According to Autor et al. (2008), the returns on education have increased significantly over the past decades. Acemoglu (1998) evidences the investment bias caused by a higher proportion of skilled workers. The increase of the latter results in a larger market demand for skill-complementary technologies and therefore new technologies will complement skills, resulting in an increase of education premium, and consequently, wage inequality. Whereas Feenstra and Hanson (1996) emphasize the decrease of labor demand for low-skilled workers, which resulted from increasing outsourcing through the imports of intermediate inputs by domestic firms.

Burstein and Vogel (2017) underline that the reductions in trade costs induce countries to pursuing sectors in which they have comparative advantages, which increases the skill premium in those sectors and decreases everywhere else. Although international trade contributed to decrease the disparities in income across countries, it increased the income inequality within countries (UNCTAD,

2019). According to Borrs and Knauth (2021), a part of the increase of income inequality in Germany was due to the market openness towards Eastern Europe and China, thus leading to wage polarization.

Income inequality is also related to the quality of institutions. Chong and Gradstein (2007) have established a negative and reciprocal relationship between income inequality and the quality of institutions. The argumentative lies, on one side, in the constraint of political power by small groups of interest and hence subverting institutions. On the other side of the relationship, weak institutions may lead to income inequality by policy ineffectiveness.

1.4 Education and Intergenerational Mobility within Countries

Education can play an important role in increasing intergenerational mobility and mitigating income inequality within countries (e.g. Abdullah et al., 2015; Yang & Qiu, 2016). Generally, Nordic countries tend to have higher intergenerational mobility, whereas countries such as United States, United Kingdom[8] or Portugal have significantly lower mobility rates (OECD, 2010; Arnold & Farinha Rodrigues, 2015). Several studies have been published in order to explain the differences across countries in intergenerational mobility (e.g. Gary Solon, 2002; OECD, 2010; Narayan et al., 2018). Understanding intergenerational mobility within countries is an important topic in building a society in which all members have the perception of fairness of opportunity (OECD, 2021a).

Alan Krueger (2012) presented what he called the "Great Gatsby curve" during his speech at the Center for American Progress in 2012. The term refers to the negative relationship between income inequality and intergenerational mobility. Indeed, many of the countries where exist greater levels of inequality

[8] See Crawford et al. (2016).

are also those which have the lowest levels of social mobility (Corak, 2013). According to Krueger (2012), the recent increasing in income inequality will have consequences in intergenerational mobility over the next years.

Jerrim and Macmillan (2015) underline the access to parents' financial resources as having a fundamental role in the transmission of social advantage. From the authors' standpoint, parents are willing to invest in their children's education when they have greater capacity of financial resources and greater incentives, that is, high returns to education. Arenas and Hindriks (2021) asserts that unequal school opportunities reduce social mobility. In contrast, Mayer (2010) states that the differences in income inequality across western countries do not result from differences in education quality or labour income, but rather in the countries' fiscal systems[9].

Solon (1992) indicates that, in the United States, the correlation of intergenerational mobility is 0.4, suggesting a low social mobility in the country. One of the reasons pointed is that in the United States, public schools are funded to some extent by local property taxes, which creates a strong differential per-student expenditure across counties (Chetty & Friedman, 2011). Therefore, higher income families, who share more expensive neighborhoods, have generally access to better public schools. Indeed, "better quality schooling may account for 40 percent of the inter-generational correlation between parents' and kids' incomes" (Chetty & Friedman, 2011, p. 116) in United States.

Gregg et al. (2017, p. 19) argue that the intergenerational persistence in countries as United States and United Kingdom, contrarily to Sweden, is not due to education as much as "the processes that push children of more advantaged family origins to more rewarded jobs than their less fortunate peers with similar education and ability". However, according to the study of Kuyvenhoven and

[9] Mayer (2010, p.15) stated that "(…) the Gini coefficient of labor income is 0.45 in the United States, 0.44 in Sweden, 0.49 in France, and 0.45 in Australia".

Boterman (2021) focusing on Amsterdam, neighborhood effects seem to intensify some of the inequalities although educational inequalities have to do mostly with individual attributes.

Dustmann (2004) focuses on the differences across education systems in secondary track decision to explain intergenerational mobility. Opposed to what happens in United States and United Kingdom, in German education system parents choose an educational track for their children at the age of ten. Dustmann (2004) points out the strong relationship between parental background and secondary track choice of their children as an important key to explaining the low intergenerational mobility in Germany regardless of the lower quality differences among schools.

Parents' role in claiming better school conditions is important to improving the quality of schools. Parents who value their children's education more also demand more from schools. Generally, they are willing to make economic efforts in order to have access to quality schools (Case & Deaton, 1999). However, according to Hastings and Weinstein (2008), lower-income households face higher costs in collecting information if there is imperfect information relatively to schools' quality, so they will tend to choose their children's school based on a proximity criteria rather than the quality of schools.

Another decisive factor to perpetuating income inequality is access to college (Chetty et al., 2020). In the United States, a student from high-income families (represented as the top quintile students) is 34% more likely to enter a selective college than those from low-income households (represented as the bottom quintile), having the same test scores (Chetty et al., 2020).

All in all, education can play a preponderant role, not only for the prosperity of countries through the formation of human capital, so to speak, but also in reducing inequalities within countries. The following sections are focused on understanding the Finnish and Portuguese education systems and how they

interact within the community in their contribution to human capital formation and in narrowing inequalities.

Chapter 2
Methodology

2. Methodological Approach

In the previous chapter, a literature review was conducted, in a broad overview, on the importance of human capital in the development (in this context, economic) of nations and on education as a driver of human capital accumulation within states. Efforts were also made to understand the tendencies in income inequality within countries and how education can foster greater intergenerational mobility in countries.

For the purpose of this work, both quantitative and qualitative research methodologies were adopted. Based on an "organizational" approach, the aim is to address questions of the effectiveness of education systems, whether for their capacity to form youngsters with good capabilities or for their fair mechanism of providing a path of upward social mobility for all (Campenhoudt & Quivy, 1995). The research is based on bibliographic research, using published material, namely books, articles, journals, and reports. In order to ensure the work's credibility, it was employed reports from the OECD's PISA examinations and statistics from the World Bank, Eurostat, among others.

The aim of this work is to critically analyze and compare the differences between the Portuguese education system and the Finnish education system, in order to understand their outcomes in society, with special emphases on intergenerational mobility and inequality. Therefore, the following chapters examine and compare the Portuguese and Finnish educational systems, which is essential to address the research questions.

Chapter 3
Portuguese and Finnish Education Systems

3. Introduction of both education systems

3.1 Fair Equality of Opportunities

Equality of opportunities is an important and debatable concept within western liberal democracies which frequently conditions public policy. Although many advocates equal opportunities, the ambiguity of the concept and the complexity of the reality makes somehow a consensus difficult. For John Rawls, there is a Fair Equality of Opportunity when individuals' success is detached from their "initial place in the social system" (Rawls, 1971,p. 63), that is, the ones with identical abilities and skills should have the same life opportunities regardless of their social conditions and background (Stanford University, 2020). Therefore, the weight of one's natural abilities and willingness to use his natural abilities shall have a decisive role in reaching social positions.

In western societies, educational achievements are intimately connected with opportunities and social positions. In Rawls' words, "it may be worthwhile to recall the importance of (...) maintaining equal opportunities of education for all. Chances to acquire cultural knowledge and skills should not depend upon one's class position, and so the school system, whether public or private, should be designed to even out class barriers" (Rawls, 1971, p .63). The school can be, therefore, a mechanism for individuals to engage in a path of upward social mobility and escape from the social reproduction of the life trajectories of their parents/previous generations.

Education is not just a manner "to even out class barriers" but, as previously mentioned, a very important economic structure towards prosperity. The way countries' educational systems are articulated and change lead to different outcomes in society. "Change, then, (as with continuity) is endemic to social life. Systems and structures, from language and education systems to relationships between men and women, or young and old, are constantly evolving" (Lawson, 1997, p.167). The education system and its relationship with societies originate tendencies[10], therefore, differences across education systems among countries may explain, in part, why some countries reach different levels of wealth, intergenerational mobility, or income inequality (Carneiro, 2008). However, other social and economic structures have potential to explain those differences whether the fiscal system, geography, rule of law, etc.

3.2 Education in Portugal

3.2.1 Brief History of Portugal

Portugal is a European peripheral country with an immense history since the foundation of its kingdom in 1143. Its history is marked by the rise of an Empire that diffused its culture (in particular the language) in several countries across Asia, South America and Africa (L. F. Costa et al., 2016). Also, in the aftermath, it survived to being seized by its Spanish neighbors, in which the landmark battle of Aljubarrota in 1385 stands out (Birmingham, 2018). However, it did not escape from losing its independence through the sixteenth and seventeenth centuries.

The French invasions in the beginning of the nineteenth century and the consequent fleeing of the Portuguese Court to Brazil resulted in political and economic instability which spurred a transition to a new liberal order. "In 1820, a liberal revolution took place followed by the election of a Constitutional

[10] See Lawson (1997)

Assembly and adoption of a new constitution in 1822" (Costa et al., 2016, p. 228), which initiated a constitutional period.

Portugal has established a Republic in 1910, however, the "political instability was the norm in Portugal's First Republic" (Costa et al., 2016, p. 297). The debacle of the First Republic led the nation to years of dictatorship that lasted until the Carnation Revolution in 1974. Following that period, Portugal sought to detach from the isolationism of Estado Novo's regime towards a greater engagement in international relations (Birmingham, 2018). In 1986, Portugal, along with Spain, has entered the European Community, which helped to reinforce democracy and later both adopted the euro currency in 1999.

