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PORTUGAL

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OECD Reviews of School Resources: Portugal 2018



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Foreword

This report for Portugal forms part of the OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools (also referred to as the *School Resources Review*, see Annex A for further details). The purpose of the review is to explore how school resources can be governed, distributed, utilised and managed to improve the quality, equity and efficiency of school education. School resources are understood in a broad way, including financial resources (e.g. expenditures on education, school budget), physical resources (e.g. school infrastructure, computers), human resources (e.g. teachers, school leaders) and other resources (e.g. learning time).

Portugal was one of the countries which opted to participate in the country review strand and host a visit by an external review team. Members of the OECD review team were David Liebowitz (OECD Secretariat), co-ordinator of the review; Pablo González (Director of the Centre for Public Systems at the University of Chile); Edith Hooge (Full Professor of "Boards and Governance in Education" at TIAS, Tilburg University in the Netherlands), Gonçalo Lima (OECD Secretariat) and Deborah Nusche (OECD Secretariat). The biographies of the members of the review team are provided in Annex B. This publication is the report from the review team. It provides, from an international perspective, an independent analysis of major issues facing the use of school resources in Portugal, current policy initiatives and possible future approaches. The report serves three purposes: i) to provide insights and advice to Portuguese education authorities; ii) to help other countries understand the Portuguese approach to the use of school resources; and iii) to provide input for comparative analyses of the OECD School Resources Review.

The scope for the analysis in this report covers primary (including 1st and 2nd cycle of basic education) and secondary (including 3rd cycle of basic education and upper secondary) school education. At the request of Portuguese authorities, the focus areas of the Review of School Resources in Portugal are: i) the process of the decentralisation of school governance; ii) the integration of local, national and international funding streams in educational financing; and iii) the teaching profession. The analysis presented in the report refers to the situation faced by the education system in January 2018, when the review team visited Portugal. The most recent educational data used in this report reflects the situation during the 2015/16 school year.

Portugal's involvement in the OECD review was co-ordinated by multiple staff members in the Ministry of Education. The national co-ordinator was Pedro Abrantes, Expert Advisor to the Minister of Education. He was supported by Luís Farrajota, Board of the Institute for Financial Management of Education (IGEFE), Ana Castro, Board of the Operational Programme for Human Capital (PO CH) and Luísa Canto e Castro Loura, Director of the Directorate-General for Education and Science Statistics (DGEEC). Important review visit logistical support was provided by Isabel Correia from the Secretary-General of Education and Science (SGEC). An important part of Portugal's involvement in the School Resources Review was the preparation of the Country

Background Report (CBR), a document providing policy context and key data that informed the review team. The OECD review team is very grateful to the authors of the CBR and to all those who assisted them in providing a high-quality informative document. The CBR is an important output from the OECD project in its own right as well as a key source for the review team. The CBR follows guidelines prepared by the OECD Secretariat and provides extensive information, analysis and discussion in regard to the national context, the organisation of the education system, the use of school resources and the views of key stakeholders. In this sense, the CBR and this report complement each other and, for a more comprehensive view of the effectiveness of school resource use in Portugal, should be read in conjunction.

The OECD and the European Commission (EC) have established a partnership for the project which partly covers participation costs of countries which are part of the European Union's Erasmus+ programme. The participation of Portugal was organised with the support of the EC in the context of this partnership.* The EC was part of the planning process of the review of Portugal (providing comments on the Portuguese CBR, participating in the preparatory visit and providing feedback on the planning of the review visit) and offered comments on drafts of this report. The involvement of the EC was co-ordinated by Antonio García Gómez, Policy Officer for Spain, Portugal and the United Kingdom in the European Commission's Education, Youth, Sport and Culture Directorate-General (DG EAC). The review team is grateful to Antonio García Gómez for his contribution to the planning of the review and for the helpful comments he provided on drafts of this report.

The review visit to Portugal took place between 8 and 12 January 2018. The itinerary is provided in Annex C. The visit was designed by the OECD (with input from the EC) in collaboration with the Portuguese authorities. It also involved a preparatory visit by the OECD Secretariat on 2-4 October 2017 with the participation of Antonio García Gómez from the EC. The review team met with Tiago Brandão Rodrigues, the Minister of Education; other officials from the Ministry of Education and its associated units; representatives of national educational guidance bodies; the Ministry of Finance; the Ministry of Labour Solidarity and Social Security; the Ministry of Science, Technology and Higher Education; representatives of the Secretary of State of Local Administration; employers' confederations; representatives of associations of private educational providers; representatives of national school teachers' and principals' unions and associations; representatives of national associations of municipalities; national parents' associations, including ones with a particular focus on the needs of special education students; representatives of teachers' professional, in-service training centres; civil society organisations with an interest in children; representatives from national special education teachers' associations; and researchers with an interest in the effectiveness of school resource use. The team visited seven schools in four of the five territorial units of the country (Lisbon Metropolitan Area, North, Alentejo and Algarve), interacting with the municipal authorities responsible for school education as well as school leaders, teachers, non-teaching staff, parents and students at each school. The seven schools selected for the main visit were chosen at random from a set of pre-specified geographic,

* This document has been produced with the financial assistance of the European Union. The views expressed herein can in no way be taken to reflect the official opinion of the European Union.

demographic and performance criteria established by the OECD review team. The intention was to provide the review team with a broad cross-section of information and opinions on school resource use and how its effectiveness can be improved. Overall, the OECD review team held 61 meetings with approximately 280 stakeholders, including 7 school clusters serving 10 033 students.

The OECD review team wishes to record its gratitude to the many people who gave time from their busy schedules to inform the review team of their views, experiences and knowledge. The meetings were open and provided a wealth of insights. Special gratitude is due to the National Co-ordinator, Pedro Abrantes, for his commitment and efforts to provide the review team with the best possible conditions for this work. In addition, the review team is grateful for the support provided by Isabel Correia for organising the perfect review visit and going to great lengths to respond to the questions and needs of the review team. The review team was impressed by her efficiency, expertise and kindness. The courtesy and hospitality extended to us throughout our stay in Portugal made our task as a review team as pleasant and enjoyable as it was stimulating and challenging.

The OECD review team is also grateful to colleagues at the OECD. Eleonore Morena provided key administrative, editorial and layout support. We also received valuable feedback on versions of the report from Patricia Mangeol, Clara Barata and Simon Roy all of the Directorate for Education and Skills. Head of the Policy Analysis and Implementation Division Paulo Santiago also provided key feedback on the report. A special thanks to Cláudia Sarrico who assumed interim responsibility for managing the School Resources Review team and provided both critical substantive comments and strategic guidance for the report writing phase.

This report is organised into four chapters. Chapter 1 provides the national context, with information on the Portuguese school system. Chapter 2 analyses the funding of school education. Chapter 3 reviews the organisation of the school network in Portugal. Finally, Chapter 4 examines the distribution and development of teachers, leaders and other staff in Portuguese schools. Chapters 2 to 4 each present strengths, challenges and policy recommendations.

The policy recommendations attempt to build on and strengthen reforms that are already underway in Portugal, and the strong commitment to further improvement that was evident among those the OECD review team met. The suggestions should take into account the difficulties that face any visiting group, no matter how well briefed, in grasping the complexity of Portugal's education system and fully understanding all the issues. This report is, of course, the responsibility of the OECD review team. While the team benefited greatly from Portugal's CBR and other documents, as well as the many discussions with a wide range of Portuguese personnel, any errors or misinterpretations in this report are its responsibility.

Table of contents

Abbreviations and acronyms **11**

Executive summary **13**

Assessment and recommendations **19**

Education system context 19
Strengths and challenges 20
Policy recommendations 28

Chapter 1. School education in Portugal **39**

Economic and social context 40
The school system in Portugal 48
Evidence on quality, equity and efficiency 59
Notes 71
References 72
Annex 1.A. Current strategies to address student and community disadvantage 77
Annex 1.B. Portuguese Ministry of Education organisational responsibilities 78
Annex 1.C. Early school leaving 80
Annex 1.D. Enrolment in ECEC: 0-to-5-year-olds 81
Annex 1.E. Regional variation of performance 83
Annex 1.F. Regional variation in school socio-economic status 84

Chapter 2. The funding of school education **85**

Context and features 86
Strengths 101
Challenges 104
Policy recommendations 114
Notes 121
References 122
Annex 2.A. The funding of the education system through European funds 125
Annex 2.B. Expenditure by educational level 128

Chapter 3. The organisation of the school network **129**

Context and features 130
Strengths 148
Challenges 158
Policy recommendations 168
References 180
Annex 3.A. Private and public schools 187

Chapter 4. The distribution and development of human resources in Portugal 189

Context and features 190
Strengths 202
Challenges 209
Policy recommendations 225
Notes 239
References 240
Annex 4.A. Current expenditures 249
Annex 4.B. Staff salary and working conditions 250
Annex 4.C. Attractiveness of teaching profession 254

Annex A. The OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools 255

Annex B. Composition of the review team 257

Annex C. Visit programme 259

Tables

Table 1.1. Demographic indicators, 2004-14 47
Table 1.2. Student age and levels of Portuguese education system 50
Table 1.3. Students in basic and upper secondary education by type of offer, 2015/16 51
Table 1.4. Number of enrolled students by education level and type of education institution, 2015/16 54
Table 1.5. Selected indicators of student performance in science, PISA 2015 62
Table 1.6. Selected indicators of equity in student performance, PISA 2015 63
Table 2.1. Main indicators of expenditure on pre-school and school education, 2014 87
Table 2.2. Funding streams for current expenditure, 2016 91
Table 2.3. Funding streams for capital expenditure, 2016 93
Table 2.4. Expenditure on equity and inclusion policies 98
Table 3.1. Grouping and student selection 141
Table 3.2. Characteristics of initial VET programmes 144

Annex Table 1.A.1. Strategies to promote equity in schools 77
Annex Table 1.B.1. Portuguese Ministry of Education organisational responsibilities 78
Annex Table 1.E.1. Student performance means by NUTS III, PISA 2015 83
Annex Table 2.A.1. Main programmed actions and measurable targets by axis of the PO CH, 2014-20 126
Annex Table 2.B.1. Expenditure by educational level and sector, 2008-16 128
Annex Table 4.B.1. Percentage of teaching time devoted to tutorials 253

Figures

Figure 1.1. Map of continental Portugal 41
Figure 1.2. Subnational role in public finance by category 42
Figure 1.3. Annual GDP growth, 2002-16 43

Figure 1.4. Government financing conditions, 2002-16 44
Figure 1.5. Employment and social inclusion indicators, 2002-16 45
Figure 1.6. Changes in school-age population in Portugal, OECD and the European Union 47
Figure 1.7. Changes in the number of teachers and students by level of education, 2005-15 56
Figure 1.8. Percentage of decisions taken at each level of government in public lower secondary education by domain, 2011 57
Figure 1.9. Portuguese educational administration organisational chart 58
Figure 1.10. Educational attainment, 2010 and 2016 60
Figure 1.11. School enrolment of 3-5 year-olds 61
Figure 1.12. Relationship between school-level socio-economic status and average school performance, 2015/16 65
Figure 1.13. Year repetition rates (3rd cycle), 2015/16 66
Figure 1.14. Between-region variation in average school performance levels 69
Figure 1.15. Between-school variation in average performance levels (Gini coefficient) 70
Figure 2.1. Public and private expenditure on non-tertiary educational institutions as a percentage of GDP, 2014 86
Figure 2.2. Cumulative expenditure per student by level of education, 2013 87
Figure 2.3. Public budget for school education, 2005-16 89
Figure 2.4. Average student-teacher ratio for TEIP and non-TEIP schools, by quartile of disadvantage 112
Figure 2.5. Proportion of TEIP-recipient schools by quartile of disadvantage 113
Figure 3.1. Variation in average school size and number of schools per cluster, 2015/16 132
Figure 3.2. Student enrolment by type of provision and programme orientation, 2015/16 133
Figure 3.3. Private school enrolment 134
Figure 3.4. Level of student segregation across schools by socio-economic status (Gini coefficient) 139
Figure 3.5. Immigrant student distribution 140
Figure 3.6. Change in the number and proportion of students with SEN by type of school, 2010-17 143
Figure 3.7. Trends and distribution of the provision of VET programmes 145
Figure 3.8. Proportion of upper-secondary students enrolled in VET programme by level of school disadvantage 147
Figure 3.9. Change over time in school facilities, 2004-14 151
Figure 3.10. Change in graduation rates from upper secondary education, 2005 and 2015 153
Figure 3.11. Geographic variation in provision of vocational education and training (VET) 154
Figure 3.12. Change in graduation rates of VET students in upper secondary education, 2005 and 2014 156
Figure 3.13. Proportion of over-subscribed schools by quartile of disadvantage, 2015/16 160
Figure 3.14. Between- and within-region variation in rates of special education identification 167
Figure 3.15. Potential stakeholders in education 171
Figure 4.1. Distribution of teachers to students and proportion of temporary teachers, 2015/16 193
Figure 4.2. Professional development participation by level of personal cost and support 196
Figure 4.3. Monthly salary by temporary contract- or permanent-employment status and step in the teaching career 197
Figure 4.4. Lower secondary teachers' average salaries relative to earnings for tertiary-educated workers, 2015 203
Figure 4.5. Instructional practices and student outcomes 205
Figure 4.6. Percentage of lower secondary teachers' working time spent teaching, 2015 207
Figure 4.7. Teachers' view of the way society values the teaching profession 210
Figure 4.8. Index of student behaviour hindering learning, by school characteristics 212

Figure 4.9. Age composition of Portuguese teachers, lower secondary (3rd cycle) and upper secondary, 2000/01 to 2015/16 213
Figure 4.10. Average age of teachers (permanent and temporary contract) 214
Figure 4.11. Proportion of temporary teachers in a school by school-level index of socio-economic challenge 217
Figure 4.12. Distribution of class time during an average lesson 219
Figure 4.13. Monitoring teaching practices, PISA 2015 221
Figure 4.14. Principals' leadership 223
Figure 4.15. Principals' formal education, including leadership training 224

Annex Figure 1.C.1. Change in the share of early school leavers in EU countries, 2010-17 80
Annex Figure 1.D.1. Average hours in formal care during a usual week and full-time equivalent participation rates for 0-to-2-year-olds in formal childcare and pre-school services, 2014 81
Annex Figure 1.F.1. Average level of school disadvantage 84
Annex Figure 2.A.1. Distribution of ESI Funds in Portugal, 2014-20 125
Annex Figure 3.A.1. Number of pre-schools and schools by type of provision, 2015/16 187
Annex Figure 4.A.1. Composition of current expenditure in public educational institutions, 2014 ... 249
Annex Figure 4.B.1. Ratio of students to teaching staff in upper secondary education, by type of institution, 2015 250
Annex Figure 4.B.2. Number of teaching hours per year in general lower secondary education, 2000, 2005 and 2015 251
Annex Figure 4.B.3. Access to formal and informal induction programmes or activities 252
Annex Figure 4.B.4. Lower secondary teachers' statutory salaries at different points in teachers' careers, 2015 253
Annex Figure 4.C.1. Percentage of 15-year-old students intending to enter teaching profession 254

Boxes

Box 1.1. School Resources Review of Portugal – 2018 49
Box 1.2. Improving adult skills: The Qualifica programme 52
Box 2.1. What do we understand by equity in education? 97
Box 2.2. Equity funding in education 111
Box 2.3. School funding formula development 116
Box 2.4. Funding formulas to reduce inequalities of opportunity 117
Box 2.5. Linking educational research and policy 120
Box 3.1. National System of Qualifications (SNQ) 148
Box 3.2. Identification and intervention processes for students with SEN 157
Box 3.3. Stakeholder involvement in education 171
Box 3.4. Taking advantage of autonomy in Ontario, Canada 172
Box 3.5. Student assignment policies to reduce segregation 173
Box 4.1. Organisation of European teachers' working time, 2013/14 195
Box 4.2. Portugal and the state of New York's efforts to reform entry into the profession 200
Box 4.3. Urban teacher residencies (UTRs) in the United States 227
Box 4.4. Preparing for Diversity 230
Box 4.5. Types of teacher collaboration in schools in Ontario, Canada 234
Box 4.6. Preparing leaders in Singapore 237
Box 4.7. Networks for school leaders in the Flemish Community of Belgium 238

Abbreviations and acronyms

AET	*Apoio Educativo Tutorial* – Tutorial Support
AML	*Área Metropolitana de Lisboa* – Metropolitan Area of Lisbon
ANMP	*Associação Nacional de Municípios Portugueses* – National Association of Portuguese Municipalities
ANQEP	*Agência Nacional para a Qualificação e o Ensino Profissional* – National Agency for Qualification and VET
ASE	*Ação Social Escolar* – School Social Assistance
ATE	*Apoio Tutorial Específico* – Specific Tutorial Support
CBR	Country Background Report
CEF	*Cursos de Educação e Formação* – Vocational Education and Training Courses
CE	*Conselho Escolar* – School Council
CIM	*Comunidades Intermunicipais* – Inter-municipal Communities
CNE	*Conselho Nacional de Educação* - National Council of Education
DGAE	*Direção-Geral da Administração Escolar* – Directorate-General for School Administration
DGE	*Direção-Geral de Educação* – Directorate-General for Education
DGEEC	*Direção-Geral de Estatísticas da Educação e Ciência* – Directorate-General for Education and Science Statistics
DGEstE	*Direção-Geral dos Estabelecimentos Escolares* – Directorate-General for Schools
EC	European Commission
ECEC	Early Childhood Education and Care
ESF	European Social Fund
ESIF	European Structural and Investment Fund
GDP	Gross Domestic Product
IAVE	*Instituto de Avaliação Educacional* – Institute of Educational Evaluation
IEP	Individualised Education Plan
IGEC	*Inspeção-Geral da Educação e Ciência* – Inspectorate-General for Education and Science
IGeFE	*Instituto de Gestão Financeira da Educação* – Institute for Financial Management of Education
ISCED	International Standard Classification of Education
ITP	Initial Teacher Preparation
iVET	Initial Vocational Education and Training
MCTES	*Ministério da Ciência, Tecnologia e Ensino Superior* – Ministry of Science, Technology and Higher Education
MTSSS	*Ministério do Trabalho, Solidariedade e Segurança Social* – Ministry of Labour, Social Security and Solidarity
NUTS	Nomenclature of Territorial Units for Statistics
OECD	Organisation for Economic Co-operation and Development
PIICIE	*Planos Integrados e Inovadores de Combate ao Insucesso Escolar* – Integrated and Innovative Plans to Combat School Failure
PIRLS	Progress in International Reading Literacy Study
PISA	OECD Programme for International Student Assessment
PCA	*Percursos Curriculares Alternativos* – Alternative Curricular Pathways

PFAC	*Projeto de Autonomia e Flexibilidade Curricular* – Autonomy and Curricular Flexibility Project
PLNM	*Português Língua Não Materna* – Portuguese as a Second Language
PMSE	*Programa Mais Sucesso Escolar* – Programme for More School Success
PNPSE	*Programa Nacional de Promoção do Sucesso Escolar* – National Programme to Promote School Success
PO CH	*Programa Operacional Capital Humano* – Human Capital Operational Programme
PPP	Purchasing Power Parity
SANQ	*Sistema de Antecipação de Necessidades de Qualificações* – System for Anticipation of Qualification Needs
SEN	Special Educational Needs
SGEC	*Secretaria-Geral da Educação e Ciência* – Secretary-General of Education and Science
SNQ	*Sistema Nacional de Qualificações* – National System of Qualifications
SPO	*Serviços de Psicologia e Orientação* – Psychology and Student Counselling Services
TALIS	OECD Teaching and Learning International Survey
TEIP	*Territórios Educativos de Intervenção Prioritária* – Priority Educational Intervention Area
TIMSS	Trends in International Mathematics and Science Study
VET	Vocational Education and Training

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Executive summary

This report for Portugal forms part of the OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools. The purpose of the review is to explore how school resources can be governed, distributed, utilised and managed to improve the quality, equity and efficiency of school education. The analysis presented in the report refers to the situation faced by the education system in January 2018, when the review team visited Portugal. The most recent educational data used in this report reflects the situation during the 2015/16 school year.