3.2.2 Structure of the Portuguese School System

Portugal Education System is represented in figure 1. It is formed by the initiative of different public, private and cooperative institutions and organizations, which reflects the article 43rd of the Portuguese Constitution, "freedom to teach and learn" (Decreto de 10 de Abril de 1976, 1976). The provision of pre-school, basic and upper secondary education is the responsibility of the Ministry of Education, while higher education is the responsibility of the Ministry of Science, Technology and Higher Education (Eurydice, 2021). Schools and municipalities work closely to ensure that all students who are in compulsory school are provided with transportation.

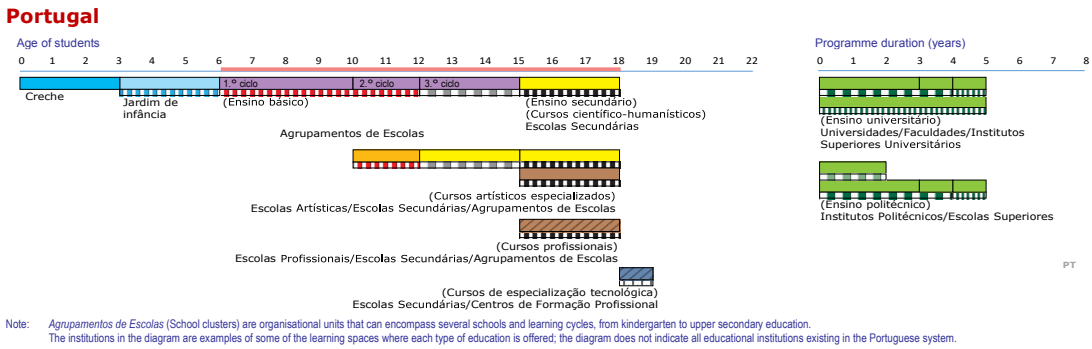

Figure 1: Structure of the National Education System of Portugal.
Source: Eurydice 2021/22

In Portugal, basic education[11] comprises primary education (ISCED 1) and lower secondary education (ISCED 2) in a single structure from 1st to 9th grade, and it is divided in three cycles. Parents choose their children school, which is usually assigned according to residency criteria. Students start the 1st cycle[12] (from 1st to 4th grade), generally, in the year they turn six. Students attend several classes by a single instructor until the end of 4th grade. Subjects as Portuguese, mathematics, environmental studies, English (3rd and 4th years), arts, physical education, etc. are englobing in the national curriculum. The 2nd cycle[13] (5th and 6th grade) usually implies a change of school and students start having classes with specialized lecturers. Also, there is an increase in the taught courses and the national curriculum begins to include the subjects of history and geography of Portugal, natural sciences, musical education, etc. The 3rd cycle[14] (from 7th to 9th grade) corresponds to lower secondary education, in which the subjects of physics and chemistry, biology and geology are taught, as well as a third language (generally French or Spanish). However, students can follow a different curriculum from the 2nd cycle on through the specialized artistic courses[15] if they

[11] Ensino básico.
[12] 1º ciclo.
[13] 2º ciclo.
[14] 3º ciclo.
[15] Cursos Artísticos Especializados.

demonstrate an aptitude to visual and audio-visual arts or dance and music. The national curriculum is the responsibility of the Ministry of Education and its dependent bodies, although schools are allowed to manage the curriculum within the boundaries of their pedagogical and organizational autonomy.

Upper secondary education[16] in Portugal comprises the 10th, 11th and 12th grades and aims to prepare students for higher education or for entering the job market. Students freely choose their path after graduating from basic education. Most of them enroll in science-humanities courses[17] (59,1% in 2018), which are designed primarily for students seeking to enter higher education (Eurydice, 2021). The four types of general upper secondary education (science-humanities courses) students can enroll are science and technology, socio-economic sciences, languages and humanities, and visual arts, and although each course has its specific educational components, there is a general educational element for all courses present in the subjects of Portuguese, English, philosophy, and physical education.

The vocational upper secondary education consists of vocational courses[18], specialized artistic courses, own-school-curriculum courses, education and training courses and apprenticeship courses, although a significant share of the students enrolls in vocational courses (33.0 % in 2018) (Eurydice, 2021). These courses can take place whether in basic and upper secondary schools (or upper secondary schools) or vocational schools and they prepare students both for further studies and work by having close ties to the professional world.

Higher education[19] is comprised in universities and polytechnic institutions and students apply based on upper secondary school grades and national final exams required by colleges. The access to higher education institutions is limited

[16] Ensino secundário.
[17] Cursos científico-humanísticos.
[18] Cursos profissionais.
[19] Ensino universitário.

by the fixed number of openings (*numerus clausus)* that are set each year at the national level, which is the responsibility of the Ministry of Education and Science for Higher Education. Notwithstanding, universities and polytechnic institutions enjoy significant autonomy in administrative, scientific, academic, statutory and financial matters.

3.3 Education in Finland

3.3.1 Brief History of Finland

Finland has been an independent country since 1917, when unilaterally declared independence from the Russian Empire. Theretofore, Finland functioned as an autonomous grand duchy of the Russian Empire (since 1809), when "it was ceded by Sweden to Russia by the terms of a peace treaty" (Hjerppe, 1989, p. 19). The Swedish realm that prevailed until 1809 has left a "lasting mark on Finland, especially in terms of religion, language, political institutions, culture, and economy" (Lavery, 2006, p. 31), which justifies the common traits in both lands.

However, the prevalence of Finnish independence that lasts since 1917 was winding and arduous. In between, in order to maintain its independence, took place the Winter War (1939–1940), "in which Finland miraculously repulsed an invasion by its much larger eastern neighbor" (Lavery, 2006, p. 14), and The Continuation War (1941–1944), known as the Second Soviet-Finnish war.

After World War II, Finland had kept a "comfortable niche between East and West" (Lavery, 2006, p. 12), as the West was gradually expanding its political and economic integration. However, there have been periods of restlessness marked by substantial migration to Sweden in the 60s and 70s, and unemployment rates climbing to "nearly 20 percent during the depression of the early 1990s" (Lavery, 2006, p. 9).

In 1995, Finland, along with Sweden, joined the European Union "motivated in part by the fear of an unstable post-Soviet Russia, in part by a desire to secure continued access to Western European markets", and later joined the monetary union at its origin in 1999 (Lavery, 2006, p. 12). The greater openness to the exterior has attracted more immigrants in recent times. Still, Finland is seen as a homogeneous country, mainly because "it has been able to assimilate diverse immigrant populations. There is no reason to doubt that, if offered the opportunity, Finland's new immigrants will become new Finns." (Lavery, 2006, p. 167).

3.3.2 Structure of the Finnish School System

A fundamental purpose of the Finnish education system (represented in figure 2) is to ensure a good quality education based on a culture of meritocracy and equal opportunities for all citizens. The right to education and culture is bound in the Finnish Constitution. To fulfill these aims, tuition fees are prohibitive from pre-primary to higher education in Finland. Therefore, most educational institutions in Finland are public, or at least, government-funding dependent (Eurydice, 2019). Notwithstanding, Finnish education system is decentralized and the education reforms that took place in the 90s increased schools' autonomy in terms of "budgets, curricula and governing boards" (Sahlberg, 2007, p. 165). Education is compulsory from age 6 to age 18 (until August 2021, education was only compulsory up to age 16). The national curriculum follows a uniform path until the completion of lower secondary education, and it is determined by the Finnish National Agency for Education, although instructors enjoy significant pedagogical autonomy.

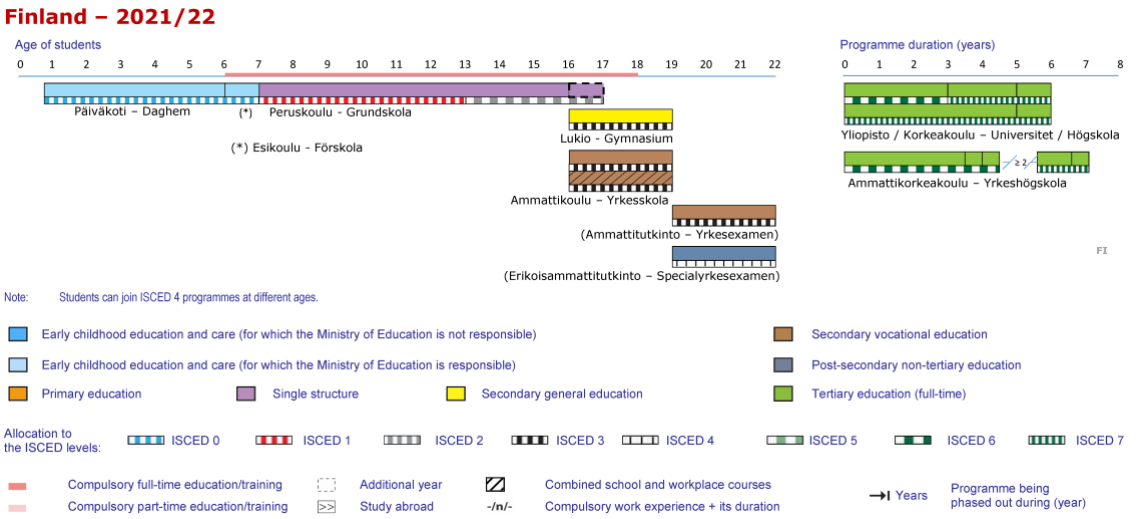

Figure 2: Structure of the National Education System of Portugal.
Source: Eurydice 2021/22

The provision of Early Childhood Education and Care is the responsibility of Finnish municipalities (Eurydice, 2019). Children are entitled to attend kindergarten[20] after the parental leave period[21]. However, most of them join later since the government allows a child home care allowance to parents whose children are under three years old. Municipalities must organize to fulfill the local needs, whether providing public ECEC services or financing private institutions as well as provide services in the official languages of Finland and consider other languages if there is a need for such. ECEC is organized in center-based and family daycare. The funding depends on the state (30%), the municipalities (56%) and in part on levy fees to households (14%). Tuition fees vary according to household income and size (between 0 - 288€). Parents can also enroll their kids in private institutions, where generally pay higher fees. Although, the majority of parents enroll their youngsters in municipal ECEC centers (76% in 2019). ECEC is seen as fundamental to "promote the holistic

[20] Päiväkoti.
[21] The parental leave period usually lasts 9 or 10 months.

growth, development, health and wellbeing of every child according to the child's age and development"[23].

Pre-primary[24] education became the beginning of compulsory schooling in Finland from 2015 onwards (Eurydice, 2019). Generally, pre-primary education is organized in early education centers, although it can also take place in schools and its tuition is free. This policy is intended to smooth the youngsters' transition from kindergarten to primary education, enabling an early detection of support needs.

Children start basic education[25] the year they turn seven, although youngsters can start school one year earlier or later in case parents authorize and have validation through psychological tests. Basic education in Finland lasts nine years from 1st to 9th grade, englobing primary education[26] (1st to 6th grade) and lower secondary education[27] (7th to 9th grade) and follows a uniform path for all students. There are two transition points within basic education: at the end of 2nd grade and at the end of 6th grade (presented in figure 3) and the workload and the diversity of subjects tends to progressively increase through the three stages. Notwithstanding, compared to other countries (particularly Nordic countries), Finnish students have shorter school days.

[23] Act on Early Childhood Education and Care (540/2018).
[24] Esikoulu.
[25] Peruskoulu.
[26] ISCED 1.
[27] ISCED 2.

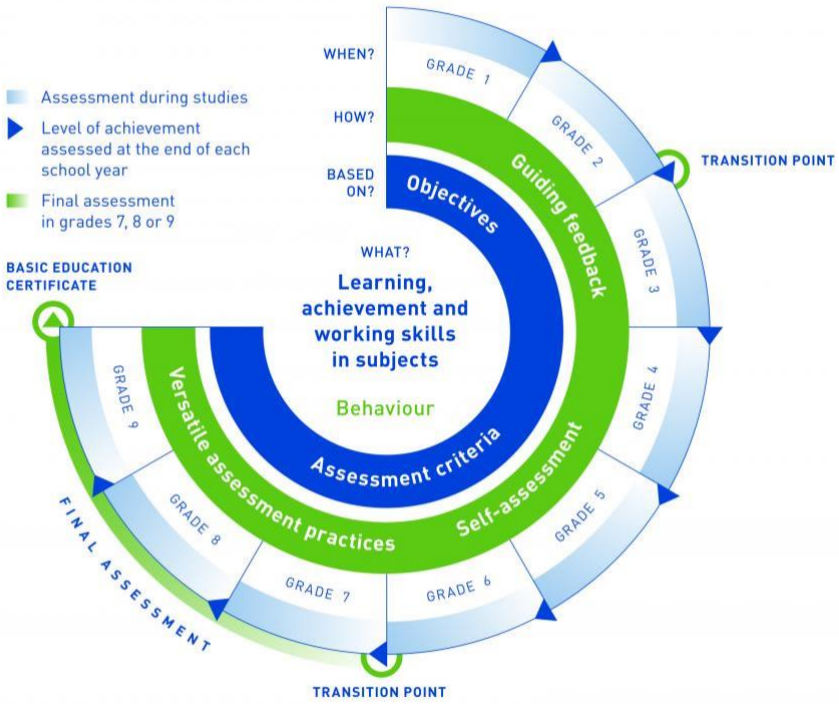

Figure 3: Basic Education in Finland.
Source: EDUFI

Youngsters usually need to change schools on entering seventh grade[28] (lower secondary education), contrary to what happens in Portugal, where that change happens earlier, when leaving 4th grade. From the 1st to 6th grade, students in Finland attend several classes with a single instructor, whereas from 7th grade onwards subjects are taught by specialized lecturers. Courses as biology and geography, physics and chemistry and health education start being part of the curricula in comprehensive school. The average class size in basic education is below 20 students[29] and about one third of schools have fewer than 100 students.

[28] According to Kalalahti (2019), only a quarter of comprehensive school (1st to 9th grade) are unified schools.
[29] The actual values are 19 in primary education (1st to 6th grade) and 17 in lower secondary education (7th to 9th grade)

Students are, as rule, assigned to schools close to their neighborhood, although there is the possibility of switching schools with some restrictions (Kalalahti, 2019). Households in larger cities, where there is greater supply, use their right to apply to a different school more frequently.

Basic education is almost entirely state-funded, in which municipalities' share in funding is 75% approximately, whereas the government's share is 25%. The government's share helps mitigate differences between municipalities, based on specific criteria, and, therefore, increasing the budget, for instance, if "municipalities are sparsely populated or if there is a high number of foreign-language speakers and if the parents' level of education is low"[30]. Besides, children are entitled to free meals and transportation in case the nearby school is far away.

In the end of basic education, students face the decision to enter in general upper secondary education or pursue a vocational education and training (VET). Either option takes three years to complete. The admission in upper secondary education is based on students' grades in the basic education certificate, although entrance or aptitude tests and parameters as hobbies or other activities can weight when applying to general upper secondary education with special educational tasks (such as music, for instance). VET providers can also support their decision on aptitude tests or interviews, work experience and grades on relevant fields. Youngsters can apply to any school, facing no restrictions and the vast majority (over 90%, and many of the non-entrants are due to the grade requirement) who apply to general upper secondary education as its first choice do get in. In 2019, 54% of students proceeded to general upper secondary, whereas 41% followed vocational upper education. This numbers are not far from what happens in Portugal, where 59% of students continued science-humanities courses after basic education.

[30] https://www.oph.fi/sites/default/files/documents/funding-pre-primary-and-basic-education-2020_0.pdf

General upper secondary education[31] aims to prepare learners for further studies in higher education by providing solid general knowledge and it contains a minimum of 75 courses, within which they are divided into compulsory and specialization courses. Schools adapt their programs in order to "meet local demand and their possible special educational mission" (Karhu, 2019, p. 17). Specialized upper secondary schools offer the possibility to accomplish upper secondary education focusing on different fields (for example: music, sports, languages, mathematics, technical studies, etc.). The assessment of courses is given once the course is completed and at the end of general upper secondary, students take the matriculation examination, which consists of four exams carried out simultaneously in the country.

Vocational education and training seek to prepare learners for work through a close approach to the labor market, by enhancing the learners' vocational skills and answering to markets' competence needs. Its attractiveness has been increasing in recent years and, as matter of fact, VET holds a very favorable public perception in Finland compared to other European countries[32], which helps to understand the high number of students who follow this pathway. Potential VET applicants (both basic education leavers and adults) can obtain three different types of qualification: vocational upper secondary qualifications[33] (ISCED 3), further vocational qualifications[34] (ISCED 3) and specialist vocational qualifications[35] (ISCED 4). Differences between programs consist in the number and compulsory nature of vocational and common units taught in institutes.

Higher education in Finland is under the responsibility of the Ministry of Education, though institutions enjoy a significant autonomy in their administration, education, and research. The system consists of both

[31] Lukio.
[32] Cedefop
[33] Ammattikoulu.
[34] Ammattitutkinto.
[35] Erikoisammattikoulu.

universities[36] and universities of applied sciences[37] and they are funded directly by the state budget. Admission to higher education institutions was generally based on upper secondary education grades and the results of an entrance examination organized by the higher education institution concerned (Kosunen, 2018). However, since the 2020 reforms, the process of selection has centered more in the grades from the matriculation examination aiming to reduce gap years of students. In the next chapter a comparative analysis is presented, using OECD reports and PISA exams.

[36] Yliopisto/ Korkeakoulu.
[37] Ammattikorkeakoulu.

Chapter 4
Comparative Analysis

4. Comparative Analysis of both Education Systems

4.1 Portuguese Education backwardness relative to Finnish Education

According to PISA results, the OECD's Programme for International Student Assessment that "measures 15-year-olds' ability to use their reading, mathematics and science knowledge and skills to meet real-life challenges" of OECD countries and partners every three years, Finland has been undeniably achieving good results in the tests. In 2018, the year Finland had its worst results in the PISA tests so far, they still ranked 3rd among OECD countries, only behind Estonia and Canada. The following table exhibits the results in the 2018 PISA tests.

	Mean score in PISA 2018		
	Reading	Mathematics	Science
	Mean	Mean	Mean
OECD average	487	489	489
Finland	520	507	522
Portugal	492	492	492

Table 1: PISA 2018 results.
Source: Own elaboration

Finnish students stand out in the results obtained, outperforming Portuguese students in the three assessed domains. Notwithstanding, Portuguese students performed above OECD average and very consistently among the three fields,

whereas the Finnish fell short in Mathematics, compared to their achievements in Reading and Science.

Figures 4 and 5 and 6 allow to perceive the evolution trend in results. Sweden is represented in the graphic to understand the quality of Finnish students and education system when compared to a close geographically, culturally, and economically country. Moreover, it helps to analyze the trends, alongside with OECD average results, in case of variations in difficulty levels across years.