The Portuguese school system has witnessed historic improvements in access, attainment and performance over the past 20 years. Portugal is fast approaching near universal enrolment for school-aged children since the extension of compulsory schooling to 18 in 2009. Enrolment rates of students between 3 and 5 years old in pre-primary education increased to 88% in 2014, with a goal of universal access by 2019. Between 2005 and 2015, the proportion of youth under 25 years of age who had graduated from secondary schooling jumped from half to four-fifths of young people, by far the largest increase among OECD countries. Furthermore, 15-year-old students in Portugal saw the greatest improvements in their science abilities of any OECD country as measured by the OECD Programme for International Student Assessment (PISA) between 2006 and 2015. Simultaneously the proportion of 15-year-old students scoring below baseline proficiency declined precipitously. These improvements in students' scientific skills were accompanied by similar substantial improvements in 15-year-olds' reading and mathematics skills. Likewise, Portuguese children in their fourth year of primary school have improved their mathematics skills tremendously over the past 20 years as evidenced by the Trends in International Mathematics and Science Study.

Despite these impressive accomplishments, Portugal faces significant challenges to achieve an excellent and equitable system of schools. Important differences in student outcomes persist for students from under-served backgrounds, including students from low-income families, families with low levels of parental education, immigrant students and others. The share of 25-64 year-olds who had completed at least upper secondary education, despite recent increases, is still far below the OECD average. The share of early school leavers is substantial and many of those fail to pursue additional training; 13 out of 100 18-24 year-olds have not completed secondary education and are not enrolled in any type of further training or education. Student repetition rates are also high. In Portugal, about 34% of 15-year-old students have repeated a school year at least once, almost 3 times as frequently as the OECD average. Additionally, significant performance gaps persist based on students' backgrounds, the schools they attend and the regions in which they live. The odds of a disadvantaged student being a low performer on the PISA assessment are seven times higher than the odds of an advantaged student, a worse rate than all but one other OECD country. Further, students in socio-economically disadvantaged schools in Portugal perform worse on PISA assessments, even after

accounting for their own socio-economic background. Finally, regional performance differences persist.

Based on the review's analysis of the strengths and weaknesses of the Portuguese school system, the review team makes the following recommendations to improve the effectiveness of resource use in Portugal.

Increase transparency, accountability and evaluation of the funding of school education

The Portuguese school system benefits from high levels of financial investment from public sources. It devotes 5.1% of its gross domestic product (GDP) on school education, a proportion higher than both the OECD average and its Southern European peers. Despite the comparatively strong financial commitment to education given the size of its economy, Portugal could improve the efficiency and effectiveness of how it uses these funds. Portugal sets the resources each school receives every year on the basis of a combination of factors, including the number of enrolled students, application-based targeted funding programmes, and a non-public algorithm for non-salary operational expenses. As a result, the criteria and decisions underlying school budgets are opaque to many stakeholders at different levels of the system. Furthermore, despite a wide range of data on students and schools and emerging systems for programmatic evaluation, Portugal does not consistently review the effectiveness of its resource expenditures nor make difficult decisions to shift resources away from less effective and towards more effective initiatives. There are rarely course corrections when project goals are unmet. Some programmes persist and are extended nationally, in some instances in the absence of clear knowledge about their impact or effectiveness. This can result in a series of overlapping and coincident projects.

Portugal should consider a shift away from its complex and obscure budgeting process by shifting gradually to a transparent, publicly-debated weighted student funding formula. This formula should be based on the true costs of school provision and equity considerations. Portuguese central authorities should also consider re-establishing a division within the Ministry of Education with planning and evaluation responsibilities. This unit could co-ordinate the formulation of a shared strategic medium- and long-term vision and estimate resource needs to achieve this vision. It might then prepare a medium-term expenditure framework to guide each annual budget process. Broad-based discussions should be initiated involving multiple stakeholders to identify measurable outcomes for the system: performance targets, metrics and progress monitoring processes. Critically, a culture change this significant will require building national and local staff's capacity to use outcome-based approaches to guide their work. Over the long-term, Portugal could consider a gradual shift to outcome-based budgeting procedures that increase funding for successful initiatives and cut those that are unsuccessful.

Ensure key priorities such as equality of educational opportunity receive sufficient financial support from stable sources of national funds

Portugal has developed a series of programmes intended to combat inequality for under-resourced communities and vulnerable students. Means-tested social support exists for all students from disadvantaged socio-economic backgrounds alongside specific programmes, instructional supports and additional resources for students struggling in school as well as schools facing concentrations of student need. Despite the existence of

these programmes, concerns persist about whether their funding levels are sufficient and more broadly about whether they are effective. Targeted funding for equity purposes in Portugal remains small – flagship programmes constitute only 1.4% of the educational budget – both by comparative standards and judged against levels estimated necessary to overcome opportunity gaps. As a consequence, schools serving high-needs communities receive relatively meagre additional resources, either human or otherwise. Further, within-system evidence suggests that these funding streams are not always targeted towards schools that have the greatest levels of need. Additionally, significant core activities of the educational system, including its equity strategies, rely heavily on international funds. Given the inherent unpredictability of international funds over the long term, key priorities for the Portuguese system are subject to changing international conditions.

Portugal should consider shifting away from addressing inequality of opportunity through a series of application-based, categorical funding initiatives that lack an overall strategy towards a comprehensive strategy for equity funding. In the near-term Portuguese authorities could consider developing a process to include a broad cross-section of educational stakeholders to develop a comprehensive equity policy that ensured programmes did not duplicate efforts and were adequately funded. This approach would be facilitated by an estimation of the true costs required to provide equal educational opportunities and would require a shift of resources away from current priorities such as universal reductions in class size and towards targeted support for students from under-resourced communities and who face learning obstacles. In the longer term, the most straightforward way to improve equity funding is through the development of a weighted student formula. In order to ensure that its existent and future supports for vulnerable students and communities are immune to fluctuations in international funds, Portugal should consider gradually absorbing equity funding priorities into the national budget.

Integrate decentralisation in education management with the promotion of school autonomy into a comprehensive strategy for effective governance of the education system

The current Portuguese government has clearly articulated the school functions which it hopes to transfer over to local control: the construction and maintenance of school buildings, the hiring and employment of non-teaching staff and after-school activities. Alongside these decentralisation efforts that allocate powers and responsibilities across governmental levels, Portugal is also undertaking efforts to promote school autonomy. However, some areas are not under consideration for devolving to local control, such as hiring and placement of instructional staff and the organisation of the school network. Autonomy for curriculum development has been broadened but it is still somewhat constrained. School autonomy, as conceptualised by Portuguese authorities, does not include broader types of school autonomy such as local responsibility for financial or human resources. Together, these patterns create a risk that both municipalities and school-level actors will understand their key autonomies to be primarily related to the operational and management side of educational endeavours. The decentralisation processes may also lead to undesired effects with respect to equity in education as a result of different capacity levels in schools across the country, if not accompanied by structures to support and monitor the process.

Portugal should consider integrating its current decentralisation goals in education into a comprehensive strategy for effective governance and embrace the challenge to shift its

current legalistic approach to a more systemic approach focusing on processes and governance culture. Portugal could explore various alternative governance structures. One sensible division would be to assign municipalities responsibility for all operational matters, including non-teaching staff responsible for operational management. Schools would then be granted further control over all resources (financial and human) which contribute directly towards student learning and development. The central government role could be to support municipalities and schools with capacity building efforts, with a particular eye towards assisting schools and communities in which weak governance and leadership skills exist. Some schools in Portugal have taken full advantage of their granted autonomies to develop a clear vision of effective teaching and learning and an overarching strategy for promoting innovative learning environments for their students. Portugal can invest in leadership development to promote the spread of these practices that break away from the predominant legalistic and bureaucratic approach towards educationally-focused school governance and leadership.

Increase learning and career development opportunities for teachers and school leaders and make the allocation of teachers more efficient and equitable

Portuguese school children benefit from an experienced, highly-qualified teaching staff. Portuguese teachers' salaries, adjusted for international differences in prices and income, are higher than the OECD and EU-22 averages. Even when compared within their country, Portuguese teachers can expect to earn 1.3 times as much as other tertiary-educated Portuguese workers. Portuguese teachers benefit from many policy, practice and classroom features that create the potential for the development of strong instructional and leadership skills within schools. Multiple formal positions, with dedicated work time, exist for teachers to guide the instructional and strategic directions of the school. Additionally, there is a mandated school governance structure in place that requires teacher consultation for all school decisions. However, while all of the above factors could contribute in theory to an environment of professional development and learning in schools, in practice many Portuguese teachers never participate in such activities as co-teaching or peer observation. Portuguese teachers rarely benefit from formal induction programmes, few cost-free opportunities exist for ongoing professional development activities and almost no classroom observations of teaching practice occur. Similarly, Portuguese school leaders have access to minimal ongoing professional development for the purposes of developing their instructional leadership capacities. They collaborate with other school leaders and participate in training at rates far behind peer countries. Some of these issues are being addressed by recently launched development programmes such as Autonomy and Curricular Flexibility Project (PFAC) and National Programme to Promote School Success (PNPSE).

Relatedly, while transparent standards exist at the national level for selecting and assigning teachers to schools, schools have limited ability to express their preferences for a specific candidate and teachers for a school profile. This may result in a mismatch between the needs of schools and teachers' interests and skills. This constrained-choice teacher assignment policy creates conditions in which some teachers are dissatisfied with the school in which they work, and this appears to disproportionately affect low-income and low-achieving students. In addition to the general mismatches between school needs and teacher interest, the temporary-contract teacher placement process results in frequent movement of teachers across schools and the delayed placement of teachers in schools. This leads to instability in the teaching force in schools, especially in high-needs areas, and creates an insider-outsider staffing structure.

Portuguese schools are not currently sites where adults engage in significant collective learning activities. Portugal's education sector should consider four levers for instructional improvement. First, Portugal should create formal induction and coaching supports for new and struggling teachers. Second, Portugal should work to establish professional learning communities in schools through capacity development and use of non-teaching time in educator teams. Third, Portugal can consider incremental steps to open up the classroom door to promote the sharing of strong practices and the development of pedagogical skills. As a first step, Portugal should develop the capacity of departmental co-ordinators and class heads to observe and provide regular feedback to teachers. Finally, Portugal should move incrementally towards providing meaningful feedback and appraisal for teachers. Portugal should consider investing in ongoing training in teacher evaluation for its school leaders. The initial goal of these appraisals should be primarily developmental in nature. Thus, the emphasis can be on ensuring the quality of the feedback is high, rather than on assigning a certain proportion of teachers to particular rating levels.

Given political concerns and cultural norms, Portugal could consider short- and long-term solutions to improve the mechanisms by which it allocates teachers to schools. In the short term, Portugal should develop a force of high-skill and high-motivation teachers who have priority placement in the most challenging school contexts and receive additional support and compensation as a result. Teaching candidates would apply to a simultaneous national placement process that would be used to assign teachers to high-needs schools. In the longer term, Portugal can explore a system-wide reform to its teacher placement process. Portugal should consider creating regional or local hiring competitions that use multiple screens and actors to preserve impartiality while requiring school and teacher to mutually agree on the final placement of a teacher in a school.

Assessment and recommendations

Education system context

There has been significant improvement in the outcomes of the Portuguese education system but significant challenges with educational attainment remain

The share of 25-64 year-olds in Portugal who had completed at least upper secondary education increased from 20% in 1992 to 47% in 2016; for those aged 20-24, 78% had completed at least upper secondary in 2016. Furthermore, 15-year-old students in Portugal saw the greatest improvements in their science abilities of any OECD country as measured by the OECD Programme for International Student Assessment (PISA) between 2006 and 2015. The average score in science increased from 474 in 2006 to 501 in 2015; simultaneously the proportion of 15-year-old students scoring below Level 2 (below baseline proficiency) declined from 24.5% to 17.4%. These improvements in students' scientific skills were accompanied by similar substantial improvements in 15-year-olds' reading and mathematics skills, trailing only one OECD country in their improvement rate. Though not as consistently, younger Portuguese students have also demonstrated improvements in their abilities. While Portuguese students in their fourth year of primary instruction have shown strong improvements in their mathematics skills over the past 20 years on the Trends in International Mathematics and Science Study (TIMSS), fourth year primary students have shown uneven patterns of gains and losses in their reading skills on the Progress in International Reading Literacy Study (PIRLS). Nevertheless, a large proportion (13%) of Portuguese students continue to leave school before completing secondary education and fail to secure a job or continue their education, repetition rates remain almost 3 times the OECD average (34% vs. 12%), and between one-fifth and one-quarter of Portuguese 15-year-olds lack baseline skills in mathematics, reading or science.

Substantial equity concerns exist in Portugal's schools, including wide socio-economic and regional variations in outcomes

Despite significant recent improvements in international measures of student knowledge and skills, important differences in student outcomes persist for students from under-served backgrounds, including students from low-income families, families with low levels of parental education, immigrant students and others. The odds of a student from a low socio-economic background being a low performer on the PISA science exam are seven times higher than a student from an advantaged socio-economic background, the second highest discrepancy in the OECD. Furthermore, the odds of a student repeating a year are four times higher among disadvantaged students than among their more advantaged peers, even after accounting for students' own achievement levels. First-generation immigrants score substantially worse on all PISA assessments than native-born peers. Along with evident performance differences between individual students, the concentration of under-served children in particular schools produces additional

inequalities in Portugal. Students in socio-economically disadvantaged schools in Portugal perform 41 score points worse in reading, even after accounting for their own socio-economic status. These school-level relationships between student-body composition and performance in maths and reading exist in national examinations as well. In addition to variation based on students' and schools' demographic characteristics, Portugal is home to large regional differences in student outcomes. 15-year-old students in western coastal regions and the central interior of the country perform relatively much better than those in the rural northern interior and the south of the country. This pattern echoes geographic performance differences for younger students on the TIMSS and for lower- and upper-secondary students on national examinations.

Strengths and challenges

Portugal invests substantial resources in school education as a proportion of its GDP; however, funding levels for key priorities remain insufficient

The Portuguese school system benefits from high levels of financial investment from public sources. In 2014, 5.1% of the added-value produced by the country, its gross domestic product (GDP), was devoted to financing pre-primary, primary and secondary education. This was not only well above the OECD average (3.4% of GDP), but also more than one percentage point higher than Southern European peers such as Italy and Spain. However, despite the high levels of investment as measured compared to the overall size of the Portuguese economy, its annual expenditure per student, corrected for differences in purchasing power across countries, is around 15% below the OECD average. As a result, significant core activities of the educational system, including its vocational network and equity strategies, rely heavily on international funds, particularly the European Social Fund (ESF). Given the inherent unpredictability of international funds over the long term, key priorities for the Portuguese system are subject to changing international conditions.

The financial crisis increased attention on the efficient use of resources but the current mechanisms for allocating funding to schools have inefficiencies and are opaque

Budget restraint due to the economic crises has increased awareness about the importance of efficiency in education and further fostered processes such as the consolidation of the school network that reduced the number of small schools and increased class sizes. Other current efforts that reflect the commitment to an efficient use of public resources include: the restriction of state funding to private schools only in geographic areas where public offer is insufficient; the centralisation of wage payments; and a more thorough monitoring of fraudulent sick leave. However, inefficiencies remain in the system as a result of fragmented decision-making authorities and budgetary responsibilities within the central administration and between vertical levels of the government. The entities responsible for planning the school network, which determines the bulk of educational expenditures, do not themselves bear the financial costs of over-spending. Furthermore, the process for defining both instructional and operational expenditure levels is opaque, understood only by a small number of central bureaucrats. This prevents open, democratic debate about the spending priorities of the system.

While programmes exist to promote equity for under-resourced communities and students, there is a lack of a system-wide strategy or sufficient levels of funds to promote equity

Portugal has developed a series of programmes intended to combat inequality for under-resourced communities and vulnerable students. Means-tested social support exists for all students from disadvantaged socio-economic backgrounds alongside specific programmes, instructional supports and additional resources for students struggling in school as well as schools facing concentrations of student need. Despite the existence of these programmes, concerns persist about whether their funding levels are sufficient and more broadly about whether they are effective. Targeted funding for equity purposes in Portugal remains small – flagship programmes constitute only 1.4% of the educational budget – both by comparative standards and judged against levels estimated in research required to overcome opportunity gaps. As a consequence, schools serving high-needs communities receive relatively meagre additional resources, either human or otherwise. Further, within-system evidence suggests that these funding streams are not always targeted towards schools that have the greatest levels of need. More broadly, while Portugal has a large set of programmes targeting particular dimensions of student need, many appear additive and to some extent overlapping, without a clear vision for an overall strategy to address the needs of under-resourced communities and students.

There is an incipient focus on programme evaluation to inform decision-making that benefits from a rich wealth of data, but funding is not related to goals and assessment of results, which limits system learning

Portugal collects a wide range of data on students and schools that could be used to highlight strengths and challenges in the system and steer resource allocation. Systems for evaluation have expanded over the past 10 to 15 years, with more widespread data collection and the production of internal and external project evaluations, a growing attention to results-based decision-making and the development of school and teacher evaluation frameworks. Future planning is underway to create additional applications to track school finances and human resources. Despite the potential for Portugal to leverage these resources to set goals, use multiple forms of data to review progress, disaggregate data for different populations and make decisions based on outcomes, these types of actions are insufficiently pursued in practice. There is not a systematic definition of shared outcome goals on which stakeholders agree. Interventions are not systematically evaluated to determine their efficacy. Further, there are rarely course corrections when project goals are unmet. During the review visit, system and school leaders were rarely able to articulate what the specific goals they held for a given project were, nor whether these goals had been accomplished. Not all projects are launched with a mechanism to evaluate them, either *ex ante* or *ex post*. Some programmes persist and are extended nationally, in some instances in the absence of clear knowledge about their impact or effectiveness. This results in a series of overlapping and coincident projects without an overall strategy and goals under which all the projects fit.

Over the past twenty years, Portugal has increased access to and attainment in school education but high levels of variation by background and region persist

Graduation rates from upper secondary education in Portugal have been climbing and are well above most OECD countries. Between 2005 and 2015, the proportion of youth under 25 years of age that graduated from secondary schooling jumped from 51% to 83%, by

far the largest increase among OECD countries for which there is available data. However, students' socio-economic backgrounds (and in some cases immigrant, language and ethnic backgrounds) remain highly predictive of their performance in school. These differences are often exacerbated by the concentration of students of particular backgrounds and with high levels of need in some schools. Between-school socio-economic segregation rates are high in Portugal, as are rates of immigrant isolation. These are produced by a variety of factors, including residential segregation, geographic assignment of students to schools, public rankings of schools and private schooling. Portugal also experiences high rates of between-school performance variation.

The central government has articulated clear priorities regarding which educational functions are to be decentralised to municipalities and schools, but these priorities do not align with promoting school autonomy and equity in student outcomes

The central government has clearly articulated the school functions which it hopes to transfer over to local control. The primary priorities the ministry and government currently articulate for decentralisation in education relate to the construction and maintenance of school buildings, the hiring and employment of non-teaching staff and peri-educational activities such as full-day enrichment activities and sports. Alongside the decentralisation efforts that allocate powers and responsibilities across governmental levels, Portugal is also undertaking efforts to promote school autonomy. Despite clearly articulated goals around decentralisation, the political leadership of the ministry is clear that some areas are not under consideration for local control: hiring and placement of instructional staff and the organisation of the school network. Autonomy for curriculum development has been broadened but it is still somewhat constrained. School autonomy, as conceptualised by Portuguese authorities, is largely limited to tailoring a part of the national curriculum to the specific needs and interests of its students but does not include broader curricular and pedagogical autonomy or other types of school autonomy such as local responsibility for financial or human resources. Together, these patterns create a risk that both municipal and school-level actors will understand their key autonomies to be related to the operational and management side of educational endeavours. As municipalities and parishes receive additional authorities over schools, they may hold these responsibilities closely, inhibiting school-level decision-making. Power play and conflicts of responsibility in education may arise at the local level, with different local authorities crowding out each other's autonomy. The decentralisation processes in education may also lead to undesired effects with respect to equity in education as a result of different capacity levels in schools across the country, if not accompanied by structures to support and monitor the process.

Portugal has succeeded where few countries have in smoothly rationalising its provision of school places and connecting schools into networks but challenges remain with the school clustering process

The Portuguese education system has witnessed a major process of consolidation in the past decade, leading to a considerable reduction of schools in the public network. Between 2004 and 2014, Portuguese educational authorities shuttered more than 47% of public education institutions – a total of 5 600 schools, compared to a decline of about 15% of students enrolled in primary education during the same period. Consolidation can be a disruptive experience for students and families, and often results in significant political headwinds for educational authorities. In Portugal, complementary policies such

as regular consultation with community stakeholders, provision of transport, investment in infrastructure capacity and the clustering of schools in networks, reduced the potential negative impacts of consolidation by improving the quality and capacity in the school network. Nevertheless, the level of integration across schools within clusters remains uneven. Some large clusters, either in geographic spread or number of schools are unwieldy to manage for small leadership teams. Some clusters successfully leverage teacher expertise across schools to build capacity, whereas others are characterised by competitive relationships between school faculties.

The physical infrastructure of schools requalified by **Parque Escolar** *is of high quality but significant concerns persist about the overall quality of school infrastructure*

In 2007, the Portuguese government launched an effort to modernise and improve public secondary school infrastructures, implementing a management and maintenance model that relied on a state-owned private company *Parque Escolar*. A strength of the *Parque Escolar* model is linking the design of the school building to the development of innovative and modern instructional spaces, such as advanced laboratories and flexible classroom layouts. Stakeholders express high levels of satisfaction with the infrastructure of schools intervened by *Parque Escolar.* However, outside of these 173 re-qualified schools, school infrastructure experiences various states of disrepair. In 2014, Portugal spent only 3.1% of its total public education expenditure on capital expenditures (OECD average: 8.4%) and between one-fifth and one-third of OECD averages on facility maintenance. This low level of investment, despite reported recent increases, results in difficult learning conditions in many schools. Some schools struggle to maintain facilities warm enough during winter months, in others classrooms experience leaking ceilings when it rains and stakeholders report that repairs are often delayed or do not happen at all. In 2015, 15-year-old students' principals reported an average of only 0.43 computers per student, 5th worst in the OECD.

Though efforts have been made to improve the profile of Vocational Education and Training (VET) pathways, the administration and provision of these programmes is still fragmented

Portuguese authorities have set a target that by 2020, fully half of secondary students would be enrolled in VET programmes, with the expectation that this would serve to keep more students in school, increase secondary completion rates and prepare students for Portugal's labour market. This goal has been accompanied by a shift in the provision of VET places from stand-alone professional training centres and schools to an integrated model where general secondary schools offer an array of educational pathways. In fact, 89% of public upper secondary schools offered some type of VET programme in 2015/16. This expansion of VET programming has been accompanied by increasing graduation rates from VET programmes in Portugal, from only 13% in 2005 to 56% in 2014. Portuguese educational authorities have taken specific steps to increase the status of VET programming through a range of initiatives to match the VET offer to labour market needs. These efforts include a coherent national qualifications framework that anticipates the skill requirements of the labour market and matches course offerings to them, an alignment of standards for vocational programming with Europe-wide benchmark standards (the European Quality Assurance in Vocational Education and Training) and a requirement that all VET programmes provide a double-certification of their graduates assuring that students demonstrate mastery of both academic and vocational skill sets.

Nevertheless, despite these impressive accomplishments, the administration and provision of VET programmes are still fragmented. Two parallel systems often fulfil overlapping functions. Such an organisation leads to similar qualification profiles, with varying intensity of work-based learning and quality of training. The separate governance of these networks, often operating under different regulatory frameworks and overseen by different ministries, hinders the ability to plan the courses that are offered, to decide which courses will be offered by each provider and to eliminate courses that have been determined to lead to weak employment prospects. Recent promising arrangements, such as the Inter-municipal Communities (CIM), the System for Anticipation of Qualification Needs, and The National Catalogue of Qualifications (CNQ), offer the possibility of a more joined-up governance of the VET system. While these systems could potentially permit an evidence- and stakeholder-informed planning process for VET courses, in practice, they need continued political commitment, sufficient staff with relevant knowledge and high levels of inter-municipal community involvement, to avoid VET course offerings that are duplicative or not connected to labour market needs.

Portugal maintains extremely high rates of inclusion for students with Special Educational Needs (SEN), yet too few resources are invested to support the success of students with moderate SEN in mainstream classrooms

Portugal has a long history of prioritising the inclusion of students with special educational needs (SEN), resulting in an extremely high level of school-level inclusion by international standards: 98.8% of SEN students were assigned to regular schools in 2016/17. Various supports exist to promote the success of students with special educational needs. Initial teacher preparation includes a required course for all teachers on how to support students with SEN. Resource Centres for Inclusion (CRIs) provide specialised support to schools and students in the form of direct services and knowledge support. Further, Communication Technology Resource Centres for Special Education (CRTICs) assess student needs and provide adaptive technologies to students with SEN. For students with severe needs, a reduced class size maximum of 20 students applies and these students frequently receive the in-class support of a SEN teacher. Despite high rates of inclusion, the quality of the education students with SEN receive is hampered by insufficient and inadequate resource investment and teaching skill gaps. SEN students with moderate disabilities particularly risk being overlooked as there are insufficient resources available to effectively include them. Due to full caseloads and responsibilities for teaching classes of students with severe disabilities, SEN teachers rarely have the time to provide meaningful support to students with less intense needs. Between 2010/11 and 2016/17, the ratio of SEN students to SEN teachers grew by nearly 2.5 students per teacher and most of the newly hired SEN teachers were temporary and part-time.

Portugal benefits from an experienced, dedicated and well-compensated teaching staff; nevertheless, Portuguese teachers do not feel valued by society and their time is not used wisely in schools

Portuguese school children benefit from an experienced, highly-qualified teaching staff. Teaching ages in Portugal imply that the typical teacher has over 20 years of teaching experience. Furthermore, over 91% of Portuguese teachers are fully certified, with no disparities in the levels of certified teachers by schools' average socio-economic status, urbanicity or public/private governance. Portuguese teachers' minimal starting and maximal salaries, adjusted for international differences in prices and incomes, are higher than the OECD and EU-22 averages. Even when compared within their country,

Portuguese teachers can expect to earn 1.3 times as much as other tertiary-educated Portuguese workers. Despite stated national commitments to education, and significant investment in both the salary and working conditions of teachers, Portuguese teachers do not perceive a high degree of societal esteem for the teaching profession. Only 10.5% of Portuguese lower secondary teachers consider teaching a valued profession in society, among the lowest in the 2013 Teaching and Learning International Survey (TALIS 2013). This perceived low-level of esteem may translate into low levels of interest in joining the teaching profession by young people. In 2015, only 1.3% of students indicated they planned to enter the teaching profession, among the lowest across all PISA-participating systems. As a result of various factors including high task demands, the freezing of teacher career progression, political discussions around teacher appraisal and challenges associated with student engagement, a perception exists among teachers that they are under-appreciated in society. Given the substantial financial investments the Portuguese system already makes in salary, student-teacher ratios and non-teaching time, this challenge appears to be one that will be solved not through additional resource investments but through cultural changes.

Opportunities exist for the development of instructional and leadership skills within schools but few effective structures exist to leverage these skills to improve the teaching practice

Portuguese teachers benefit from many policy, practice and classroom features that create the potential for the development of strong instructional and leadership skills within schools. As reported by their 15-year-old students, Portuguese teachers frequently employ the types of instructional practices shown to consistently correlate with increased learning outcomes. Further, school faculties in Portugal are characterised by collaborative, collegial relationships. At the system level, multiple formal positions, with dedicated work time, have been created within Portuguese schools for teachers to guide the instructional and strategic directions of the school. Additionally, there is a mandated school governance structure in place that requires teacher consultation for all school decisions. Finally, school cluster leaders have broad discretion in identifying effective second-tier leaders to join their leadership team. They can also deploy teachers to schools across their cluster in strategic ways; for example, to spread instructional skill across schools, to create faculties with the best chance to promote a positive adult culture or to align class need and teacher skill to ensure that the students with the greatest need are paired with the highest-skilled teachers. However, while all of the above factors could contribute to an environment of professional development and learning in schools in theory, in practice, according to TALIS 2013 results, many Portuguese teachers never participate in such activities as co-teaching (49.5% never co-teach) or peer observation (71.2% never participate). Few Portuguese teachers participate in formal induction programmes (only 20%), few cost-free opportunities exist for ongoing professional development (57% of teachers paid for some of their professional development activities) and even fewer are paid accompanied by release time (only 15%). Finally, only 41% of Portuguese teachers work in schools where school leaders observe lessons and even fewer external observations occur (31% of teachers report being observed).

Steps have begun to create greater curricular autonomy for teachers, yet concerns remain about the constraints the national curriculum imposes on innovative teaching practices

In 2017, Portugal launched a pilot project of curricular autonomy and flexibility in 235 schools. These schools, as part of plans developed by their Pedagogic Councils, may diverge from the national curriculum for up to 25% of the weekly compulsory teaching hours. Schools may create new subjects by combining existing ones. This would permit, for instance, the combination of a history and Portuguese class into a humanities class that would cover similar content in an integrated fashion. In other cases, the autonomy might take the form of small numbers of additional teaching hours to be allocated to the school and to be used at their discretion. Recipients of the autonomy contracts may also organise the school calendar in innovative ways. For instance, they may offer some subjects more intensively, but only for part of the year, or they may divide the school year in two semesters rather than the traditional trimester format. The intent of the Portuguese authorities is to extend this pilot to all public schools in 2018/19. Stakeholders reported mixed opinions on the degree to which these autonomies provided meaningful flexibility to the national curriculum. Some suggested these changes provided opportunities to dive more deeply into a set of skills and content, allowing them to address student misconceptions more thoroughly and employ innovative pedagogical techniques. Others reported that despite the autonomies provided, students still were expected to master the same total material and were tested on it in national exams. Still others indicated that the additional resources were insufficient to accomplish their stated goals.

The shifting age profile of Portuguese teachers and the structure of the teaching profession pose substantial staffing challenges, and some opportunities, in the coming years

As a result of various historical and current-day demographic and policy changes, the Portuguese teaching workforce is ageing. Factors contributing to the older teaching workforce include the overall ageing of the population, increases to the retirement age in response to the economic crisis, low interest in entering the teaching profession and selection and assignment structures that heavily favour existing teachers. A challenging facet of the ageing teacher profile is not only that the average or median teacher has become older due to shifts throughout the distribution of teaching ages, but that the proportion of teachers under 30 years old has shrunk to around 1% of all teachers. The shrinking number of new entrants into the profession and the coming wave of retirements will create both expertise voids and absolute supply problems if there are insufficient numbers of qualified candidates who enter the teaching profession. Even if the system is able to accommodate the wave of future retirements through the recruitment of a fresh cohort of teachers, there will be a missing generation of teachers with 10-15 years of experience who can preserve the skills currently present among Portuguese teachers. Furthermore, in some geographical areas, particular subject areas will be especially affected by coming retirements. While demographic patterns and retirement age policies clearly contribute to this ageing teacher profile, the structure of the teaching profession prioritises early entrance and seniority benefits. Entry into the professional teaching career requires many years of service as a temporary contract teacher which involves low salaries and frequent position changes. Once teachers have attained professional status, they progress from one salary step to the next based almost exclusively on years of service. No credit is given for years of work in the private sector. Combined, these provisions make it difficult to recruit mid-career changers or to attract early-career

candidates interested in exploring the profession. While the ageing profile of the teaching force clearly presents challenges, it may also present an opportunity to revitalise the profession with new ideas, higher skill levels and professional expertise from career changers. Much depends on how Portugal conceptualises and brands the teaching profession and opportunities for development within it.

Initial Teacher Preparation (ITP) and induction programmes do not sufficiently prepare new teachers with the skills needed to enter the classroom

The applied requirements of Initial Teacher Preparation (ITP) programmes are minimal and insufficiently rigorous to adequately prepare prospective teachers for the challenges of classroom teaching. The average skill profile of teaching candidates ranks 21st out of 22 areas of tertiary study in Portugal. Portugal has strong measures in place to vet the quality of the co-operating teacher who will work with prospective teachers; however, unlike 16 European countries that establish minimal credit hours for student teaching in schools, Portugal grants higher education institutions autonomy in deciding how many hours to require. Once through the formal stage of initial teacher education, early career Portuguese teachers receive minimal formal support. Portuguese teachers have access to the lowest levels of formal induction programmes of any TALIS 2013 system.

An inefficient system of teacher distribution through national assignment creates instability and inequities

While transparent standards exist for ranking teachers in priority order in the initial assignment process, schools and teachers have limited ability to express their preferences for a specific candidate or school profile. This results in a mismatch between the needs of schools and teachers' interests and skills. Nearly one-quarter (24%) of Portuguese lower secondary teachers "strongly agreed" or "agreed" that they would like to change to another school if it were possible. This constrained-choice teacher assignment policy creates conditions in which some teachers are dissatisfied with the school in which they work and this appears to disproportionately affect low-income and low-achieving students. In addition to the general mismatches between school needs and teacher interest, the temporary-contract teacher placement process results in frequent movement of teachers across schools and the delayed placement of teachers in schools. This leads to instability in the teaching force in schools, especially in high-needs areas, and creates an insider-outsider staffing structure. Local and regional disparities exist between schools in the proportion of temporary and permanent teachers on their faculties; schools serving greater proportions of students on social support and with low maternal education had higher proportions of temporary faculty. Further, urban areas have substantially higher actual student-teacher ratios than rural areas, despite a system that should provide for equal levels of assignment across the country.

Despite comparatively high staffing levels, repeated and ongoing concerns exist about the correct level of school staffing, particularly as it relates to non-teaching staff

Portugal has low student-teacher and student-assistant ratios compared to other OECD countries. Despite the relatively high staffing levels, various stakeholders in the educational community have concerns that these are insufficient. Principals representing 66.8% of Portuguese teachers reported they had insufficient support personnel for their school community in 2013. These concerns were echoed during the review team's visit. It

may be that the level of student need is higher in Portugal than in other countries. Or, it may be that Portuguese educators feel the need for support staff more acutely than educators in other school systems. As in other areas, the significant challenge in assessing the appropriate level of resource allocation in Portugal is that this topic has not been evaluated.

Formal leadership skills and responsibilities are insufficiently developed and overly focused on operational and managerial tasks

There is an insufficient conception of school leaders in Portugal as responsible for instructional leadership. According to TALIS 2013, Portugal has the lowest percentage of school leaders observing classroom instruction among OECD and partner countries, with only 5.2% reporting that they have observed classroom instruction "often" or "very often" in the past 12 months. Portuguese principals report participating in other activities such as promoting the use of new teaching practices, promoting responsibility for improving teaching skills or student outcomes at rates lower than the TALIS average. By contrast, Portuguese school leaders spend more time working on discipline problems, and especially on family interactions and the schedule of classes. This lack of focus on instructional improvement may stem from the fact that the role of school leader is not conceptualised as a profession into itself. Only 39% of Portuguese principals report having strong leadership training in their studies and a full 24% of Portuguese principals report having no leadership training, the highest proportion in TALIS. In addition to limited pre-service development, Portuguese leaders have access to minimal ongoing professional development for the purposes of developing instructional leadership capacities. They collaborate with other school leaders at lower rates than the TALIS average and less than 11% participated in a professional network or mentoring activity compared to a TALIS average of 51%. Over 23% of Portuguese principals of school clusters including lower secondary levels did not participate in any professional development in the past 12 months (TALIS average: 9.5%).

Policy recommendations

Improve governance using combined budget and education information systems, moving from a focus on inputs and rules to results and processes

While resources alone are not sufficient to ensure excellent and equitable outcomes, they are a pre-requisite to design smart policies that invest limited resources wisely. A funding system based on the allocation of inputs and the compliance with rules, even with an inclusive focus, does not maximise the capacities that are available in each school and local community to respond creatively to each student needs. A first step is to improve governance mechanisms to reduce inefficiencies and bureaucratic controls. One simple initial practice would be to eliminate duplicative budgeting efforts on all non-teaching staff and operational expenditures so that school administrators do not complete tasks rendered irrelevant by central algorithms. A more fundamental improvement would be the establishment of a co-ordination mechanism that aligns the goals of various entities responsible for planning and implementing the budget. Portugal might also consider increasing school level responsibility for budget management to promote responsivity to local needs while gradually increasing the allocation for non-staff expenditures to bring the country more in line with international standards.

Initiate steps to shift to a transparent, publicly-debated weighted student funding formula

The complex and non-transparent budgeting process generates too many distortions that might be corrected by shifting gradually to a transparent, publicly-debated weighted student funding formula. This formula should be based on the true costs of school provision and equity considerations. More resources should be allocated to students from disadvantaged backgrounds and to schools educating large proportions of these students. When funds are distributed via formula rather than the allocation of staff and resources, it creates the potential for local decision-making on the use of these funds. A funding formula increases efficiency only insofar as principals and school clusters have the managerial capacities to take advantage of this flexibility and allocate and use this funding with effectiveness. Important considerations exist to ensure these funds are used wisely; this requires capacity building at the school level. At the same time, municipalities and schools should be made responsible and accountable for results achieved with this funding or whatever other degrees of freedom are transferred to the local level.

Improve strategic thinking around use of funding to increase equality of opportunity

Portugal should consider shifting away from addressing inequality of opportunity through a series of nationally managed, application-based, categorical funding initiatives that lack an overall strategy towards a comprehensive approach to equity funding. The most straightforward way this could be accomplished is through the funnelling of these equity funds into the weighted-student formula described above. However, in the near-term, Portuguese authorities could consider developing a process to include a broad cross-section of educational stakeholders to develop a comprehensive equity policy that ensured programmes did not duplicate efforts and were adequately funded. This approach would be facilitated by an estimation of the true costs required to provide equal educational opportunities. Independent, but concomitantly necessary, of a comprehensive equity strategy, Portugal should consider increasing the share of the educational budget targeting students from under-resourced communities and who face learning obstacles.

Improve learning capacity of the system through more transparent and widely shared performance indicators, data access and a culture of planning and evaluation

Portuguese central authorities should consider re-establishing a division within the Ministry of Education with planning and evaluation responsibilities similar to those of the former Office of Foresight and Strategic Management in Education. This unit should co-ordinate the formulation of a shared strategic medium- and long-term vision and estimate resource needs to achieve this vision. It might then prepare a medium-term expenditure framework to guide each annual budget process. Broad-based discussions should be initiated, involving multiple stakeholders to identify measurable outcomes for the system: performance targets, metrics and progress monitoring processes. Critically, a culture change this significant will require building national and local staff's capacity to use outcome-based approaches to guide their work. Over the long-term, Portugal could consider a gradual shift to outcome-based budgeting procedures that increase funding for successful initiatives and cut those that are unsuccessful.