One can perceive a downward trend in Finnish scores in the three domains, despite starting from a very high base and the Sweden' and OECD countries' average have also decreased during this period. While Portugal has experienced the opposite direction, noting significant improvements in the quality of education in Portugal. However, from 2015 to 2018, Portuguese students have dropped in the PISA tests in both Mathematics and Science, although the OECD countries' average also has declined, which may not indicate a decrease in the quality of Portuguese education. Moreover, as convergence with the best performing OECD countries occurs, the pace at which occurs is expected to be slower. Furthermore, Finnish students continue to outperform Swedish students, however, the 2018 tests reveal more matching results between these two countries.

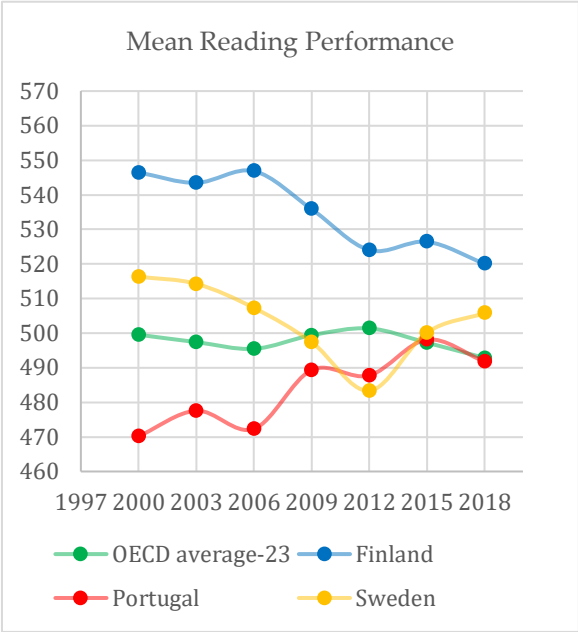

Figure 5: Mean PISA reading performance evolution, 2003 through 2018.
Source: OECD database

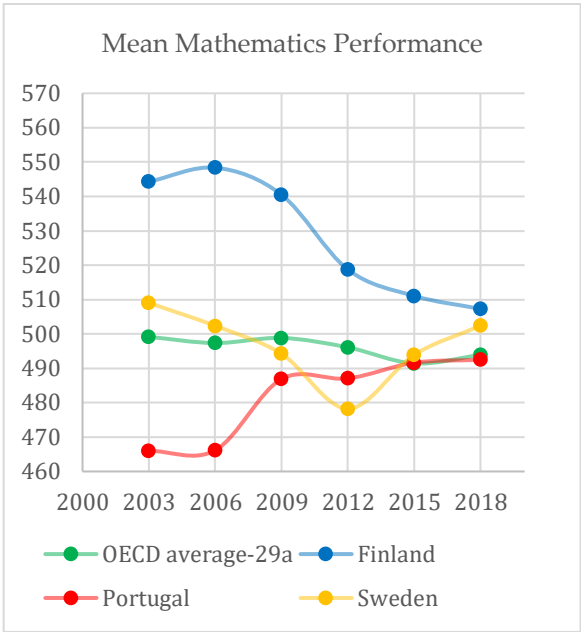

Figure 4: Mean PISA mathematics performance evolution, 2000 through 2018.
Source: OECD database

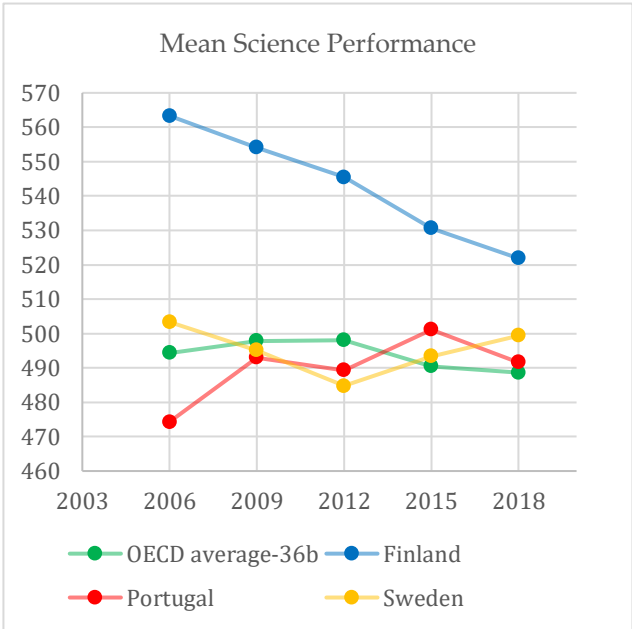

Figure 6: Mean PISA reading performance evolution, 2006 through 2018.
Source: OECD database

Finland also has a considerably more highly educated population than Portugal. The percentage of population with tertiary education is presented in the figure 7. The Portuguese economic gap still has many of its roots in the qualifications deficit whose differences with their "congeners were widening at least until the seventies of the past century, at the time of the Carnation Revolution"[38] (Figueiredo et al., 2017, p. 17). Figure 9 illustrates the evolution of the average years of schooling between Portugal, Finland and Germany since the seventies. One can perceive the clear educational backwardness of Portugal in relation to those countries. As a matter of fact, "in 2000, with less than eight years of average schooling, the Portuguese resident had similar schooling as the resident of 1930's Germany (…)[39]" (Veiga et al., 2019, p.28). Nonetheless, education after the Carnation Revolution has expanded and Portugal has managed to increase the number of qualified people in recent times, as one can see in figure 8, contributing to the growth of the average years of schooling and its convergence with its European partners. However, the low birth rate and, accordingly, the relative ageing of the population and the decline of the working population are elements that will delay the educational convergence with the European partners that has been taking place in recent decades (Alves et al., 2010).

[38] Translated from Portuguese.
[39] Translated from Portuguese.

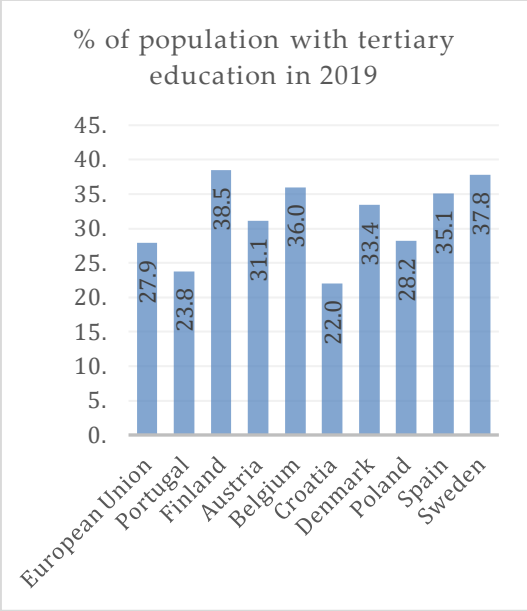

Figure 8: % of population with tertiary education in 2019 from 15 to 64 years old. Source: Eurostat database

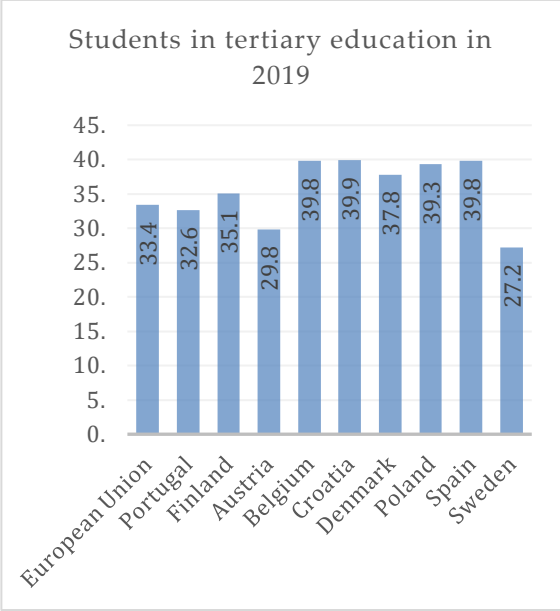

Figure 7:: Students in tertiary education in 2019 - as % of 20-24 years old in the population. Source: Eurostat database

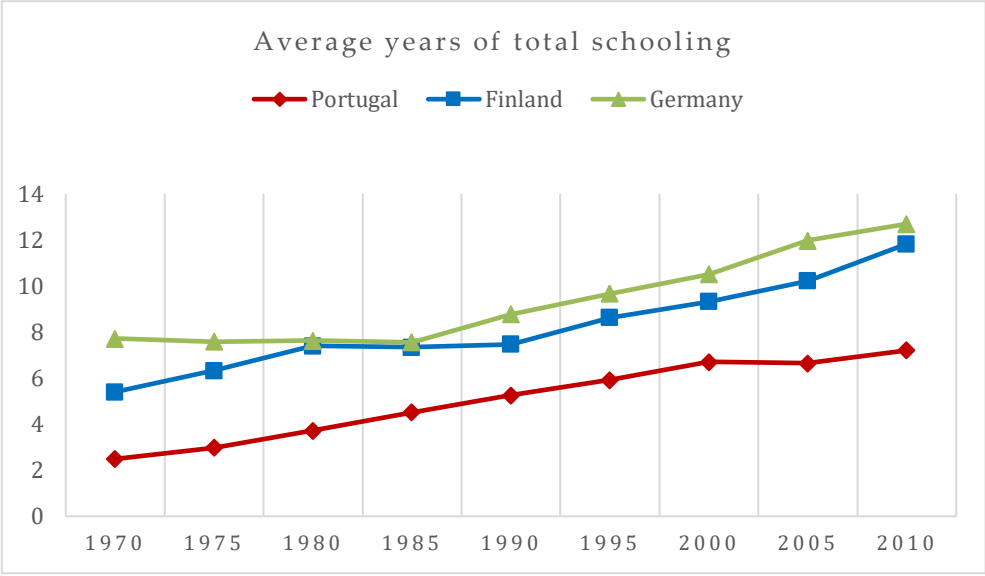

Figure 9: Evolution of the average years of total schooling in age 15+. Source: World Bank- Barro and Lee (BL)

4.1 Educational Outcomes

Finland has consistently been one of the OECD countries where there is a smaller difference in student performance between schools, which illustrates the homogeneity of Finnish school system, combined with the fact that Finland has quite a relatively homogenous society throughout the whole territory (Sahlberg, 2007). Figure 10 exhibits the variance in reading performance between-schools and within-schools across countries. Furthermore, according to the 2015 PISA mathematics exams, Finland has among the least differences between the top quarter and bottom quarter students, in terms of socio-economic status of the parents (illustrated in figure 11).