Initiate a plan to incorporate core budget priorities into national budget, reducing reliance on European funds

Portugal currently relies on international funding to support what have become key priorities in its educational strategy. To buttress against the potential decrease of these funds, Portugal should consider gradually absorbing some of these funds into the national budget. The first priority should be to shift the funding of equity programming to national funds. Equity funds currently represent a much smaller portion of the overall budget than other priorities supported by international funds, so this is a more easily accomplishable goal in the short term given fiscal realities. Such a step will likely require hard trade-offs between such goals as universal reductions in class size and targeted support for students from under-resourced communities. When economic conditions permit, Portugal can explore assuming more national responsibility for the budget for vocational programming.

Integrate decentralisation in education and promotion of school autonomy into a comprehensive strategy for effective governance of the education system

The currently proposed decentralisation and school autonomy strategies in Portugal are relatively narrow in scope. The decentralisation measures are primarily of an operational and administrative nature, focusing on more efficient subcentral administration of buildings, equipment, and hiring and allocating non-teaching staff, rather than on core educational improvement efforts. Portugal must review its priorities around decentralisation and school autonomy and determine whether these established priorities are likely to accelerate school improvement outcomes. Portugal should consider integrating its current decentralisation goals in education into a comprehensive strategy for effective governance and embrace the challenge to shift its current legalistic approach to a more systemic approach focusing on processes and governance culture. Portugal could explore various alternative governance structures. For instance, the education system could take advantage of its strong central decision-making powers, retain control of educational issues at the central level and work to promote system-wide steering strategies with a particular emphasis on promoting equity. On the other hand, Portugal could devolve most operational responsibilities to municipalities and instructional responsibilities to schools. It would need to articulate a clear division of responsibilities between actors such that municipalities and/or parishes were not tempted to infringe on the educational autonomies of schools. One sensible division would be to assign municipalities responsibility for all operational matters, including non-teaching staff responsible for operational management (security, cleaning, food services, etc.). Schools would then be granted further control over all resources (financial and human) which contribute directly towards student learning and development. The central government role would be to support municipalities and schools with capacity-building efforts, with a particular eye towards assisting schools and communities in which weak governance and leadership skills exist. Other blends of such approaches could potentially be successful.

Leverage school autonomy to improve the educational capacity of school clusters

Portugal should work to improve the educational governance and leadership capacities in school clusters to get the full benefits of increased school autonomy. Schools must develop a clear vision of effective teaching and learning and an overarching strategy for achieving quality education and school success in collaboration and consultation with

teaching and non-teaching staff, students and parents. Importantly, they must be able to implement this vision. Some schools in Portugal have taken full advantage of their granted autonomies to develop a clear vision of effective teaching and learning and an overarching strategy for promoting innovative learning environments for their students. Portugal can invest in leadership development to promote the spread of these practices that break away from the predominant legalistic and bureaucratic approach towards educationally-focused school governance and leadership.

Continue efforts to rationalise the school network, while preserving support for unique schools meeting the needs of under-served populations

Portugal must address the heterogeneous needs for school places, meeting the strong demand for new school places in some locations and anticipating a much lower and more scattered demand for school places in others. A system-wide and differentiated strategy to provide schooling places is needed to address this complex and varied demand. While rationalising the school network, Portugal should consider additional investment in schools providing high-quality schooling for unique populations, particularly because many under-served populations in Portugal live in poor, remote areas. For instance, the process for de-funding government-dependent private schools takes into account the location and capacity of public schools in the region, the school infrastructure and transportation services, but crucially does not consider specialised need or school performance. Therefore, Portugal must shift away from a unified, one-size-fits-all approach, and take a diversified, tailor-made and situational approach in the provision of schooling options. In particular, the consolidation process, which disproportionately affects remote, poor and under-served areas, should consider multiple criteria for the decision of closing down or de-funding schools that meet particular needs.

Tackle between-school segregation through complementary policies

Multiple strategies are employed internationally to promote integration and inclusion in education systems, with varying degrees of success and sustainability. Examples include: re-drawing of school catchment areas to include more diversity in the neighbourhoods they encompass; revising school assignment policies to de-prioritise proximity of residence to school as the dominant factor in placement decisions; offering increased choice to families between public schools with complementary educational and informational campaigns to empower all families to make best choices; establishing controlled choice systems that offer expanded choice only when selecting a school other than the default school; or the siting of schools with unique profiles (e.g. "magnet schools" offering unique curriculum, arts focus, or other specialised offers) in low-income neighbourhoods. While considering whether Portugal can learn from these policies and measures, and potentially adopt them, careful translation to the Portuguese context is essential.

Focus on improving the quality of learning for struggling students, rather than simply adding more teaching time

Portugal should consider shifting away from the dominant model to respond to students' struggles in schools of adding additional teaching time in the form of extra instructional time in mathematics and Portuguese, tutorials or year repetition. Rather, Portugal should explore alternative instructional and student support strategies in response to academic and social struggles. Such approaches could include: appropriate teacher training and

support; student counselling to orient students to second-chance education, accelerated education and the labour market; improved early-warning data systems to identify students at-risk of failure and assign trained staff to intervene with support early; or the development of clear, objective criteria including cognitive and non-cognitive factors to determine the appropriateness of students for year repetition and limiting repetition to a specific subject area or course in secondary education.

Reduce fragmentation of governance and operation of the VET network

Portugal should consider eliminating the overlapping provision of vocational programmes in comprehensive schools, professional schools and apprenticeship programmes in private training centres. Increased efficiencies could also be leveraged by closing less successful VET programmes. Freed resources could be allocated to reinforce the quality of human and physical resources of the remaining providers. While the system of needs anticipation has gradually permitted data-informed steering of the existing offer, greater efforts should be made to make the provision of VET courses less duplicative and more labour-market relevant. To improve the quality of quantitative estimates, Portugal should develop technical capacity within the National Agency for Qualification and Professional Education (ANQEP) to estimate the costs and benefits of offering each strand of VET courses across different networks of providers. To improve the effectiveness of steering bodies, Portugal should endow ANQEP with budgetary control over the VET offer and build more binding and effective contracts to signal the costs to municipalities of not participating in regional co-ordination efforts.

Develop a differentiated profile of VET, while pursuing the strategy of integration within secondary schools

Portugal should continue to smooth transitions across general and VET secondary programmes to allow students to experiment in the different pathways and ensure that VET courses are not dead-end tracks. Portugal should also facilitate transitions of VET students to post-secondary education, in particular, tertiary education. The jobs of the future will require some form of post-secondary training, but only 6% and 10% of Portuguese VET students progress to either long- or short-cycle tertiary education respectively. The existing regime of entrance examinations to higher education could be modified by re-structuring the contents of access examinations in two parts: a general component and a component of modules specific to each type of upper secondary education offer. In particular, entrance examinations should be designed to include modules aligned with VET curricula. Simultaneously improving secondary VET students' skills and the quality of higher education support will be critical to increase access and success. Higher education institutions and VET sector leaders can collaborate to identify VET graduates' skill and knowledge gaps and take steps to improve the transition by improving the VET programmatic curriculum and providing supports and transitional courses in higher education. Strong VET sectors crucially depend on the engagement of employers and the provision of work-based learning. VET sector leaders should reflect on the best way to incentivise companies to participate in apprenticeships that go beyond the relatively superficial current offerings. A stronger work-based learning component should not preclude solid general skill instruction be built into VET programmes. Finally, system actors must act to ensure that students are not funnelled into VET programming simply because they are struggling in school or because they come from a disadvantaged background.

Build capacity and increase staff support for the mainstreaming of moderate-needs special education students

Portugal must support its teachers to better meet the needs of moderate-needs special education students through increased training and staffing. Currently, while special educational needs teachers receive training in supporting the needs of SEN students, subject-area teachers have no requirements beyond their initial training to pursue expertise in this area. Subject-area teachers, as well as special needs teachers, can grow their skills in differentiating classroom content for all students. Mandating ongoing, job-embedded training with staff from resource centres for inclusion (CRIs) available to provide technical capacity building could be an effective strategy. Portugal must also invest additional resources in the form of special education teachers to support students in mainstream classrooms. A key premise in the inclusion of students with SEN in the mainstream classroom, in addition to its ethical justification, is that they will benefit from positive learning models. However, inclusion means more than simply placing students with SEN in the same classrooms or schools as other students. It requires thoughtful planning and intensive supports. To realise the promise of inclusion, the Portuguese education system needs to ensure that all students who have Individualised Education Plans (IEPs) that call for additional support within reading or mathematics classrooms, in fact, receive these supports.

Reconsider the teacher career structure to respond to shifting teacher demographics

Portugal should consider offering voluntary retirement buyouts with no pension penalty incurred. Introducing flexible retirement rules carries many benefits, with some pitfalls to avoid. Offering early retirement can provide a mechanism for ageing teachers to leave a cognitively and physically demanding profession in a dignified manner. It can also limit the negative effects of teacher absenteeism. Additionally, opening up additional teaching positions may stimulate new entrants into the profession. This infusion of new teachers could also receive cohort-wide training in line with national priorities to shape the development of the profession for the next generation. Finally, shifting the age profile of the teaching profession can reduce expenditures within the education budget by replacing high-salary senior teachers with lower-cost early-career ones. However, flexible retirement policies should be accompanied by other complementary labour market policies to avoid possible negative side effects. Opportunities for part-time teaching should exist to make early retirement a financial possibility. Teachers need clear and honest information on the benefits they can expect to receive if they retire early to assist with making an early retirement decision to avoid mis-estimation of their financial needs in retirement. As a mechanism to attract and retain new teachers to the profession and ensure they remain during their early improvement years, Portugal could consider shifting the largest salary increases to earlier in the career progression with flatter increases later on, resulting in an overall budget-neutral reform.

Explore intensive residency models for teacher preparation

Portugal should consider piloting a graduate-level training programme that prioritises the development of applied pedagogical skills in an intensive teaching residency. Such a residency would integrate aspects of traditional university classroom preparation with the on-the-job learning of alternative pathways into an immersive learning experience. The model in Portugal could include a selective application process targeting top performers

in bachelor's subject-area courses. This would ensure that these prospective teachers would meet the high subject-matter expertise standards. Candidates would then be placed for a one-year residency in a local school. Prospective teachers could in the bulk of their training in the classroom with a highly-effective experienced teacher, progressively taking more responsibility for leading the class. A smaller proportion of time could be spent learning with the cohort of residents at a local polytechnic or university. The effective development of this pilot depends on the quality of the polytechnic/university partnership, the skill of the host classroom teachers and the design of the residency pilot in such a way to evaluate its effectiveness. In order for the residency to provide the appropriate mix of skills, the co-operating polytechnic/university department will need to agree to design the programme curriculum to align with the goals of the project. Specifically, the coursework should efficiently introduce key theory around learning sciences, while primarily supporting teaching candidates in building skills in response to the realities they face in their classrooms. Residency programme leaders should work with school principals to identify high-capacity experienced teachers to serve as host classrooms for teaching candidates. Instructional as well as adult coaching skills are important in these roles. Finally, if the pilot programme is to provide valuable lessons for the broader development of teacher education in Portugal, formal evaluation structures should be in place. The design of such a pilot should consider the most appropriate actor to manage the pilot, either a unit with the Ministry of Education or the Ministry of Science, Technology and Higher Education, a joint venture between them or a non-governmental actor.

Examine short- and long-term approaches to better match teachers' skills and interests with schools' needs

Portugal's current teacher assignment policy does not permit a mutual match between the interests and skills of teachers and the needs of schools. As a result, it does not maximise either teachers' or students' interests. However, reform to this long-standing practice should preserve the advantages of the current system in terms of transparency and equity. The current process was developed to avoid local nepotism or cronyism and does so successfully. In the short term, Portugal should develop a force of high-skill and high-motivation teachers who have priority placement in the most challenging school contexts and receive additional support and compensation as a result. Teaching candidates would apply to a simultaneous national placement process that would be used to assign teachers to high-needs schools. Schools participating in the Priority Educational Intervention Areas (TEIP) programme could be the primary targets. Participants in this parallel placement contest would go through a screening process to ensure they had the appropriate beliefs and attitudes to work with students and families from different backgrounds. As a complement to the targeted recruitment and placement of teachers in under-served communities, Portugal could work with one or several polytechnics/universities to develop a graduate programme to build teachers' abilities to successfully meet the needs of groups of students who have traditionally been disfavoured in Portuguese society. In the long term, Portugal can explore a system-wide reform to its teacher placement process. Portugal should consider creating regional or local hiring competitions that use multiple screens and actors to preserve impartiality. Regional or municipal review panels could identify sets of qualified candidates who enter into a local hiring pool. These panels could include members from schools, municipalities and the ministry to balance local interests with national standards. The panel screen could then present a list of qualified candidates to school leaders, who would be free to pick from among the list. An alternative process could involve a system where school leaders

can view teacher profiles and exert some level of influence on the placement of a new teacher in the school. For example, school leaders could have veto power over a defined number of teachers if they felt that the profile of the teacher did not match their needs. There could be a more formal probationary period where, if a teacher was deemed ineffective in a particular school context within a set timeline, school leaders could request the re-assignment of this teacher to another context. While there are several methods to accomplish this end, the key is to achieve some level of mutual consent in placement between teacher and school.

Analyse staffing needs across educator category and revisit the appropriate balance

Portugal must address concerns around a shortage of operational assistants through a needs-assessment study. The study should examine what roles are currently performed by operational assistants, how their time is spent, what needs schools have that are currently unmet and whether operational assistants are the best staff category to fill these responsibilities. As part of this needs-assessment, it will be valuable to explore the extent to which concerns on staff shortages are manifestations of the need for support for students with behavioural disorders and/or special educational needs. If these are the primary needs schools experience, increased training for all staff in developing trauma-sensitive schools and building a supportive school culture may be a more efficient and effective use of resources than investing in untrained support staff.

Support schools to become learning organisations – for adults as well as students

Portuguese schools are not currently sites where adults engage in significant collective learning activities. Portugal's education sector should consider four levers for instructional improvement: i) induction, mentoring and coaching; ii) teacher teaming; iii) peer observation and feedback; and iv) formal appraisal for the purpose of growth. First, Portugal should create formal induction and coaching supports for new and struggling teachers. Portuguese schools already provide multiple leadership opportunities at departmental, class and school levels for its teachers. A shift in the conception of teaching leadership roles to involve more direct feedback on practice could have significant positive impacts on teachers' growth trajectories. Second, Portugal should work to establish professional learning communities in schools through capacity development and use of non-teaching time in educator teams. This can be accomplished through a combination of re-conceptualising the role of department co-ordinators and class heads, repurposing some portions of non-instructional time away from tutorials towards goal-oriented team meetings, and building the capacity of teachers to work in teams through system-wide professional development priorities. Third, Portugal can consider incremental steps to open up the classroom door to promote the sharing of strong practices and the development of pedagogical skills. As a first step, Portugal should develop the capacity of departmental co-ordinators and class heads to observe and provide regular feedback to teachers. This might be accomplished through the formal writing of this expectation into the roles and responsibilities of the position. Additionally, or alternatively, targeted professional development or working groups for these categories of educators could be used to build capacity for these mid-level leaders to observe and provide feedback. Finally, Portugal should move incrementally towards meaningful feedback and appraisal for teachers. Portugal should consider investing in ongoing capacity development support for teacher evaluation among its school principals

(including deputy and assistant principals). Principals should be paired with the external evaluators provided for in the current evaluation framework to build appraisal capacity throughout the school system, and especially at the school level. Once confident in the majority of evaluators' alignment, Portugal should reintroduce observation-based appraisals tied to teachers' progression past Steps 2, 4 and 6 of the teaching career. The initial goal of these appraisals should be primarily developmental in nature. Thus, the emphasis can be on ensuring the quality of the feedback is high, rather than on assigning a certain proportion of teachers to each of the five rating levels. Schools could also develop an internal component of the evaluation system that had as its products: i) a qualitative assessment of the teacher's practice; and ii) a personalised professional development plan based on the appraisal for each teacher rather than a rating system with incentives and consequences.

Leverage the network of Regional Training Centres to provide more incentives and opportunities to participate in ongoing professional development

The network of 91 Regional Training Centres that provide localised professional development to all schools in Portugal has broad credibility due to the centres' ability to respond to the authentic challenges faced by educators in schools around the country. These centres have histories of designing a sequence of learning events to build teachers' skill and promote collaboration to respond to these challenges. Portugal can leverage the credibility these centres have, as well as the practice-informed problems they address, to promote system-wide priorities. Clear priorities exist for ongoing professional development around: i) teacher-driven, in-class formative assessment; ii) responding to difference among students; iii) building student relationships and classroom management; and iv) the use of ICT in the classroom. Portugal should leverage the Regional Training Centres to build skills in teachers around the country in these areas. To complement the bottom-up, volunteer-reliant existing model of Regional Training Centres, Portugal will need to invest additional resources in the centres to allow them to recruit external expertise, increase the centres' organisational capacity, and potentially to provide teachers release time or remunerate them for their time participating in ongoing professional development.

Reconceptualise educator career development, including re-imagining formal leadership roles as professional pathways

The Portuguese education system already has a strong concept of the formal school leader as a career teacher who must bring instructional expertise to the role. Portugal should build off this conception of principals as instructional leaders to expand expectations that they are the strategic and pedagogic leaders of the school. This requires re-envisioning the roles of school leaders as professionalised ones that mandate candidates acquire additional skills beyond the ones they developed as teachers. School leaders should have formal training in educational strategy, system management and adult learning. These should complement the training required of department heads in school management, teacher evaluation or pedagogical supervision. By linking the development of skill sets across roles, Portugal can create a sequenced, professional pathway for teachers to take on additional leadership responsibility, from classroom teacher to department head, to assistant/deputy principal to cluster principal. Once in the role, school principals continue to benefit from opportunities for growth and development. Portugal should develop more explicit connections between school leaders from various clusters to allow leadership teams to collaborate and learn from each other. Explicit allocation of resources to free up

school leaders' time and strategic decisions about the leadership developmental areas on which to focus are important. Further, as principals develop expertise over the course of their tenure in the role, they should be provided with the opportunity to mentor other principals. Portugal could consider creating formal opportunities for cross-school leadership for successful cluster principals.

Chapter 1. School education in Portugal

This chapter presents an overview of the political, economic and demographic context of Portugal. It also provides a brief description of structures and trends in the Portuguese school system for international readers. Portugal is a small open economy, on the westernmost edge of continental Europe. Following the late democratisation of its institutions in the 1970s, the country widened access to education with compelling results. While prior to the democratic revolution 25% of the population did not know how to write or read, by 2016 almost half the working-age population had at least completed upper secondary education. The efforts have ensured universal access to school and also clear improvements in quality. The Portuguese education system witnessed the largest improvement in 15-year-olds' scientific literacy among OECD countries between 2006 and 2015. Still, important challenges remain. Political reforms in the country prioritise greater delegation of responsibilities to municipalities and decision-making autonomy at the school level. Building capacity for a smooth delegation of authority over school resources is crucial. Despite expanded access, substantial equity concerns exist in the provision of schooling. Large proportions of students repeat years, school attainment does not consistently produce labour market success and students' socio-economic backgrounds still strongly influence their level of school attainment. Finally, high dropout rates and regional disparities hinder the effectiveness of the Portuguese education system.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Economic and social context

Portugal is situated on the Iberian Peninsula, in southwest Europe. Most of its territory faces or is surrounded by the Atlantic Ocean. Its 92 225 square kilometres include a mainland and two autonomous regions: Azores – comprising nine volcanic islands – and Madeira – comprising three main islands and several islets. Continental Portugal shares its northern and eastern borders with Spain and includes a coastline that extends for 2 601 km. Portugal has 10.3 million inhabitants. Most of these (53%) live in predominately urban areas, making it the 9th most urbanised country in the OECD (OECD, 2016[1]). The country has two metropolitan areas: the capital Lisbon (2.8 million inhabitants) and the city of Porto (1.7 million inhabitants), both on the country's coast.