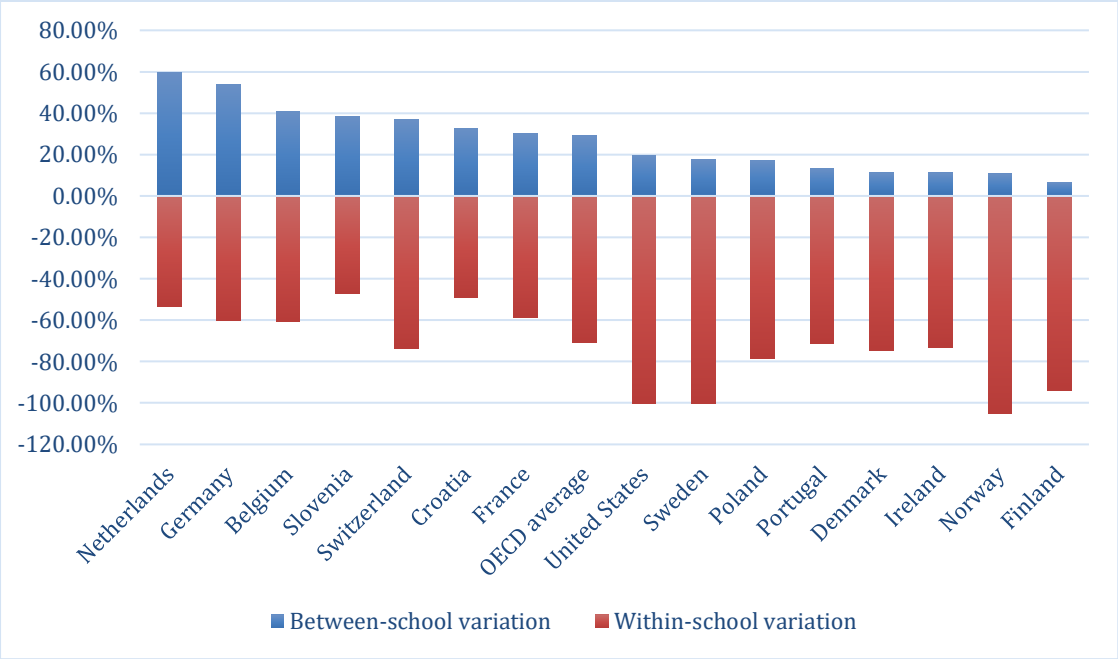

Figure 10: Variation in reading performance between and within schools.
Source: OECD

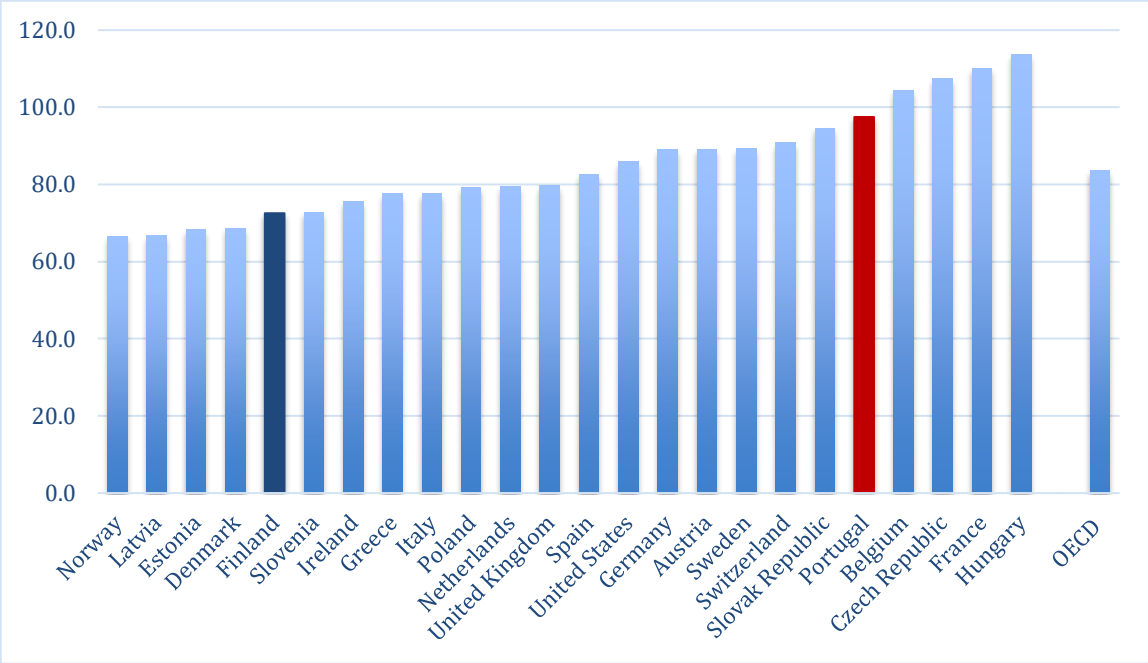

Figure 11: Difference of points between the top quarter and the bottom quarter of the ESCS in mathematics.
Note: ESCS refers to the PISA (Programme for International Student Assessment) index of economic, social and cultural status.
Source: PISA 2015

Figure 12 displays the percentage of students who had not attended pre-primary education for more than a year and indicates that Finnish students practically all attend at least one year of pre-primary education. Among Portuguese students the share who do not attend is still higher than the OECD average, although not by much.

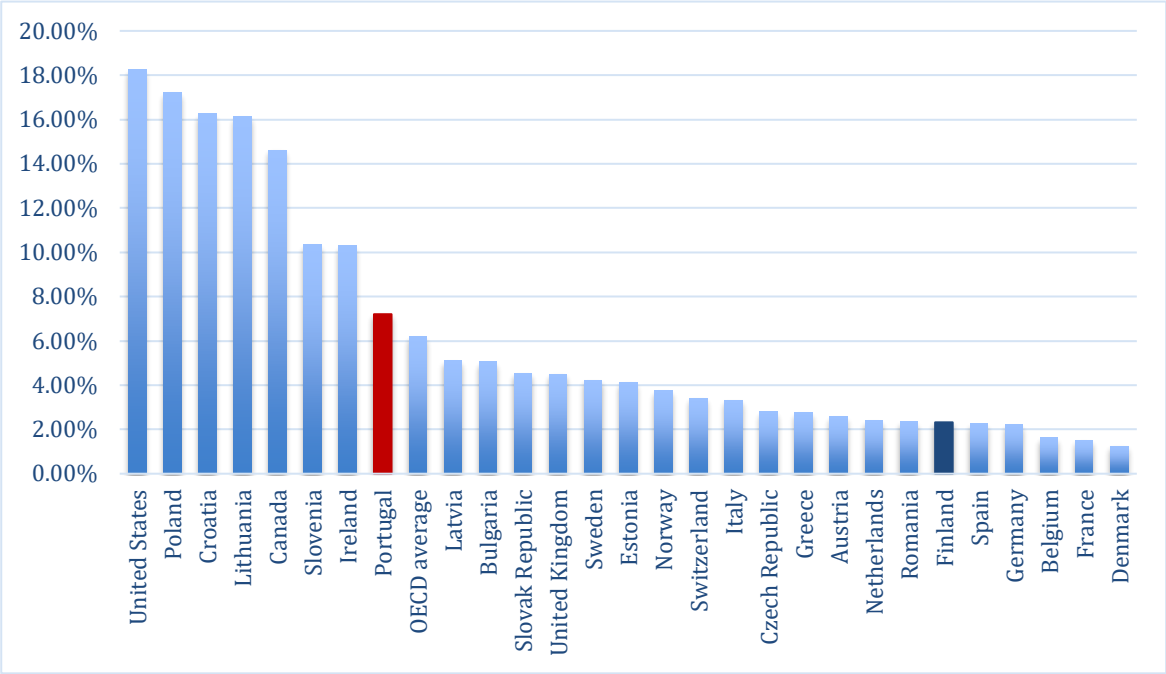

Figure 12: Percentage of students who had not attended pre-primary education or had attended for less than a year.
Source: OECD

In figure 13 one can follow the percentage of students enrolled in private schools in Portugal since 1986. The enrollment of students in private schools (as a percentage of the total number of students in the country) has displayed an increasing tendency over the years, although not necessarily uniform. From 1986 to 2019, the percentage of students attending private schools in Portugal increased from 10.9% to 19.5%, i. e., 8.6 p.p. And this difference gets exacerbated in upper secondary education, the education before university for many, in which this increase was 15.5 p.p. (from 5.7% in 1986 to 21.2% in 2019).

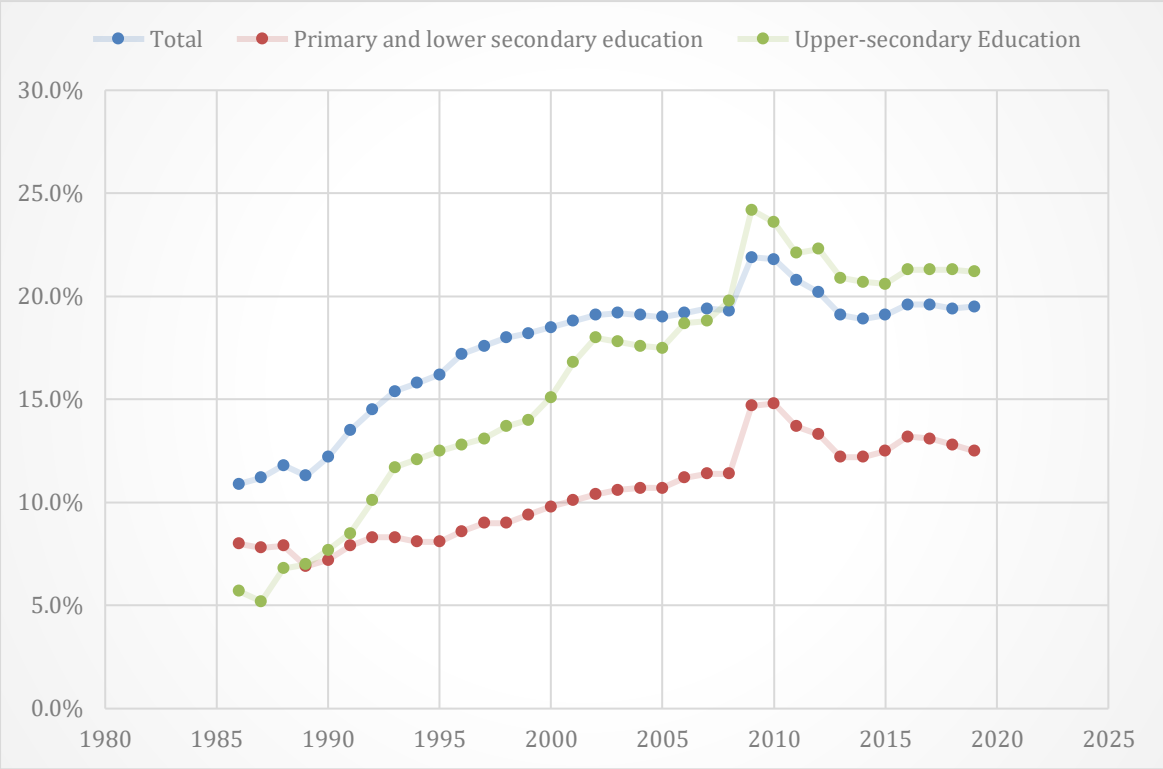

Figure 13: Students enrolled in private education in Portugal as a % of total students.
Source: PORDATA

As previously mentioned, resources in Finland are very often allocated to students having learning difficulties, which makes easier to compromise those resources when schools are more equivalent than what could be if schools have significant distortions of underachievement students. Figure 14 illustrates the difference in educational resources between advantaged and disadvantaged schools in countries, indicating that resources are equitably distributed in Finland by advantaged and disadvantaged schools, on the contrary of Portugal.

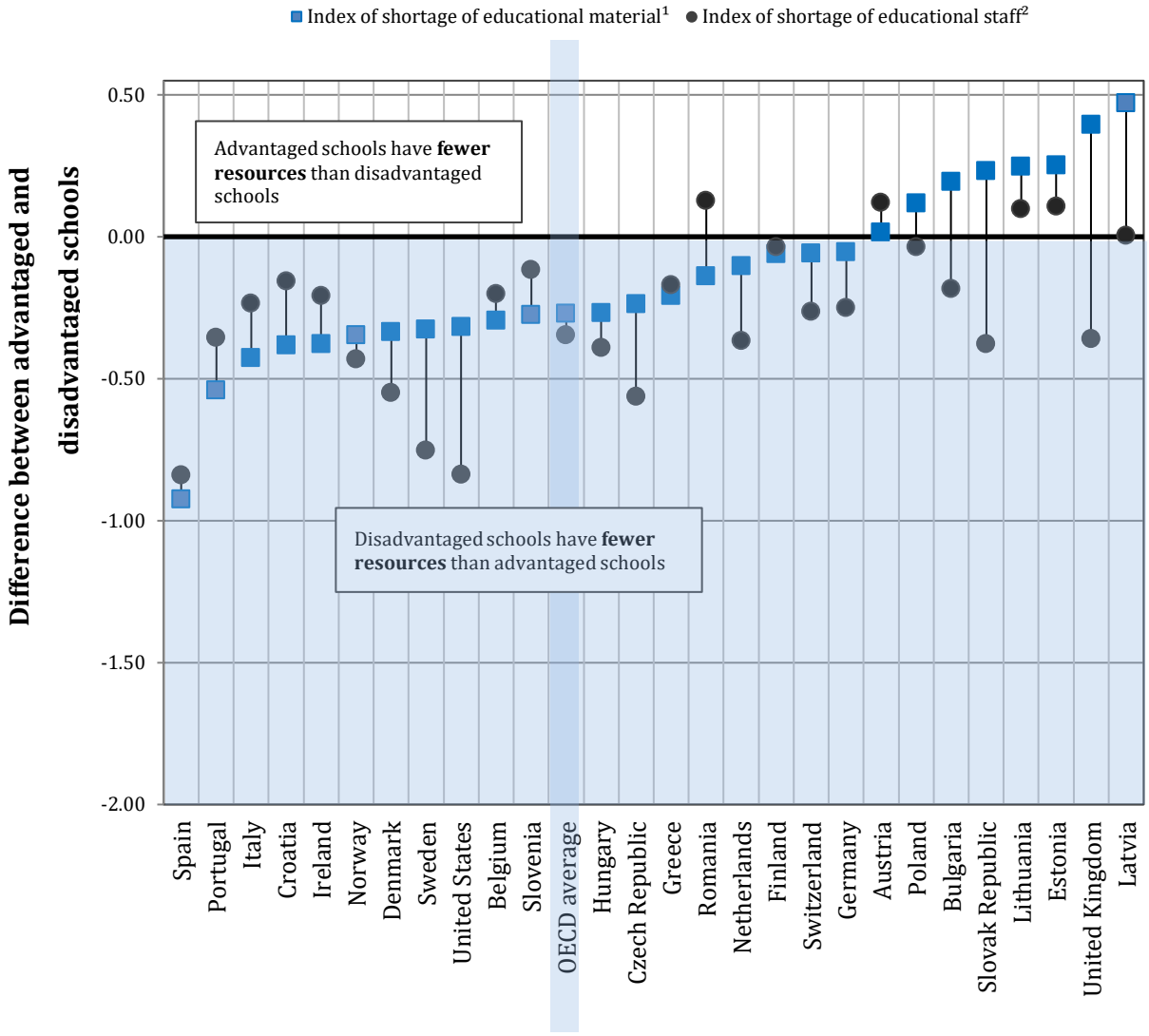

Figure 14: Differences in educational resources between advantaged and disadvantaged schools. Source: OECD

Instruction is fundamental in what students learn. Figure 15 shows the percentage of teachers with at least a masters' degree, by schools' socio-economic profile, and one can see the significant difference in the education of Portuguese and Finnish teachers as the difference between disadvantage and advantage schools in some OECD countries. Moreover, schools in Finland are given a higher degree of autonomy in the allocation of their resources in comparison with Portugal. Figure 16 presents the index of school autonomy based on school principals' reports.