Portugal is a democratic nation. Its current political regime emerged from a non-violent military coup, on the 25th of April of 1974, effectively replacing the previous authoritarian system. The New State (*Estado Novo*) lasted for 41 years, one of the longest dictatorial regimes in Western Europe during the 20th century. Education policy in the country is deeply shaped by the late democratisation of its political institutions, which underlies several of the challenges still found in the education system. More recently, economic constraints, demographic trends and aspirations for government decentralisation have influenced education policy priorities in the country.

A complex yet centralised governance system

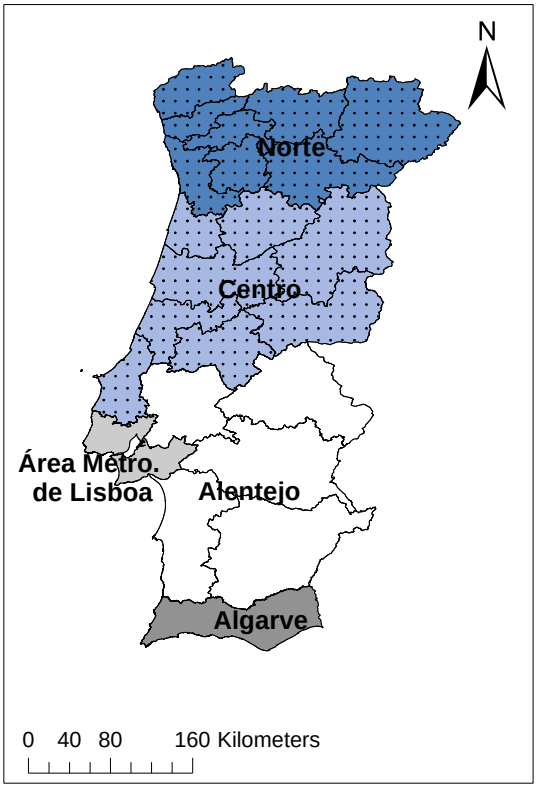
Portugal is a semi-presidential republic, which joined the European Union (EU) in 1986. The Constitution of the Portuguese Republic (1976) governs the separation of powers into the legislative (the Assembly of the Republic), the executive (the Government) and the judiciary (the Constitutional Court as well as Administrative, Civil and Criminal Courts) branches. The President of the Republic – elected every five years – is the State's Chief, whose duties are to represent the country, as well as supervise and guarantee the regular functioning of democratic institutions. The President is also vested with the responsibility of commanding the Armed Forces, approving or vetoing legislation and nominating the Prime Minister, after approval of the Assembly of the Republic. The Assembly of the Republic is the national parliament, composed of 230 members who are elected by popular vote every 4 years.

The executive power in Portugal is shared across three administrative tiers: central, regional and local. The central government is divided into executive departments headed by their respective ministers who are nominated by the Prime Minister. The local level is sub-divided in 308 municipalities (*concelhos*) and 3 091 civil parishes (*freguesias*). Each municipality has executive and deliberative representation. The Municipal Chamber, composed of a President – the mayor – and other elected members (*vereadores*) acts as the executive body, whereas the Municipal Assembly supervises all municipal activity. At the sub-municipal level, civil parishes are governed by a Council (*junta de freguesia*) and an Assembly. Regional level organisation is rather unusual. The Portuguese Constitution established a political division of Portugal into two Autonomous Regions (Azores and Madeira) and 18 districts on the Continent. However, no formal regional administration exists on the Continent. Supra-municipal administration is generally provided by such entities as Metropolitan Areas, Regional Co-ordination and Development Commissions (*Comissões de Coordenação e Desenvolvimento Regional* – CCDRs) or inter-municipal communities (*comunidades intermunicipais* – CIMs), which often have intertwining and overlapping functions.[1] Most regional approaches are related to the use of EU Structural and Investment Funds, put forth in the Partnership Agreement with the EU for 2014-20

(OECD, 2016[1]).[2] The five territorial units in continental Portugal – and to which the Review will refer – are the North (*Norte*), Centre (*Centro*), Lisbon Metropolitan Area (*Área Metropolitana de Lisboa*), Alentejo and Algarve (NUTS II). The review also often uses NUTS III regions – subdivisions within the larger NUTS II regions and coincident with the division into inter-municipal communities and metropolitan areas – to conduct regional analyses (see Figure 1.1).

Figure 1.1. Map of continental Portugal

NUTS II and III regions



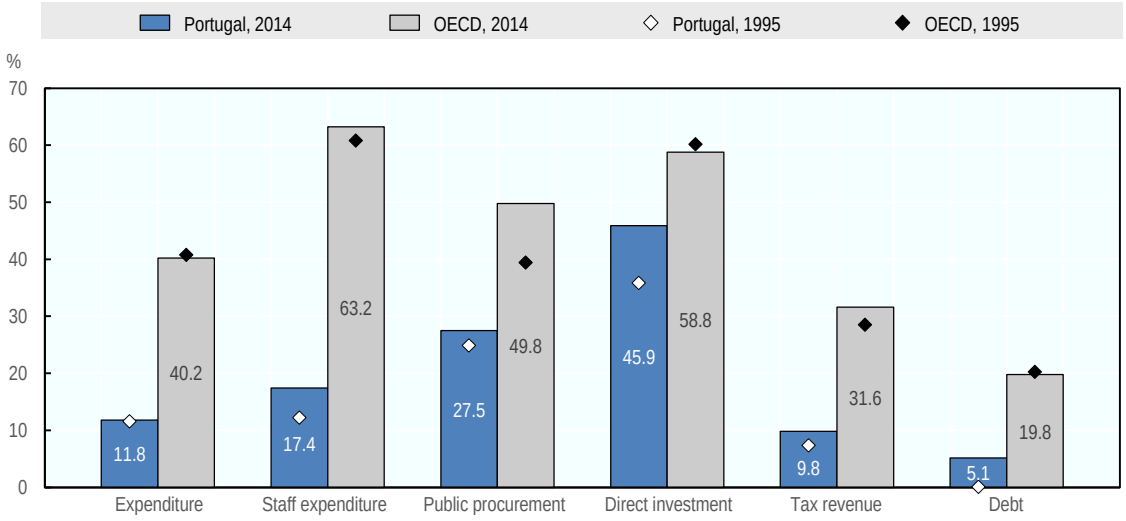
Source of administrative boundaries: Direção-Geral do Território (2016*), Official Administrative Maps of Portugal - Version 2016* [*Carta Administrativa Oficial de Portugal - Versão 2016*], http://www.dgterritorio.pt/cartografia_e_geodesia/cartografia/carta_administrativa_oficial_de_portugal_caop_/caop__download_/carta_administrativa_oficial_de_portugal___versao_2016/ (accessed on 8 December 2017).

Despite its complex administrative division, public governance in Portugal is relatively centralised. Given its low share of subnational spending (11.8%), Portugal is the 6th most centralised country in the OECD. Tax revenue at subnational levels is only 9.8% of central government expenditures, which compares to a significantly higher average share of 31.6% across OECD countries (Figure 1.2). Local level governmental fragmentation is also below most OECD countries, with an average of three municipalities per 100 000 inhabitants (OECD, 2016[1]). Most strategic decisions are executed by the central government, according to the annual state budget. The education system is no exception. Decisions on hiring and distribution of human

resources across schools, teachers' compensation or total schools' budget are all made at the central level of administration (see Chapters 3 and 4).

Figure 1.2. Subnational role in public finance by category

As a percentage of central government expenditures



Source: OECD (2016), "Country note on Portugal", in *Regional Outlook 2016: Productive Regions for Inclusive Societies*, http://www.oecd.org/cfe/regional-policy/regional-outlook-2016-portugal.pdf.

Notwithstanding, Portugal is in the midst of a long-term and multi-sector process of decentralisation. Central authorities have gradually sought to promote the delegation of funding and management of responsibilities to subnational levels of governance. The education sector has been one of the spearheads of this process. Successive governments have transferred to municipalities the management of non-teaching staff, school buildings, the provision of extracurricular activities and school transportation. In 2015, selected municipalities signed delegation contracts to provide autonomy in the distribution of all types of school funding, except for teachers' salaries. The pilot project is targeted at assessing the capacity of those 14 municipalities to manage the funds provided and evaluating the potential to scale up this localised control to the rest of the country.

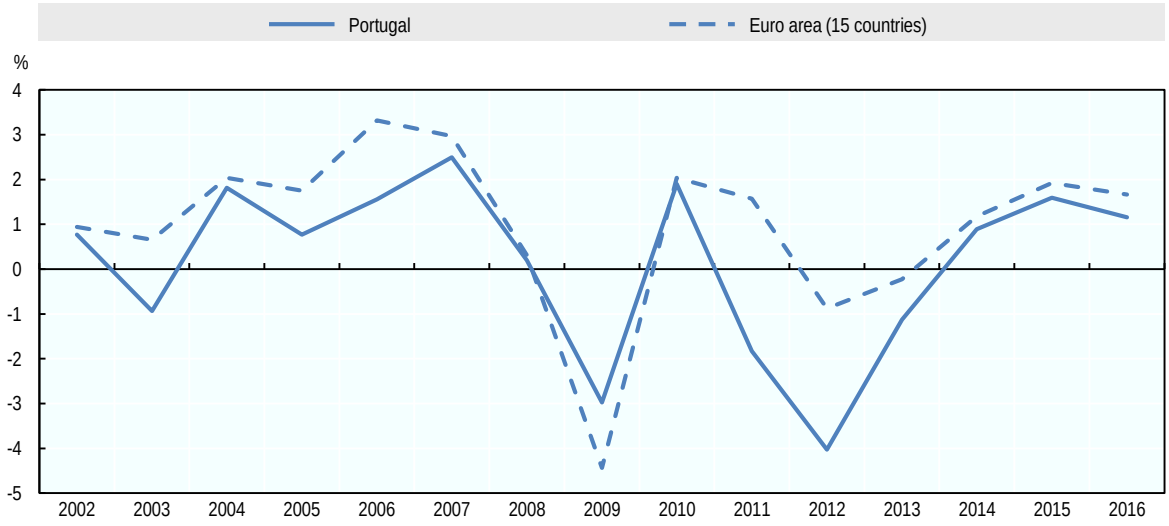
The economy is recovering from a deep recession

Portugal is a small open economy. It exports about 40.6% of its production, mainly machinery, transportation equipment and textiles. Labour costs are relatively low, compared to European standards, and the GDP per capita is 71% of the OECD average (OECD, 2017[2]). There are also marked regional differences. Lisbon's GDP per worker – the highest in Portugal – is 29% above the national average and 56% higher than the GDP per worker in the North region (OECD, 2016[1]). Labour productivity is low, which reflects both low intensity of productive capital and gaps in workers' skills (OECD, 2017[2]).

The Portuguese economy experienced a deep recession in the aftermath of the international financial crisis. In 2012, GDP contracted to levels below 2003. The decline was significantly larger than the average of Euro area economies for that year, due to

major macroeconomic imbalances and an increasing public budget deficit. Since then, economic activity has recovered at a sluggish pace, in line with the Euro area (Figure 1.3). The gradual comeback has been mostly propelled by the recovery in private consumption (European Commission, 2017[3]).

Figure 1.3. Annual GDP growth, 2002-16

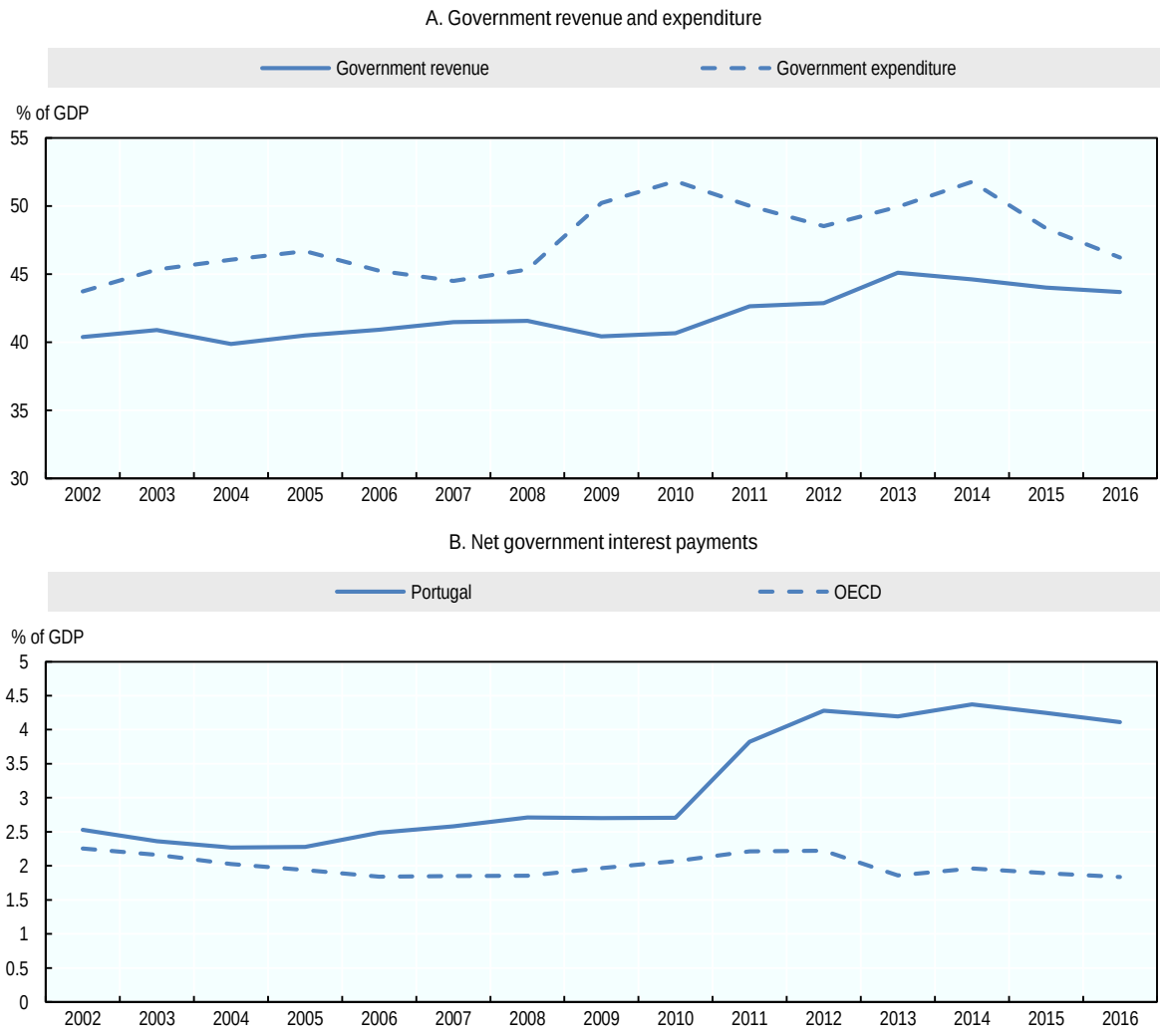


Source: OECD (2017), OECD Economic Outlook Database, Economic Outlook No 101 - June 2017, https://stats.oecd.org/index.aspx?DataSetCode=EO.

Consecutive years of high public deficits – higher governmental expenditures than revenues – have put government activity under intense international scrutiny. As public deficit escalated to 11% of GDP and public debt to 111% in 2011, financing conditions became perilous, far exceeding economic convergence criteria agreed upon with other EU countries.[3] As a result, the Portuguese Government, the International Monetary Fund (IMF), the European Commission (EC) and the European Central Bank (ECB) agreed on a three-year economic adjustment programme initiated in May 2011. The adjustment package included EUR 78 billion in loans (equivalent to 44% of total GDP in 2011). The programme contained large-scale structural reforms aimed at promoting growth and job creation. Among these reforms, measures related to the education system included programmes to tackle low educational attainment and early school leaving, as well as efforts to improve the quality of secondary education and vocational training (European Commission, 2014[4]; 2014[5]). Moreover, the Government agreed to tight fiscal measures to reduce government expenditure and guarantee the long-term sustainability of public debt repayment.

New fiscal measures translated into growing government revenues. Simultaneously, public expenditure dropped 5.6 percentage points between 2010 and 2016 (Figure 1.4). During the adjustment period, government net interest payments proved difficult as a result of unfavourable financing conditions. As of 2016, the country had the largest interest payment as a percentage of GDP among OECD countries (OECD, 2017[6]). Therefore, public debt repayment has become a public funding priority, competing with other sectors of public concern, such as education.

Figure 1.4. Government financing conditions, 2002-16

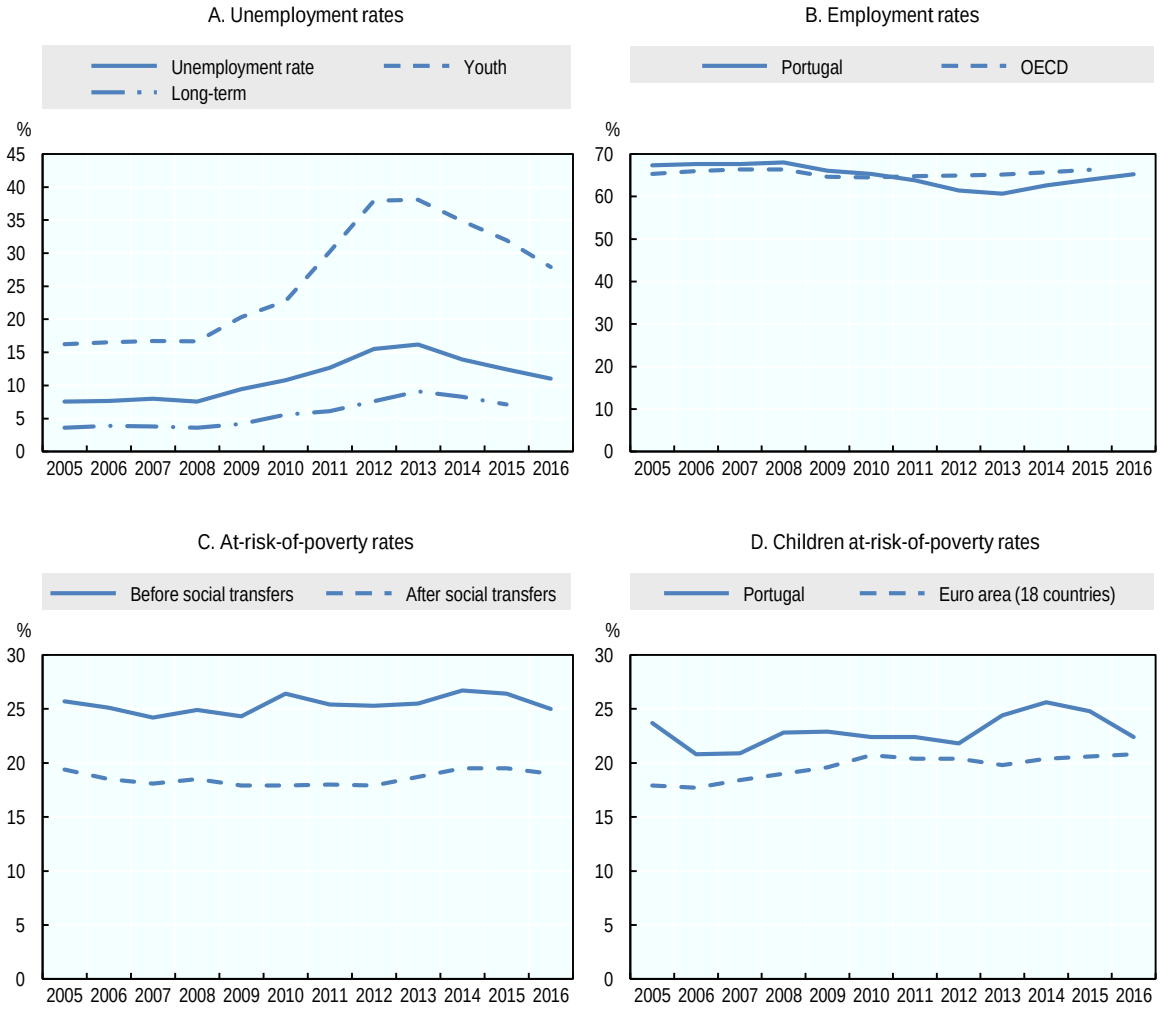


Source: OECD (2017), OECD Economic Outlook Database, Economic Outlook No 101 - June 2017, https://stats.oecd.org/index.aspx?DataSetCode=EO.