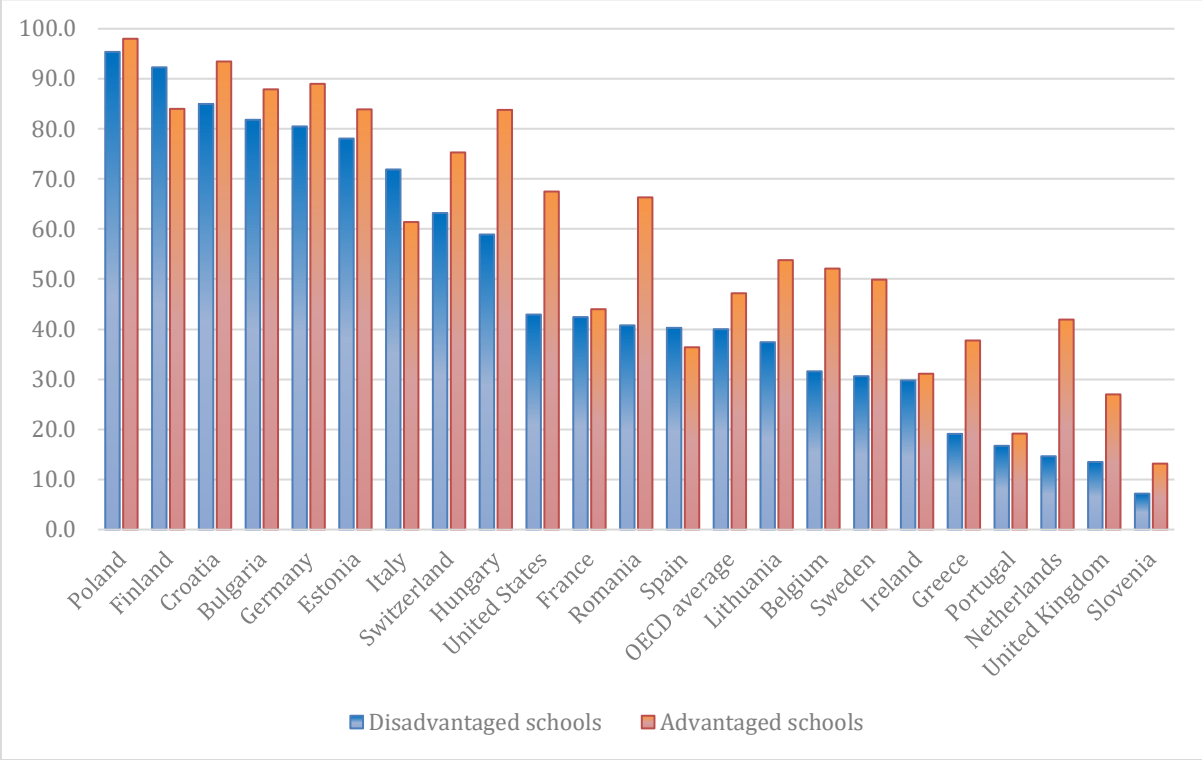

Figure 15: Percentage of teachers with at least a masters' degree by schools' socio-economic profile.

Source: OEC*D*

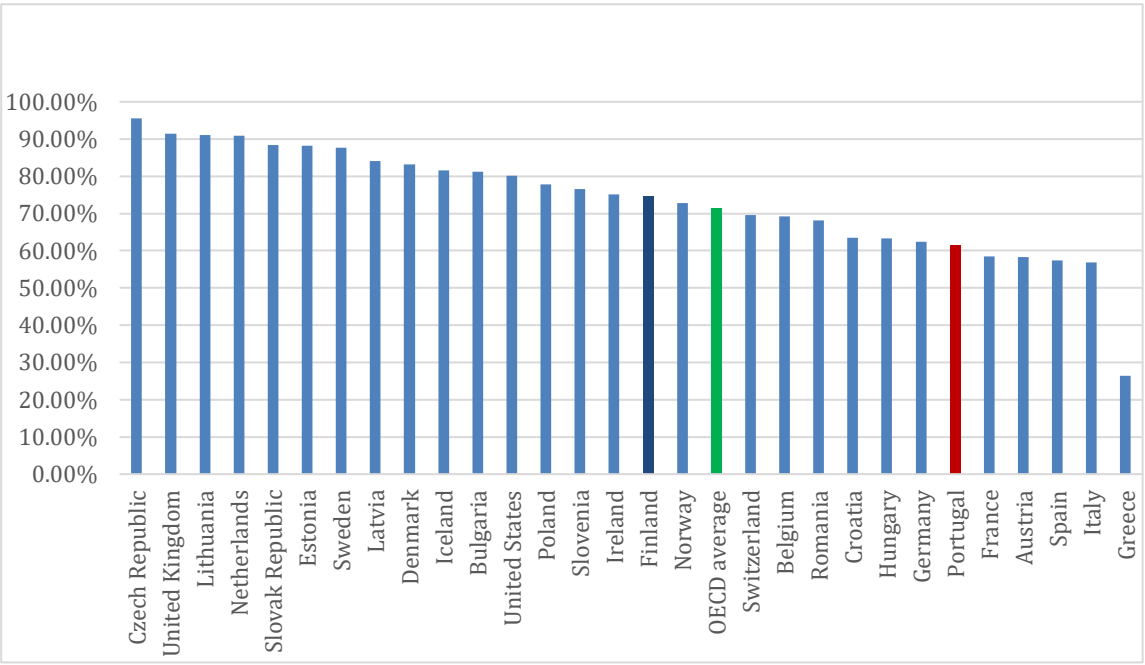

Figure 16: Index of school autonomy.
Source: OECD, PISA 2015 Database, Table II.4.5. Results based on school principals' reports

Although educational policies and schools may play a role in either widening or narrowing the transmission of intergenerational disadvantage, we cannot neglect the possibility that other forces play a role in intergenerational mobility (Krueger, 2012). Figure 17 highlights a negative correlation between income inequality and intergenerational earnings mobility. Many authors like Jerrim and Macmillan (2015) or Corak (2013) point to a greater difficulty in ascending socially in the presence of greater income inequality. The Nordic countries, which include Finland, have the highest levels of intergenerational mobility, but also have the lowest levels of income inequality as measured by the Gini coefficient[40].

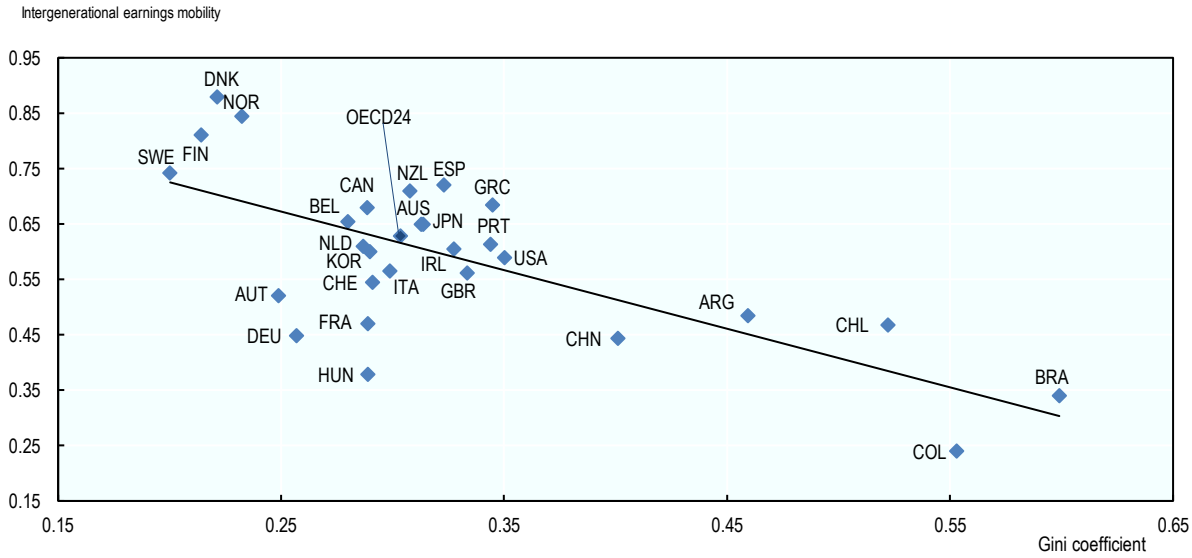

Figure 17: Educational mobility and public spending on education.
Note: Earnings mobility is proxied by 1 minus the intergenerational earnings elasticity of fathers with sons. Gini coefficients refer to the mid-1980s/early 1990s.
Source: OECD 2018 - A Broken Social Elevator? How to Promote Social Mobility

[40] According to the Eurostat (2018), "the Gini coefficient measures the extent to which the distribution of income within a country deviates from a perfectly equal distribution. A coefficient of 0 expresses perfect equality where everyone has the same income, while a coefficient of 100 expresses full inequality where only one person has all the income".

On the other hand, figure 18 seems to suggest a positive correlation between public expenditure on education (as a percentage of GDP) and intergenerational educational mobility, which some authors (Davies et al., 2005; Schütz et al., 2008; Green et al., 2012; Le Donné, 2014) suggest that a substitution of public investment by private expenditure decreases the social mobility of countries.

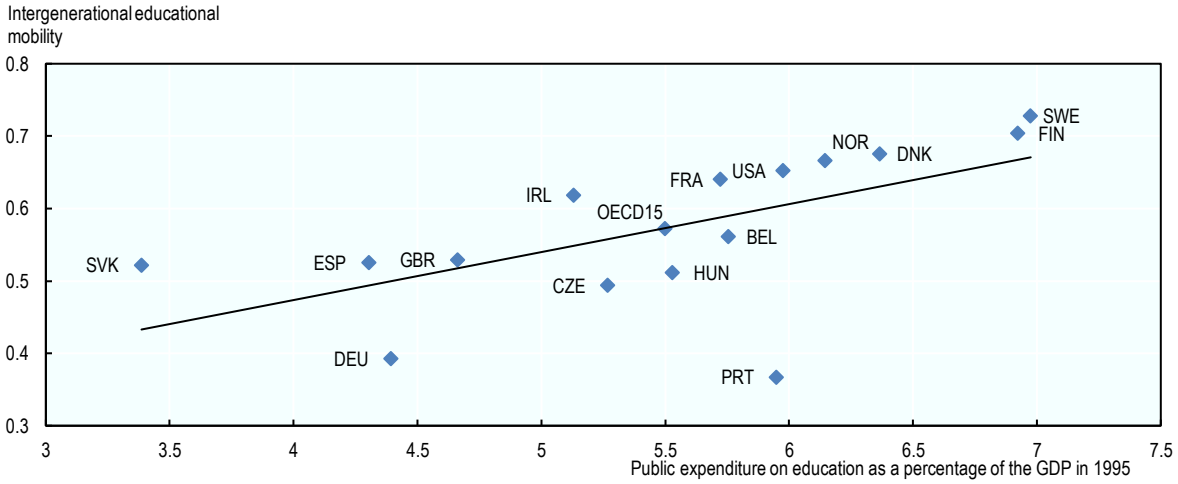

Figure 18: Intergenerational educational mobility and public expenditure on education
Note: Intergenerational educational mobility is measured as 1 minus the intergenerational educational persistence, defined as the regression coefficient between parental and children's years of schooling at age 30-55.
Source: OECD 2018 - A Broken Social Elevator? How to Promote Social Mobility

Chapter 5
Discussion and Analysis

5. Comparative Performance

Until the nineties Finland had average grades in international assessments, however, nowadays the Finnish education achieved outstanding results in international comparisons, and added to that, a high degree of equity among students (Sahlberg, 2007). The educational reforms that were carried out in the seventies aggregated into the comprehensive school- peruskoulu- both grammar schools and civic schools and the introduction of a one-track educational program gave schools a considerable heterogeneous group of students.

In Portugal, comprehensive school does not have a single structure, however, almost all students follow a uniform path, similarly to what happens in Finland. Contrarily, in countries as Germany and Switzerland, students engage in a different educational path at an earlier age, which is associated with lower intergenerational mobility and a greater correlation between parents' and children's educational pathways (Dustmann, 2004; Martins et al., 2018). Nevertheless, schools in Portugal seem to present less diversity than in Finland. One of the reasons for this reduced diversity in Portuguese schools may be related to a degree of school segregation that has been accentuating throughout the 21st century, while other may relate to the heterogeneity within the national territory. The expansion of the private sector in education may have led to a lower degree of diversity in Portuguese schools, essentially from a socioeconomic nature. The parents who value education the most and hold more financial resources at their disposal are the ones who most readily encounter in privately funded schools the solution to the requirements they seek (Case & Deaton, 1999).

In this manner, the ability to claim for better public-funded schools diminishes (whether in schools or electorally). Hence, one of the reasons to a lower level of equality in results between students (Schütz et al., 2008; Eurydice, 2020).

As seen in the previous chapter, peer quality suggests positive effects on future earnings and accomplishments in higher education (Humlum & Thorsager, 2020). When schools are very heterogenous between them, in terms of performance, this could cause a distortion in a presumably equal opportunity environment. This means that if there are schools with wide divergences in student performance, the positive peer effects would not be as significant in schools with underachieving students, in contrast to schools with high-achieving students.

Furthermore, the introduction of a decentralized, teacher-focused education system in Finland with a high diversity of students would not be possible without the capacity of the teachers. Indeed, teachers are in the frontline of a comprehensive school that comprise many highly differentiated students, with "effective teaching methods and pedagogically focused school designs" (Sahlberg, 2007, p. 23) in order to involve the participation of students in the learning process itself (e.g., Project Based Learning). Finland is among the countries with the most highly qualified teachers, which demonstrates the importance Finns give to teaching. On the contrary, Portugal (although qualifications are generally lower) has teachers with much lower academic qualifications. The teachers are responsible for most of the students' achievement, and good and motivated teachers can push students to better learning levels, especially those with more difficulty and from a lower starting point (Card & Krueger, 1992; OECD, 2005). In addition, the smaller number of students per classroom is a helpful tool for Finnish teachers to have more dedicated time to each child.

Education in the Finnish school system has a consistent focus on students with learning difficulties. As opposed to Portugal, Finland devotes a considerable effort (including financial) into the early detection of students with learning difficulties (Sahlberg, 2007). This not only enables many students to catch up with their peers and get them back on track, so to speak, but also prevents excessive and harmful retention of such students. In Portugal, early detection and special education programs are not as common as in Finland, which explains the high number of grade retentions[41] as the solution to the scarce acquired knowledge during the year. As a result, the grade retention policy in Portugal is neither effective nor equitable as suggests Conboy et al. (2013).

Moreover, children's development starts very early in life and future economic impacts seem to start as well, as the literature review seemed to suggest, hence the importance of education policies starting early in children's lives. In Portugal the same does not seem to happen with equal intensity, leading to greater discrepancies between households, where in 2019 "about 75% of children up to age 3 in families from the first income quartile do not attend daycare" and "this percentage decreases to 50% in children from families with higher incomes"[42] (Peralta et al., 2021, p.72). Finland seems to have very inclusive childcare policies, including practically free daycare after the parental leave period.

Table 2 compares some statistics between Portugal and Finland, allowing us to examine two distinct societies. Through the GDP per capita in PPP one can perceive that the Finnish economy is considerably more solid than the Portuguese economy. Expenditure in education is relatively similar in both countries, despite the lower value of public investment in education (as % of GDP) in Portugal in which is compensated by private sources of financing. The returns to education are higher in Portugal, which may lead to more inequality.

[41] https://repositorio.iscte-iul.pt/bitstream/10071/7320/1/master_nadia_carreira_goncalves.pdf
[42] Translated from portuguese.

In fact, the disparities in inequality are quite significant. Finland has a lower Gini index, higher intergenerational educational mobility, fewer early school leavers, less underachieving students in the three PISA domains, fewer children at risk of poverty and less segregation.

Measure	Portugal	Finland	Year	Source
GDP per capita PPP (current USD)	$ 34 928,50	$ 49 580,60	2018	World Bank
Government Expenditure on Education, Total (% of GDP)	4,7%	6,3%	2018	World Bank
Education Expenditure in Primary to post-secondary non-tertiary, % of GDP	3,8%	3,6%	2018	OECD
Education Expenditure in Primary, % of GDP	1,52%	1,36%	2018	OECD
Education Expenditure in Secondary, % of GDP	2,30%	2,25%	2018	OECD
Return to Tertiary Education (Relative Earnings)	168,3	147,5	2015	OECD
Gini Coefficient	33,5	27,3	2018	World Bank
Intergenerational educational mobility	0,37	0,70	2015	OECD
Early leavers from education and training (age 18–24)	11,8%	8,3%	2018	Eurostat
Proportion of 15-year-olds underachieving in reading	17,2%	11,1%	2018	OECD
Proportion of 15-year-olds underachieving in mathematics	23,8%	13,6%	2018	OECD
Proportion of 15-year-olds underachieving in science	17,4%	11,5%	2018	OECD
15 years old Students Reporting They Had Repeated a Grade at Least Once	26,6%	3,3%	2018	OECD
Academic and Social Segregation in Mathematics	18,9%	8,0%	2018	OECD
Social Segregation	21,0%	13,2%	2018	OECD
Children at Risk of Poverty or Social Exclusion (less than 18 years old)	21,9%	13,8%	2018	Eurostat

Table 2: Comparative performance between Portugal and Finland
Source: Own elaboration

The philosophy of promoting social inclusion is extended to the entire society, and if, on the one hand, education in Finland plays an important part in promoting social inclusion, on the other hand, education by itself is insufficient to produce these outcomes and, therefore, it requires interaction with other social and economic structures in order to foster a more inclusive society.

Chapter 6
Conclusion

The aim of this research was to analyze and compare both Portuguese and Finnish education systems and to try to understand which one prepares students more successfully for higher studies or the workplace, and which one leads more successfully to greater social mobility among students.

All in all, the research seems to suggest the Finnish education system prepares students more thoroughly for higher studies than the Portuguese, by providing them with more capabilities as PISA exams suggest. Additionally, the highly positive perception of VET programs in Finland seems to suggest that they are more prepared for the workplace[43]. Notwithstanding, the Finnish education system has managed to ensure greater equality in education, reflected in a greater social mobility among students. The vision from and for the society is fundamental to the role of education in attempting to establish an educational structure that reduces the parental background in the life trajectories of the youngsters.

From the literature review one is able to draw several important insights: the significance of human capital, and in particular education, to the economic development of nations; the trends in income inequality in recent decades; the relevance of education systems for intergenerational mobility within countries, and also, in reducing income inequality.

Moreover, from this research one can draw lessons from Finnish education system which might contribute to a better preparation of Portuguese students and to a greater social mobility within the country. Firstly, education should be a government priority, and thus, education spending (Davies et al., 2005).

[43] Source: Cedefop

Secondly, teachers are a key to the students' success, so it is recommended to promote highly qualified teachers with continuous formation, particularly in the area of pedagogy, as well as to promote the profession of teaching (Sahlberg, 2010). Third, it is recommended a more flexible education curriculum, a comprehensive school with a one-track educational program as well as heterogeneous classrooms (e.g. Dustmann, 2004; Martins et al., 2018) and greater autonomy for teachers in order to not encourage memorization but rather the participation of students in the learning process itself (e.g., Project Based Learning). Fourth, it is recommended a deeper engagement of parents in schools, and a greater autonomy of schools and its principals in the decision-making process (Hahn et al., 2018). Lastly, a strengthening of measures to support students with learning difficulties and to detect such difficulties as early as possible in their academic path, in order to prevent their retention (Conboy et al. 2013).

The case of Finland provides evidence that it is feasible for nations to have a mass education system with high-quality students, while achieving high social mobility and committing (time and resources) to students with learning difficulties. This contribution attempts to highlight the foremost importance of education for nations from an economic viewpoint as well as to further understand and to highlight the underlying differences and strengths between both education systems in order to provide decision-makers with an enlightened policy framework.

Despite the contributions of this research, some limitations are worth to be mentioned, such as the following: the limited period of time to conduct the research; the timeliness of the available documents; the limitations of some measures and tests on which the analysis is focused, as the fact of having solely relied on PISA exams in spite of its robustness. Further research with different methodological approaches would help deepen the foundations for a well-

functioning education system, plus analysis of virtues from other education systems that could help to enhance the quality of education in Portugal.

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