The downturn in economic activity had a strong impact on the labour market. The unemployment rate peaked at 16.2% in 2013 (Figure 1.5, Panel A). The proportion of employed workers has since recovered rapidly (Figure 1.5, Panel B). Nonetheless, the employment rate is still 3 percentage points lower than the one registered in 2008 and below the OECD average (Figure 1.5, Panel B), as it is still significantly affected by the challenging conditions for investment. In fact, overall unemployment remains higher than in the OECD (Portugal: 9.7%; OECD: 6%, in 2017) but compares favourably with other Southern European countries (OECD, 2017[6]). As in other OECD economies, unemployment is significantly higher among young workers, who experienced a worsening in employment conditions during the period. The unemployment rate for 15-24 year-olds increased by about 17 percentage points to 38.1% in 2013 (Figure 1.5, Panel A). These trends were in line with the upsurge of long-term unemployment – i.e. active population unable to find a job for at least 1 year – whose rate more than doubled between the years prior to the crisis and 2013 (Figure 1.5, Panel A).

Nevertheless, Portugal is experiencing a gradual economic recovery and an associated improvement in labour market conditions. The unemployment rate is expected to steadily decrease to 7.4% in 2021 while the economy gradually accelerates with the support of EU funds (European Commission, 2017[3]; Portuguese Ministry of Finance, 2017[7]).

Figure 1.5. Employment and social inclusion indicators, 2002-16



A. Youth unemployment rate measures the share of unemployed people between 15 and 24 years old over the active population within the same age band. The long-term unemployment rate is the percentage of unemployed persons for one year or more, over the active population.
B. The employment rate measures the number of employed persons over the total population.
C. The at-risk-of-poverty rate measures the share of people whose equivalised disposable income falls below 60% of the equivalised median disposable income. The equivalised disposable income is calculated by factoring in the age composition of the household and its total disposable income. More details in the Eurostat Glossary: http://ec.europa.eu/eurostat/cache/metadata/en/ilc_esms.htm.
D. Children at-risk-of-poverty rates are measured for people aged 0-17 years old.
Sources: OECD (2017), *OECD Labour Force Statistics 2016*, http://dx.doi.org/10.1787/oecd_lfs-2016-en; Eurostat (2017), "At-risk-of-poverty rate by age group - EU-SILC survey", *Social Inclusion and Social Policy Indicators*, http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tessi012&plugin=1.

Nevertheless, the recovery in employment has been felt unevenly across sectors, reflecting the productivity structure of the Portuguese economy. The Portuguese labour market is significantly polarised: returns to higher education are still substantial (Sousa, 2016[8]), but there are few positions in middle-qualified occupations, relative to other European countries. The recovery in employment rates was mainly attained through job creation in low-qualified occupations, mostly in the tourism sector, and anchored at the minimum wage value – 42% of the average and 58% of the median wage of full-time workers in the country as of 2016 (OECD, 2017[9]).

Despite the fall in GDP and high unemployment levels, the proportion of individuals at risk of slipping into poverty remained relatively stable (Figure 1.5, Panel C), settling at 25% before social transfers and 19% after transfers in 2016. However, the relative nature of the at-risk-of-poverty measures may mask a real deterioration in the living conditions of those at the bottom of the income distribution if the median income also declines, as was the case in Portugal. In fact, between 2010 and 2014, the poorest 10% of households witnessed a 26% reduction in their disposable income. Among OECD countries, this was only surpassed by those in Chile and Greece (OECD, 2015[10]). The risk of poverty for children increased after 2012 and remains high (22.4% compared to 20.8% in the Euro Area in 2016; Figure 1.5, Panel D). Children's poverty rates are a growing concern in OECD countries, as poverty in this age group is now higher than among 65-year-olds and older (OECD, 2015[11]). Portugal mirrors this trend, as 18.2% of children lived in poor households compared to 10.2% among the elderly in 2013 (OECD, 2015[10]).[4]

A fast ageing population and a new wave of emigration

The number of inhabitants in Portugal has been declining since 2009. The decrease in total population primarily reflects new migration trends and diminishing fertility rates. Natural population growth – i.e. the difference between live births and deaths in the country – has been persistently decreasing (Table 1.1). As a result, similar to other OECD countries, projections indicate that the Portuguese population will age at a fast pace (United Nations, 2015[12]). By 2030, it is predicted that for every 100 inhabitants aged 15 to 64 there will be 44 people aged 65 years old or more – above the EU average of 39 in the same year (European Commission, 2015, pp. 361-385[13]). On the other hand, the decrease in the school-aged population (0-19 year-olds) has been steeper than the school-aged population declines of OECD and EU countries (Figure 1.6). The projected demographic trends are expected to have a significant impact on the reallocation of public resources among competing priorities. With student numbers plummeting, a reallocation of public resources towards pensions' schemes and healthcare is anticipated. In 2014, public pension spending amounted to 13% of GDP, substantially above the OECD share of 7.9% (OECD, 2015, p. 325[14]). Nevertheless, in order to keep the sustainability of the public pensions system, the retirement age in Portugal has been gradually increased, reaching 66 years and 3 months in 2017. The downward sloped trend on the fertility rate and the consistent growth in life expectancy imply a potentially similar pattern of retirement policies in future years. Such pressures, in tandem with the decreasing number of required teachers, may also suggest a future increase in the average age of the teaching workforce.

The economic downturn in Portugal had severe impacts on migration patterns, adding to an already negative natural growth since 2009. While between 2004 and 2008 a higher inflow than outflow of migrants contributed to a positive growth rate of the population, a sharp decline in immigration starting in 2009 reversed this trend. The largest inflows of

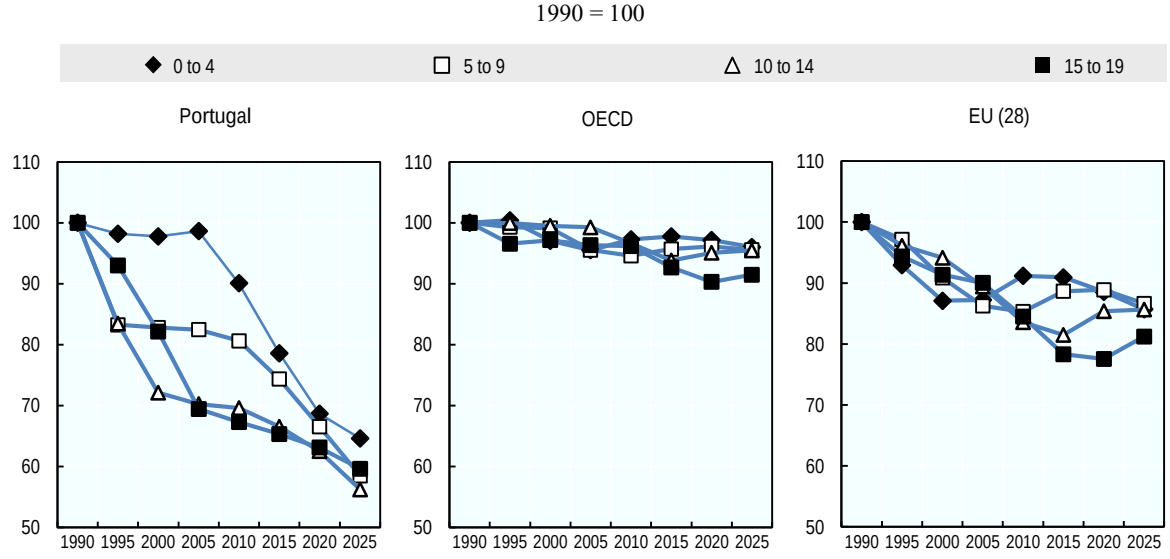
migrants are and have traditionally been from Brazil. However, post-recession, the immigration profile changed considerably. The number of Brazilian immigrants in 2014 fell to less than half of the registered inflow in 2012. On the other hand, the percentage of inflows coming from China more than doubled their average between 2004 and 2013, mainly due to incentives for business settlement and facilitated visa conditions (OECD, 2016, p. 292[15]). Nevertheless, the largest foreign-nationality populations residing in Portugal as of 1 January 2017 are Brazilian (81 300), Cape Verdean (36 600), Ukrainian (34 500), Romanian (30 400) and Chinese (22 600) (Eurostat, 2018[16]). Long-term emigration varied substantially during the period, peaking at 53 800 individuals in 2013 but falling to 40 400 in 2015 (INE, 2016[17]). In 2015/16, immigrant students represented 3.5% of school-aged students enrolled in Years 1-9 and 4.6% of school-aged students enrolled in upper secondary.

Table 1.1. Demographic indicators, 2004-14

	Growth per 1 000 inhabitants						Level (thousands of individuals)
	2005	2010	2013	2014	Average 2004-08	Average 2009-13	2014
Total	1.6	-0.1	-5.7	-5.1	1.7	-2.6	-52.5
Natural increase	0.2	-0.5	-2.3	-2.2	0.2	-1.1	-22.5
Net migration	1.4	0.4	-3.4	-2.9	1.5	-1.5	-30

Source: OECD (2016), *International Migration Outlook 2016*, http://dx.doi.org/10.1787/migr_outlook-2016-en.

Figure 1.6. Changes in school-age population in Portugal, OECD and the European Union



Source: OECD (2016), Historical Population Data and Projections (1950-2050), https://stats.oecd.org/Index.aspx?DataSetCode=POP_PROJ.

For short-term emigrants, the net out-migration patterns are even more stark, with 134 600 residents leaving the country in 2014, and 93% of those being of working age. Such levels of outflowing population are only matched by the Portuguese emigration cycle to Europe in the 1960s and 1970s. However, the profile of the outgoing population is now different. Permanent emigration rose substantially among the young – a 169% spike between 2009 and 2012 for those aged 20 to 34 – and the more qualified (INE, 2016[17]). Despite the slowdown in the outflow of migrants and a gradual return to migratory balance as the economy started recovering, a number of challenges are expected from a "brain drain" of young qualified workers leaving the country.

The school system in Portugal

Education goals and current priorities

The Constitution of the Portuguese Republic (1976) dictates that access to education is a legal right for all citizens (Articles 43, 72-75). It is the goal of public administration to promote the democratic access to education as an end in itself but also as a means for promoting equality of opportunity and the reduction of economic, social and cultural inequities. Education also aims to equip children with the full development of character, imbuing them with the spirit of tolerance, mutual understanding, solidarity, responsibility, social progress and active participation in democratic life.

The Base Law of the Education System (Law no. 46/86, 1986) reinstates and translates the principles enshrined in the Constitution into a distribution of governance responsibilities and the legal framework for the private provision of education. It also aims to fulfil other overall goals of the education system such as the sustainability of national identity, the preservation of historical and cultural heritage, awareness of spiritual, aesthetic, moral and civic values vis-à-vis the balanced physical development of children, as well assuring the recognition of different cultures. Education in Portugal is also understood as a means to develop the ability to perform productive work and to participate in active life, according to the individual's interest and capabilities.

Policy priorities of the current government in the field of education include:

1. The universalisation of access to pre-schooling by 2019.
2. The expansion of upper secondary graduation rates to 90%.
3. The reduction of student dropout and year repetition rates in primary and lower secondary in half.
4. The provision of additional support to low-achievers and students from disadvantaged backgrounds.
5. The involvement of 600 000 adults in education and training by 2020.

This review assesses these goals in light of the current configuration of the Portuguese education system as of January 2018 (see Box 1.1).

Box 1.1. School Resources Review of Portugal – 2018

The qualitative reflections in this report reflect the state of the Portuguese education system at the time of the review visit in January 2018. Administrative data presented are from the 2015/16 school year, the most recently verified data by the Portuguese authorities at the time of the report's drafting in spring 2018. Several new initiatives and reforms were planned and implemented in the months following the review visit. These include:

- Reforms to the **TEIP programme** as part of its next implementation cycle.
- New law on the **inclusion of students with Special Educational Needs (SEN)** and a shift away from a medical diagnosis model for identification of students with SEN.
- Changes to the **student assignment process** requiring families to use their legal address and prioritising low-income students' applications to over-subscribed schools.
- **Unfreezing of the career progression** for teachers, including associated increases in compensation.
- Expansion of the **curriculum autonomy** pilot to all public schools.
- Planned **reduction of class size** for the 2018/19 school year.

Equity and inclusion are guiding principles of education policy in Portugal. In order to help achieve these goals, central authorities provide additional support usually by means of targeted programmes. In order to achieve similar educational opportunities for children, means-tested support to students from disadvantaged socio-economic backgrounds, School Social Assistance (*Ação Social Escolar* – ASE) has for over 30 years covered families' expenses on such items as school textbooks, meals and transport. For additional support to schools in disadvantaged environments, successive governments have since the mid-1990s experimented with the deployment of targeted funds for schools in Priority Educational Intervention Areas (*Territórios Educativos de Intervenção Prioritária* – TEIP). TEIP schools, representing just under 16% of the public school network, develop their own response strategies to address particular needs and submit proposals to central authorities that decide on the suitability for additional funding. Recently, in order to tackle early school leaving and improve the quality of learning environments for a broader swathe of students, the National Programme to Promote School Success (*Programa Nacional de Promoção do Sucesso Escolar* – PNPSE) focuses on educational interventions at the beginning of each education level. Finally, the law on inclusive education also sets the principles for the inclusion of special needs students in regular schools, aiming to promote equity. The current framework for strategies to address student disadvantage can be found in Annex 1.A.

Portuguese educational authorities – in co-operation with the OECD Education 2030 project – have also developed a new encompassing framework for teaching, learning and assessment. The framework establishes the key competencies for learning, through the definition of the new Profile of Students at the End of Compulsory Schooling (*Perfil dos Alunos à Saída da Escolaridade Obrigatória*), published in June 2017. It establishes

Essential Learning Objectives (*Aprendizagens Essenciais*) for each education level. The new framework was tested in the 2017/18 school year in a set of 235 public and private schools. Implementation is monitored and supported by higher education institutions in the country, in collaboration with the OECD. Plans are underway to extend its reach to the whole network of schools in 2018/19.

Structure and curricular organisation

The Portuguese school system is organised in three sequential levels: early childhood education and care (ECEC), basic education and secondary education. In line with OECD countries, children enter the education system through kindergartens (*jardins-de-infância*). Pre-school education – level 02 of the International Standard Classification of Education (ISCED) – is offered for children between the ages of 3 and 5, in either public pre-schools or government-dependent private centres, the latter of which offer both early childhood care (ISCED 01) and pre-school education (ISCED 02).

Compulsory education typically starts at the age of 6, when children enrol in basic schools (ISCED 1-2). Basic compulsory education (*ensino básico*) is organised in three study cycles, with varying lengths. The first cycle – elsewhere called primary education – comprises the first four years of ISCED 1 under the responsibility of a single teacher. The second cycle lasts for two years and is organised in interdisciplinary classes under the responsibility of one teacher per subject. The third cycle of basic education, comparable to lower secondary education (ISCED 2) and lasting 3 years, furthers the specialisation of the curriculum with one teacher responsible for each subject area or group of related subjects. At the end of the third cycle, students (typically aged 15) transition to (upper) secondary education (*ensino secundário*), corresponding to ISCED level 3. Table 1.2 provides a brief overview of the structure of the pre-tertiary system.

Table 1.2. Student age and levels of Portuguese education system

	Age and schooling year/level														
Modal age at start of school year	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Year				1	2	3	4	5	6	7	8	9	10	11	12
Cycle				1st cycle				2nd cycle		3rd cycle					
Education level	Pre-primary			Basic									Secondary		
ISCED (2011) level	ISCED 02			ISCED 1						ISCED 2			ISCED 3		

Note: For a full diagram with secondary pathways and post-secondary education, see Diagram of the Portuguese Education System on the OECD Education GPS website: http://gpseducation.oecd.org/Content/MapOfEducationSystem/PRT/PRT_2011_EN.pdf.
Source: Ministry of Education (2018), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Portugal,* http://www.oecd.org/education/schoolresourcesreview.htm.

Formal schooling in Portugal is compulsory for students until 18 years old or until the completion of upper secondary if students complete their studies before the age of 18. Secondary education is organised in both general and vocational education pathways. In the general track, students select between four strands of sciences-humanities courses and a set of technological courses which are gradually being phased out. Slightly more than half the students enrol in scientific or humanities courses (52.7%), selecting one of four curricular areas: science and technologies, social and economic sciences, languages and humanities or visual arts. While the scientific-humanities strand is geared towards further

studies at the tertiary level, other pathways offer vocationally-oriented courses. Professional programmes (*cursos profissionais*), apprenticeship programmes (*cursos de aprendizagem*), specialised artistic courses (*cursos artísticos especializados*), education and training courses (*cursos de educação e formação* – CEF) and the recently discontinued vocational programmes (*cursos vocacionais*) are mainly geared towards integration in the labour market and comprise part of the vocational education and training (VET) sector in Portugal (see Chapter 3), which enrols about 41% of young students in upper secondary education.

A non-negligible portion of students (8%) attends basic education under specific programmes other than the regular curricular pathway, suited to their profiles (Table 1.3). These include basic level specialised artistic courses, education and training courses (CEF),[5] alternative curricular pathways and pre-vocational courses, adapted to struggling students' specific cultures and interests (see Chapter 3).

Table 1.3. Students in basic and upper secondary education by type of offer, 2015/16

Type of offer/Level of education	1st cycle	2nd cycle	3rd cycle	Upper secondary education	Total
General	404 124	219 349	324 300	210 259	1 158 032
From which in Sciences-Humanities courses	x	x	x	206 346	206 346
From which in Technological courses	x	x	x	3 913	3 913
Specialised artistic	303	1 029	1 181	2 454	4 967
Alternative curricular pathways (PCA)	774	2 164	3 495	x	6 433
Education and training courses (CEF)	x	66	2 433	506	3 005
Professional courses	x	x	230	112 395	112 625
Vocational courses	x	1 539	25 035	5 244	31 818
Apprenticeship courses	x	x	x	26 010	26 010
Total enrolment of young students	405 201	224 147	356 674	356 868	1 342 890
Adult learning courses	2 840	6 695	17 840	34 670	62 045
Total enrolment	408 041	230 842	374 514	391 538	1 404 935

x : Category not applicable.
Note: Enrolment in adult learning courses include individuals in recurrent classes (*ensino recorrente*), education and training courses for adults (*Educação e Formação de Adultos* – EFA), certified modular training (*Formações Modulares Certificadas* – FMC) and in the national system of prior learning assessment and recognition (*Sistema Nacional de Reconhecimento, Validação e Certificação de Competências* – RVCC).
Source: Adapted from DGEEC (2017), Estatísticas da Educação 2015/2016 [Education Statistics 2015/16], http://www.dgeec.mec.pt/np4/96/%7B$clientServletPath%7D/?newsId=145&fileName=DGEEC_DSEE_2017_EE201520164.pdf, Table I-1.3.

Basic and secondary education in Portugal also provides a wide array of courses for adult qualification and potential early school leavers. Second-chance educational programmes

for adults generally aim at providing individuals with relevant qualifications for the labour market. The certification of skills acquired outside of the formal education system fall under the umbrella of the recently created Qualifica programme (Box 1.2). The programme aims to increase adults' access to training courses to build skills related to their employment needs, and it facilitates the formal recognition and validation of prior learning. Programmes of Qualification in Basic Skills (FCB) are targeted to adults aiming to acquire basic literacy in reading, writing, mathematics and information technologies. Adult Education and Training Courses (EFA courses) are targeted at individuals aged 18 or over in need of improving their qualifications; these account for 5% of enrolment in ISCED 3. Additionally, a System of Recognition, Validation and Certification of Competences (RVCC) formally validates learning gained in different contexts by adults who seek to obtain an academic or vocational qualification. While an important current educational priority, adult education is out of the scope of this report. See the OECD (2018[18]) *National Skills Strategy* for a recent evaluation of adult education in Portugal.

Box 1.2. Improving adult skills: The Qualifica programme

Prioritising labour market reintegration through relevant qualifications became critical in the aftermath of the economic downturn in Portugal. However, economic recovery has been hindered by historically low rates of educational attainment, considerably behind the OECD average. The Qualifica programme (2017) intends to tackle this concern. The strategic priority of the programme is the improvement of adult qualification and the promotion of lifelong learning. It is publicised as a wide-reaching policy package, aimed to cover 600 000 people by the end of 2020. The plan replaced the New Opportunities programme, non-operational since 2013, with similar policy objectives. The success of the Qualifica project hinges on a network of adult learning centres with teaching and guidance staff, known as Qualifica Centres. These fulfil the functions of informing, counselling and steering adult workers looking to improve their qualifications. The government established just over 300 Qualifica Centres through the end of 2017. The education and training obtained is also fully integrated with the National Catalogue of Qualifications (CNQ), a system for the standardisation of professional qualifications. In order to improve implementation, the government also created an online tool to help adults document their educational and professional paths – the Qualifica Passport. This tool helps individuals identify learning opportunities that suit their needs based on their particular prior education and training experiences.

Main objectives

The Qualifica programme aims to fulfil several objectives:

- Increase qualification levels and improve employability.
- Significantly reduce illiteracy rates.
- Promote individual engagement in lifelong learning.
- Bring educational attainment rates to the level of other European countries.
- Align the curricular offer with labour market needs and strategic priorities.

Measurable goals

By 2020, the programme aims to fulfil the following measurable goals:

- 600 000 participants involved in adult learning.
- 50% of the economically active population will have completed at least upper secondary education.
- 15% of adults will be engaged in lifelong learning activities (25% by 2025).
- 40% of 30-34 year-olds will have earned a higher education degree.

Sources: OECD, (2018[19]), *Skills Strategy Implementation Guidance for Portugal: Strengthening the Adult Learning System*, http://dx.doi.org/10.1787/9789264298705-en; Qualifica Programme (n.d.), *Qualifica*, http://www.qualifica.gov.pt (accessed on 22 February 2018).

To complete general secondary education, students in Portugal must take national examinations. National exams are common tests undertaken by every student at the relevant school year. The students sit the exams in the subjects specific to their strand of studies, typically completing two in Year 11 and another two in Year 12. The exams fulfil two functions in the system. They are both a formal requirement for graduation from secondary school, and the exam scores may be used to gain admission to tertiary education. Candidates to public tertiary education are centrally placed by the government according to available slots, student demand and each student's candidacy grade. The candidacy grade depends on the final graduation grade and the scores in the final exams. Final graduation grades in each subject are computed as the weighted average of the school grade and the grade at the national exam for that subject (with weights of 70% and 30% respectively). The quantitative candidacy grade is then assigned a weight by the tertiary educational institution and the department to which the student applies. The candidacy grade must weigh a minimum of 50% in the admission decision. Each tertiary education institution can set the weight of the national exams scores within a band of 35% to 50% of the total score for admission.

In addition to upper secondary exams, there are national examinations at the end of basic education (Year 9) in Portuguese and mathematics. There are also national assessments in basic education (*provas de aferição*), carried out in the middle of each education cycle namely the Years 2, 5 and 8. In contrast with earlier testing regimes that focused on measuring the particular performance of students and schools, these tests are mainly used for overall assessment of the system. They are also provided to teachers to inform them of the achievement of specific students. Reports provided to families are qualitative in nature, describing students' skills without reporting a score to students or families, though scores are computed and averaged at the school level. Central level authorities then analyse these school-level scores to generate a report on the ability of each school to provide a quality education.

Organisation of the school offer

The school offer in Portugal is guaranteed by both public and private providers. The public school network is organised in clusters (covering 98% of all primary, lower and upper secondary public schools) and non-grouped schools. School clusters aggregate

schools from one or more education levels under the same school leadership team. Organisational leadership is assigned to a principal – supported by a number of deputy principals and school co-ordinators – and school governing councils composed of representatives of each school. School clusters typically group between 4 and 7 schools but vary widely from as few as 2 to as many as 28 schools under a single administration. The organisation of the public school offer in clusters reflects a major consolidation process initiated in 2005. It sought to reduce the number of isolated schools, prevent social exclusion and scale up pedagogical capacity and efficiency gains in larger school networks. Establishing school clusters was also intended to facilitate transitions across educational levels and improve communication between central authorities and schools since there are now only just over 800 public school units in Portugal (see Chapter 3).

The public school network enrols most students (80%). However, the proportion of those attending public schools varies with the level of education – from about 88% in basic education schools (years 1 to 9) to only 54% in pre-school institutions (Table 1.4). Public pre-primary education is generally guaranteed by pre-schools under the responsibility of the Ministry of Education, but also by private, and often government-dependent institutions, which often also offer crèche education (ages 0 to 3) under the Ministry of Labour, Solidarity and Social Security. Since 2015, 2 years of non-compulsory, pre-primary education are offered free of charge to all children aged 4. The anticipated expansion of universal early childhood education to 3-year-olds in the medium term is expected to create additional capacity challenges to the public offer at this level of education. Public provision of basic and secondary education is the independent responsibility of the Ministry of Education.

Table 1.4. Number of enrolled students by education level and type of education institution, 2015/16

Education level			Number of students	Number of educational institutions	Distribution of students across levels (%)	Students attending public schools (%)	Students attending government-dependent private schools (%)	Students attending independent private schools (%)
All	ISCED 0-3		1 664 785		100	79.6	8.9	11.5
Pre-primary	ISCED 0		259 850	6 114	15.6	52.9	30.8	16.2
Basic	ISCED 1-2		1 013 397	7 009	60.9	86.8	4.9	8.3
	ISCED 1	1st cycle	408 041		24.5	87.5	2.3	10.2
		2nd cycle	230 842		13.9	86.2	6.8	7.0
	ISCED 2	3rd cycle	374 514		22.5	86.4	6.5	7.1
Secondary	ISCED 3		391 538	963	23.5	78.7	4.6	16.7

Note: The distribution across type of education institutions refers to the number of students enrolled. The data in the table above refer to youth and adult education and include the autonomous regions. ISCED 0 data on private school attendance include both ISCED 01 and 02 and encompass children enrolled in private subsidised pre-schools (IPSS).
Sources: Adapted from DGEEC (2017), Estatísticas da Educação 2015/2016 [Education Statistics 2015/16], Table I-1.1, supplemented by DGEEC administrative data, 2015/16, http://www.dgeec.mec.pt/np4/96/%7B$clientServletPath%7D/?newsId=145&fileName=DGEEC_DSEE_2017_EE201520164.pdf.

Enrolment in public schools follows a set of legally defined criteria. When the demand exceeds the offer of places in a given school, the following priorities for the selection of students apply, in order: i) having special educational needs status serviced in that school; ii) being enrolled in the same school in the previous year; iii) having siblings enrolled in the school; iv) the students' legal address; and v) the parents' work address. New for the 2018/19 academic year, students receiving social support will have preferential status after the above factors are applied in an attempt to increase opportunities for low-income students and increase socio-economic integration in schools. In addition, the legal address is confirmed by the tax declaration of families to avoid that they give false addresses.

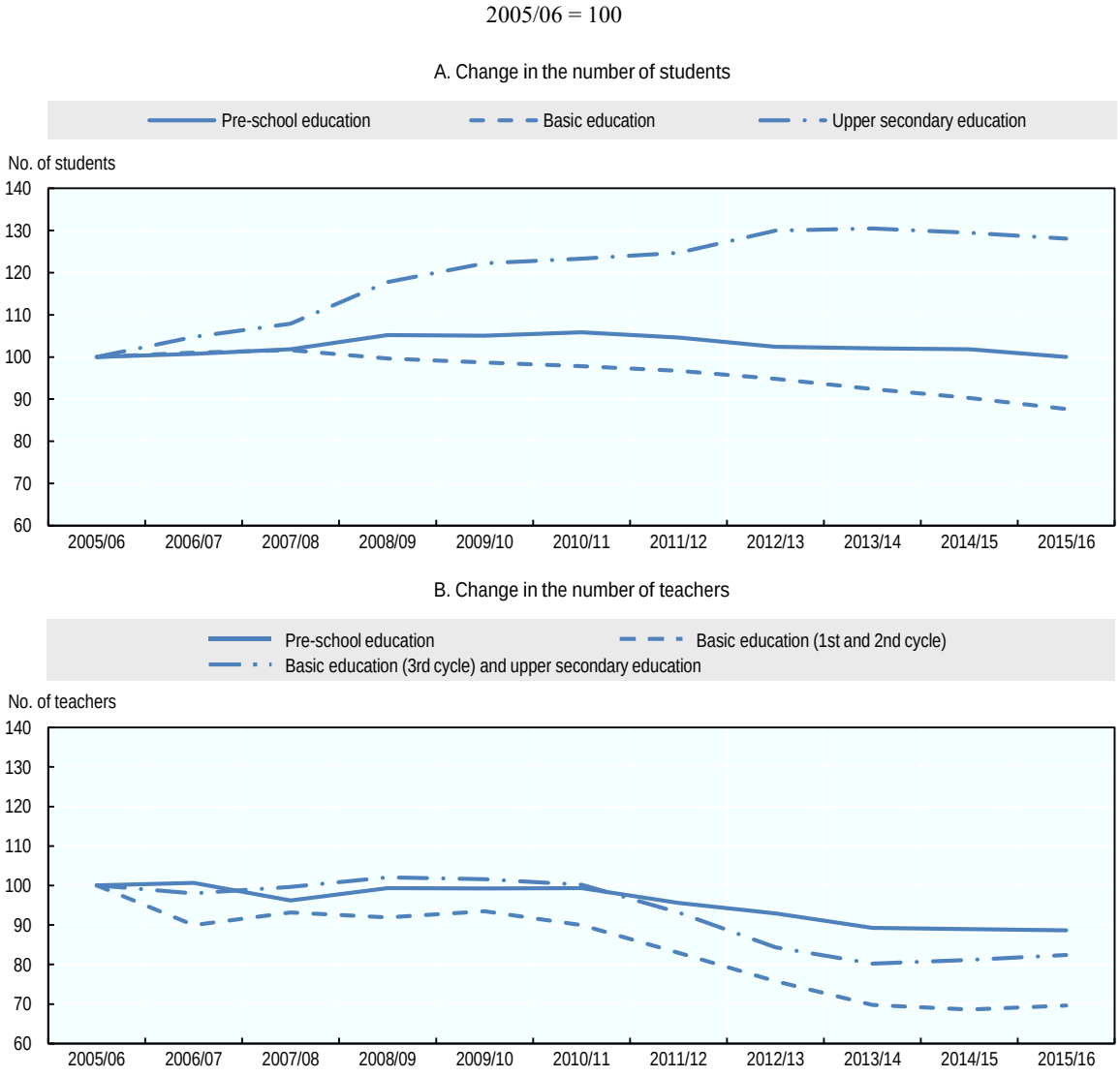
Beyond the public education offer, there is a relatively large network of private schools in Portugal. As in other OECD countries, private educational provision is mostly self-financed through attendance fees charged to students' families. As part of their autonomy, private schools are responsible for recruiting and evaluating their own teachers, as well as setting their quality standards. Many private schools, however, are dependent on government funding. These are intended to fill gaps in the public supply of schooling in oversubscribed locales, remote locations, specialised artistic areas or special education services. Government-dependent private schools are particularly relevant in early childhood education and care – 31% of pre-primary students are enrolled in this type of institution – whereas only 4.6% of upper-secondary students select this type of school. By contrast, independent private schools enrol about 16% of the secondary education learners (Table 1.4). The private school network comprises for-profit and non-profit providers, which are governed by specific legislation and statutes. The Ministry of Education is responsible for regulating private school provision within the limits of the Base Law of the Education System. Non-profit institutions providing early childhood education and care are regulated by the Ministry of Labour, Solidarity and Social Security in co-ordination with the Ministry of Education. Nevertheless, independent private schools have no specific regulatory constraints for the selection of students. Private providers are free to set their own criteria as long as these do not violate non-discriminatory principles set by the law. Government-dependent private schools, on the other hand, have to obey to identical criteria for the selection of students as public schools.

As noted above, Portugal has undertaken a major school consolidation process over the past 15 years. The number of teachers employed has declined dramatically and more rapidly than the student population. As a result, overall student-teacher ratios have increased accordingly. In pre-primary education, expanded access to early childhood education and care have been counterbalanced by declining birth rates, resulting in relatively stable numbers of enrolled students (Figure 1.7, Panel A). However, efforts to decrease the intensiveness of human resources have led to a 10% decline in teacher numbers for the same period (Figure 1.7, Panel B). At the primary education level, the number of teachers decreased by more than 30% over a decade, more than in any other education level (Figure 1.7, Panel B) and far outpacing the 10% decline in the number of students.

Finally, in upper-secondary education, from 2007/08 to 2012/13, the number of upper secondary students increased by almost 30% (Figure 1.7, Panel A). While the expansion of compulsory education to 18 years of age occurred during the same period and certainly fuelled some portion of this growth, the expanding enrolment trends predate the 2008/09 law. As Chapter 3 highlights, expanded VET programming led to higher rates of enrolment independent of the increase in compulsory schooling age. However, while the mix of secondary teachers' licensure categories has shifted from general to vocational, the

number of secondary teachers in the system has declined since 2005 (Figure 1.7, Panel B). Thus, the expansion of upper secondary enrolment has not been accompanied by an expected growth in teaching staff up to 2015/16.

Figure 1.7. Changes in the number of teachers and students by level of education, 2005-15



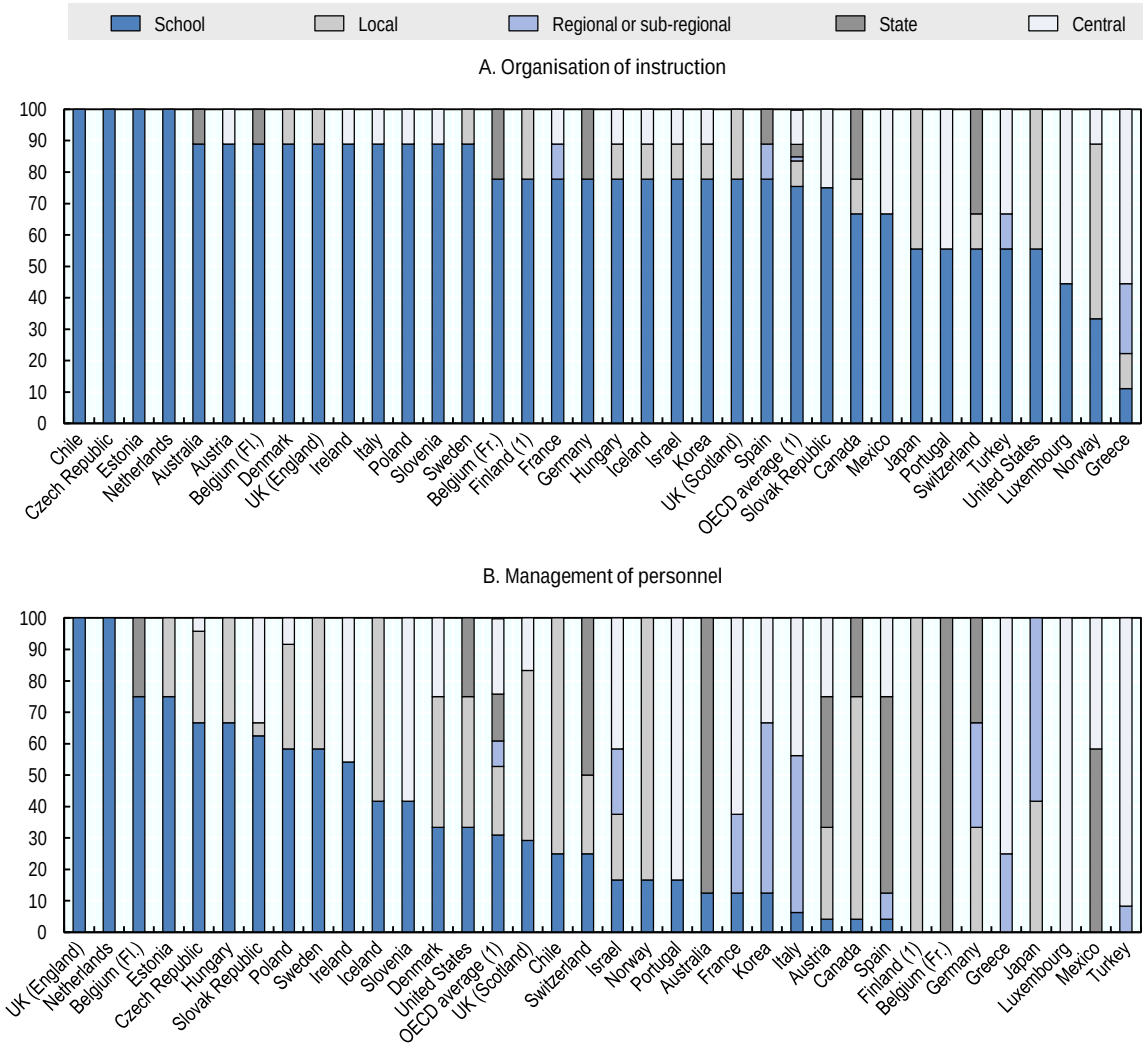
Note: The underlying data only refers to the number of students and teachers in continental Portugal.
Source: DGEEC (2017), *Educação em Números 2016 [Education in Numbers 2016]*, http://www.dgeec.mec.pt/np4/%7B$clientServletPath%7D/?newsId=691&fileName=DGEEC_DSEE_2016_Educa__o_em_n_meros_2016.pdf.

Governance and policy development

Education policy in Portugal is fairly centralised (Figure 1.8). The Ministry of Education (ME) establishes major policies regarding educational programmes, the curriculum, national examinations, teacher recruitment and deployment, the distribution of funds to public school, and the regulations for the public funding of private providers. The functions of the ME are complemented by the crucial role of other ministries. In

particular, the Ministry of Science, Technology and Higher Education (MCTES) separately governs the provision of tertiary education. Also, the Ministry of Labour, Solidarity and Social Security (MTSSS), in co-ordination with the ME, is responsible for regulating public and private provision of childcare (ages 0-2) and the public funding of private provision of pre-primary education (ages 3-5). The MTSSS also collaborates with the ME to establish the rules governing the provision of secondary-level vocational programmes and adult education. In turn, the Autonomous Regions of the Azores and Madeira oversee the administration of their own education system independently of the ME, though they receive their funding directly from the central government. The autonomous regions have full responsibility for managing, human, material and financial resources, as well as adapting national education policy to the regional context. Therefore, the autonomous regions fall outside of the scope of this review.

Figure 1.8. Percentage of decisions taken at each level of government in public lower secondary education by domain, 2011

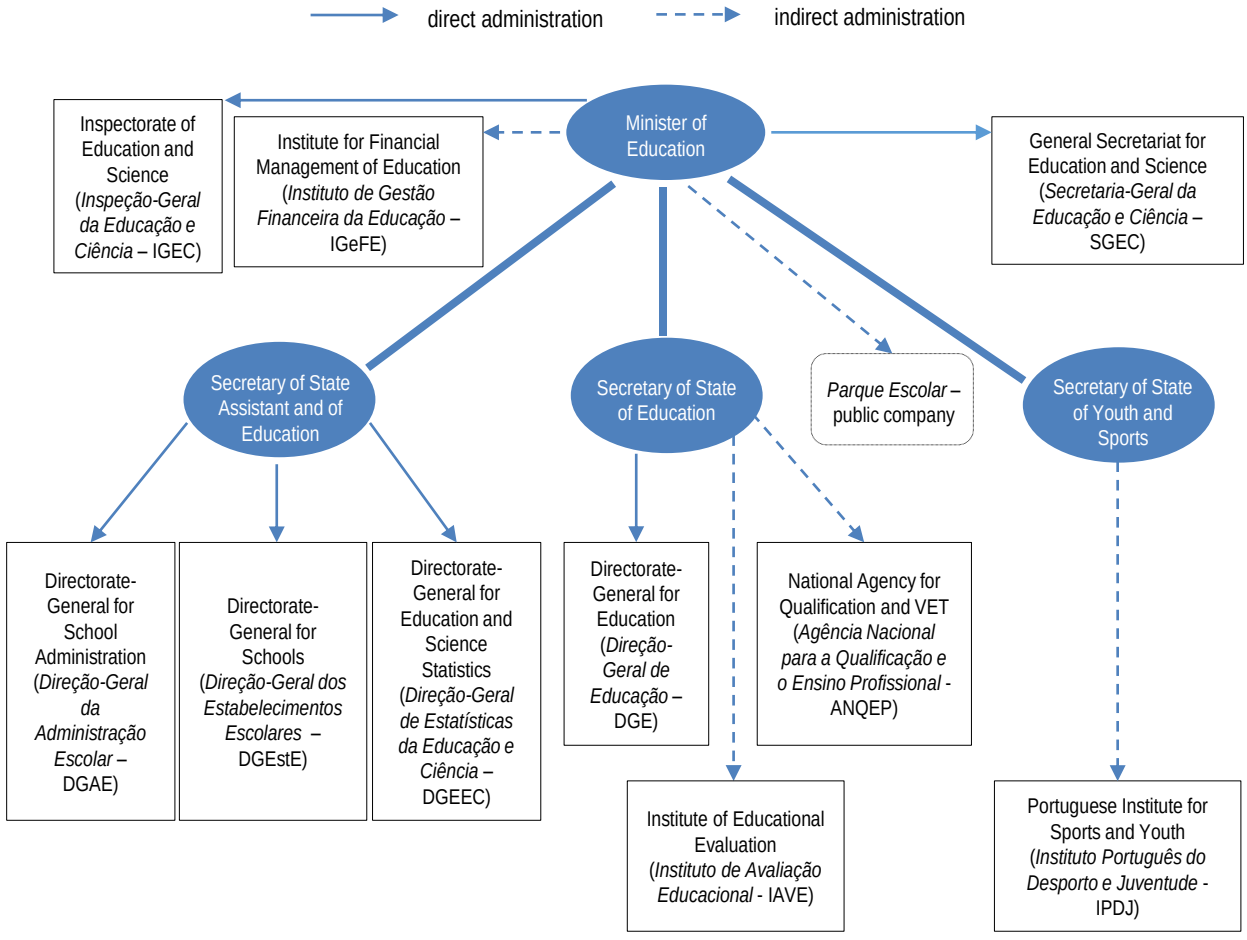


1. Finland is not included in the averages.

Source: OECD (2012) *Education at a Glance 2012: OECD Indicators*, http://dx.doi.org/10.1787/eag-2012-en, Table D6.2.a. See EAG Annex 3 for notes (www.oecd.org/edu/eag2012).

Policy development is led by the Ministry of Education, which defines, co-ordinates, implements and evaluates policy decisions pertaining to the school system. Policy implementation is supported by each of the central agencies of the ME. Ministry services are distributed across different central agencies. Figure 1.9 presents the key agencies and their relationship with each other. Annex 1.B provides details on some of the key responsibilities for each of the agencies within or under the supervision of the ministry (Chapter 3 elaborates).

Figure 1.9. Portuguese educational administration organisational chart



Source: Ministry of Education (2018), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Portugal,* http://www.oecd.org/education/schoolresourcesreview.htm.

The Ministry of Education sets policies and takes strategic decisions in consultation with specific advisory bodies. The two most important are the National Education Council (*Conselho Nacional de Educação* – CNE), which forms views and advises on a range of educational issues, aiming to promote the participation of all education stakeholders in the pursuance of a broad consensus on education policy, and the School Council (*Conselho Escolar* – CE) that represents the viewpoint of schools, collected through representatives of school principals.

Other compulsorily consulted groups are the National Association of Portuguese Municipalities (*Associação Nacional de Municípios Portugueses* – ANMP), the National Confederation of Parents' Associations (*Confederação Nacional das Associações de Pais* – CONFAP) and the Independent National Federation of Parents and Guardians in Education (*Confederação Nacional Independente de Pais e Encarregados de Educação* – CNIPE). Teacher unions must also be consulted in matters relating to teachers' working conditions. In total there are over 20 teacher unions, including 4 federations grouping multiple unions. The two professional associations representing the most teachers are the National Federation of Teacher Unions (*Federação Nacional dos Professores* – FENPROF), covering about half of unionised teachers, and the National Federation for Education (*Federação Nacional da Educação* – FNE), representing about a quarter of unionised teachers.

For some time, but especially in recent years, local governance levels have been granted more responsibilities. Municipalities are responsible for the provision of extracurricular activities (including the recruitment of associated coaches and instructors), school meals and transportation in public basic schools and pre-schools. Furthermore, compensation of non-teaching staff and the management of basic schools' availability for full day education are also provided through municipal funds and under municipal management. A recent pilot project has further decentralised responsibilities through signed agreements (*contratos inter-administrativos*) to provide autonomy to municipal authorities to distribute funding for capital and current expenditures except for teachers' salaries in schools under their jurisdiction. The project started in 2015 and will run for 4 years in a set of 13 municipalities.

Support for greater school autonomy has also been on the rise in the last two decades. Since 2001, schools have the right to flexibly manage the curriculum, according to regulations (Decree-Law 6/2001). The Decree-Law 75/2008 also reinforced the responsibilities of the school governing bodies, especially with regards to the selection and evaluation of the school principal and a more professional framework for school management. Some schools with positive external evaluation reports have voluntarily signed four-year autonomy contracts, including more control over financial management. Central education authorities are engaged in continuing the delegation of responsibilities to schools, while ensuring that there is sufficient capacity. This includes support to develop strategic action programmes to promote school success and flexible models for the implementation of curricula (see Chapters 3 and 4).

Evidence on quality, equity and efficiency

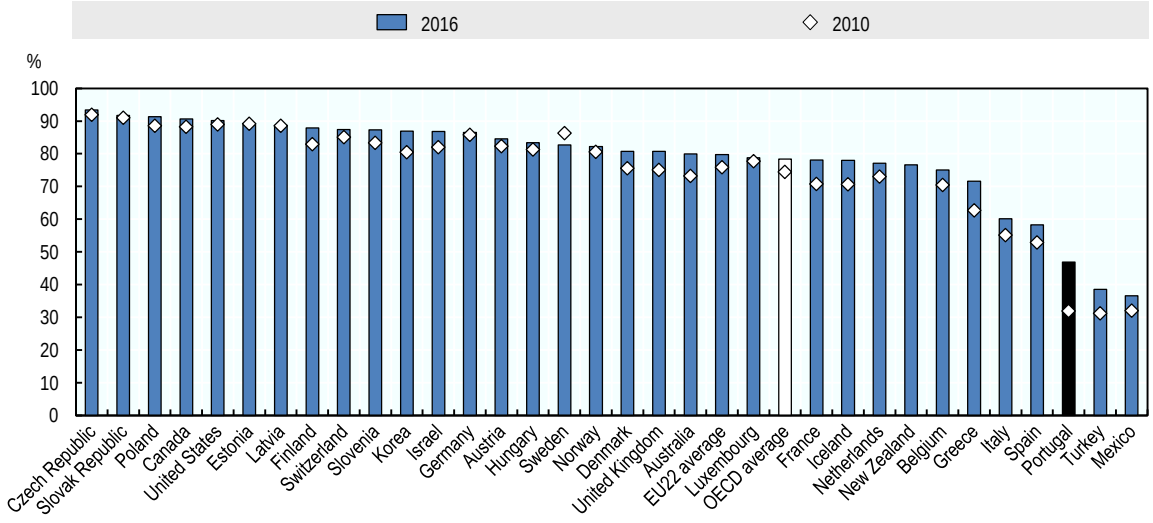
Historically low but rapidly improving enrolment in pre-school and overall educational attainment

Portugal has a significant historical lag in educational attainment. During the New State (*Estado Novo*) regime, wide access to education was not a political priority. As a result, in 1970, a fourth of the population aged 10 and older did not know how to write or read and less than 1 in every 100 residents had completed the equivalent of a tertiary education degree. Efforts to ensure universal access to education, especially after democratisation, translated into a rapid increase in attainment. The share of 25-64 year-olds with at least upper secondary education jumped from 20% in 1992 to 47% in 2016. Nevertheless, the rate is still far below the European average of 77% (79.7%, for EU countries belonging to the OECD group). As Figure 1.10 depicts, despite the noticeable improvement since 2010, the percentage of 25-64 year-olds with at least upper secondary education is one of

the lowest among OECD countries. Among those aged 20 to 24, however, attainment is expected to continue a gradual convergence to international standards (Portugal: 78%; EU28: 83%, in 2016) (Eurostat, 2017[20]). This is driven by a 15-percentage point decline in the rate of early-school leaving (prior to upper secondary completion) between 2010 and 2017, the largest such decline in the EU (see Annex 1.C).

Figure 1.10. Educational attainment, 2010 and 2016

Share of 25-64 year-olds with at least upper secondary education



Source: OECD (2017), *Education at a Glance 2017: OECD Indicators*, http://dx.doi.org/10.1787/eag-2017-en.

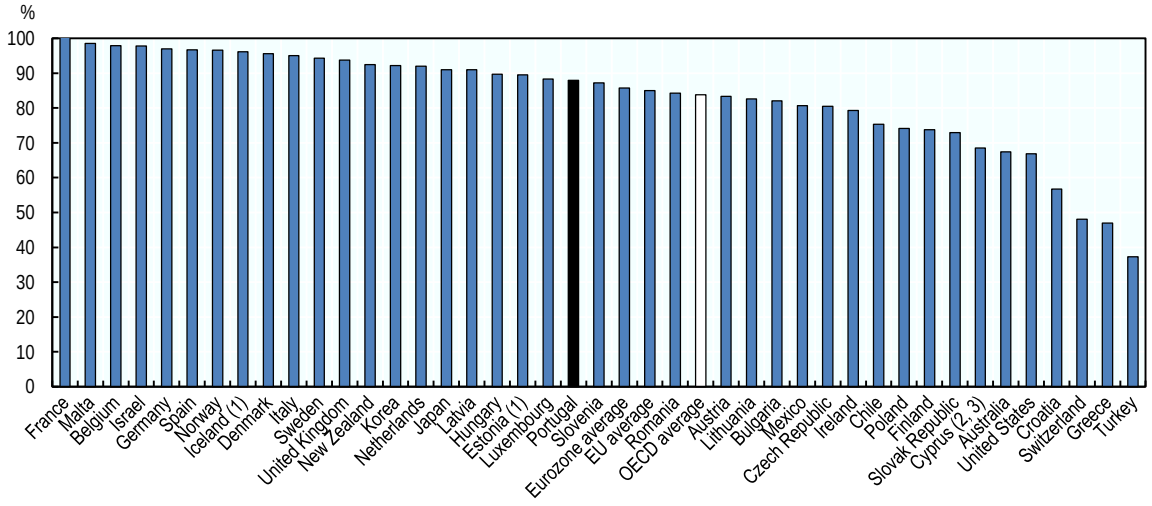
Educational attainment has important economic and social implications. Across the OECD, the unemployment rate among 25-64 year-olds with qualifications below upper secondary education was 13% in 2015. In turn, only 6 in every 100 workers with at least upper secondary education were unemployed. Portugal mimics the trend, with a less marked difference. Unemployment among those with below upper secondary education is at the same level of the OECD average, and it is only 10% for those who have completed at least secondary schooling. Nevertheless, full-time earners who have completed only lower-secondary or less schooling earn 27% less than other workers with an upper secondary degree – which compares to an OECD-average of only 18% less (OECD, 2016[21]).

Efforts to ensure greater participation in pre-primary education have also translated into higher coverage. In the last two decades, enrolment rates of students between three and five years old, typically enrolled in pre-primary education, increased substantially, reaching 88% in 2014 (Figure 1.11). For 5-year-olds, enrolment rates reached 96.4% (OECD, 2017[22]). In cohorts of younger children, enrolment in the system has also increased. Participation of 0-2 year-olds in formal childcare and pre-school services increased by 10 percentage points in 1 decade, reaching 47.9% as of 2014 (see Annex 1.D). Children aged 0 to 2 and enrolled in ECEC, in Portugal, spend an average of 37.6 hours in formal care during a usual week. In comparative terms, it is one of the longest weeks across countries for which data is available, only surpassed by Iceland and Latvia (see Annex 1.D). Nevertheless, participation in early childhood care in Portugal is still significantly determined by differences in household income. For children whose families

are in the bottom third of the disposable income distribution, participation rates only reach 36%. About six in every ten children whose families are in the top third of the income distribution are enrolled in formal childhood care (OECD, 2017[22]).

Figure 1.11. School enrolment of 3-5 year-olds

Enrolment rate for 3-5 year-olds in pre-primary education or primary school, 2014 or latest available



1. Data for Estonia and Iceland refer to 2013.
2. See note k) to Chart PF3.2.A, http://ec.europa.eu/eurostat/web/education-and-training/data/database.
3. See note l) to Chart PF3.2.A, http://ec.europa.eu/eurostat/web/education-and-training/data/database.

Note: Data include children enrolled in pre-primary education (ISCED 2011 Level 02) and primary education (ISCED 2011 Level 1), only. Potential mismatches between the enrolment data and the coverage of the population data (in terms of geographic coverage and/or the reference dates used) may affect enrolment rates. This can lead to overestimated or underestimated figures (for instance, enrolment rates exceeding 100%) in countries that are net exporters (e.g. Luxembourg) or net importers of students, or where there is a significant increase or decrease over time in any of the variables involved. See the notes to Indicator C2 in *OECD Education at a Glance 2016*, Annex 3 for more details: http://www.oecd.org/education/skills-beyond-school/EAG2016-Annex3.pdf.

Note by Turkey: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Source: OECD (2017), *Starting Strong 2017: Key OECD Indicators on Early Childhood Education and Care*, http://dx.doi.org/10.1787/9789264276116-en.

Student achievement has improved substantially in international terms

Student learning outcomes in Portugal have improved in international comparison. The average science performance of 15-year-olds on the Programme of International Student Assessment (PISA) was for the first time above the OECD average in 2015. Portuguese students' average scale score increased from 474 in 2006 to 501 in 2015. No other OECD country made similar progress in the period. Students in Portugal averaged an improvement of 8 score points in each 3-year assessment cycle between 2006 and 2015.

In particular, the results for 2015 are estimated to be better than those of other Southern European countries, such as Greece and Italy, and in line with those of Spain (Table 1.5).

The increase in student learning outcomes was driven by better results across all students. Between 2006 and 2015, the percentage of low-achieving students decreased by 7.1 percentage points. In turn, the number of top-performers went up 4.3 percentage points. The median performance in science – i.e. the score of the student in the middle of the distribution – also registered the largest increase among OECD countries.

Table 1.5. Selected indicators of student performance in science, PISA 2015

	Mean	95% confidence interval	Average 3-year trend
Singapore	556	553 - 558	7
Maximum OECD (Japan)	538	533 - 544	3
China (B-S-J-G)	518	509 - 527	x
Portugal	501	496 - 506	8
France	495	491 - 499	0
OECD average	493		-1
Spain	493	489 - 497	2
Italy	481	476 - 485	2
Greece	455	447 - 463	-6
Minimum OECD (Mexico)	416	412 - 420	2
Brazil	401	396 – 405	3

x : The category does not apply in the country concerned. Therefore, the data are missing.
Note: The average 3-year trends marked in bold are significantly different from zero at the 95% confidence threshold level. Select countries presented in the table represent a mix of Southern European peers, Portuguese-language diaspora (Brazil) and high-performing Asian systems. OECD average represents the average for all 35 OECD systems.
Source: OECD (2016), *PISA 2015 Results: Excellence and Equity in Education (Volume I)*, http://dx.doi.org/10.1787/9789264266490-en.

Younger students in Portugal have seen their performance increase in a similar way in mathematics, but not in science or reading. The 2015 Trends in International Mathematics and Science Study (TIMSS) shows strong, consistent improvement in mathematics skills for students enrolled in the fourth year of primary education. In fact, Portugal has shown the most marked change among participant countries. Student scores in mathematics improved by almost 100 scale points over 2 decades – increasing from 442 in 1995 to 541 in 2015. Portugal now scores significantly higher than Finland, outperforming all other Southern European countries participating in the assessment. The increase can be mainly explained by the significant improvement in the results of low-achieving students. In 1995, 30% did not reach a basic level of mathematical knowledge. Twenty years later, almost every student (97%) was able to reach the lower benchmark level. In science, however, the latest results do not show a similar pattern. Despite the continuous increase in achievement in previous assessments, the 2015 science results were 14 scale points below the ones in 2011.

Similarly, in the most recent Progress in International Reading Literacy Study (PIRLS), administered at the end of their fourth year of primary education, Portuguese students declined in their reading performance by 13 scale points in 2016, a significant difference driven primarily by a decline in the proportion of students reaching the Intermediate and High benchmarks for reading proficiency. Thus, while TIMSS improvements appear to be

driven by achievement gains in low-performing students, PIRLS declines appear to be driven by declines in the performance of average-achieving students.

There are equity concerns in student performance

Despite better overall student learning outcomes, equity concerns remain. As in most OECD countries, family background significantly influences learning in Portugal. According to PISA 2015 results, differences in performance are strongly correlated with the environment in which children grow up. In fact, 15% of the variation in science achievement can be attributed to students' socio-economic status (Table 1.6). The odds of being a low performer in science are almost three times higher among students from disadvantaged socio-economic backgrounds in Portugal – in line with the OECD average. However, the odds of a disadvantaged student being a low performer are seven times higher than the odds of an advantaged student– a figure only surpassed by Hungary in the context of OECD countries (OECD, 2016[23]). This relative discrepancy implies that while the impact of disadvantage on science performance in Portugal is roughly equivalent to the OECD average, a higher degree of socio-economic and educational inequality exists between advantaged and disadvantaged students.

Table 1.6. Selected indicators of equity in student performance, PISA 2015

		Portugal	OECD average
Percentage of top performers	Mathematics	11	11
	Reading	8	8
	Science	7	8
Percentage of low performers	Mathematics	24	23
	Reading	17	20
	Science	17	21
Gender performance differences (boys – girls)	Mathematics	10	8
	Reading	-17	-27
	Science	10	4
Variation in performance explained by socio-economic status (%)	Mathematics	14	13
	Reading	14	12
	Science	15	13
Students who repeated a year (%)	All students	31	12
	Disadvantaged students	52	19
	Odds ratio	4	2

Note: Low performers in science are those with proficiency below Level 2, i.e. scores below 410. Top performers in science are those with scores above 633. A socio-economically disadvantaged (advantaged) student is a student in the bottom (top) quarter of the distribution of the PISA index of economic, social and cultural status (ESCS) within his or her country/economy. The odds ratio represents the ratio between the odds that a disadvantaged student would be a repeater and the odds that an advantaged student would be a repeater.
Source: OECD (2016), *PISA 2015 Results: Policies and Practices for Successful Schools (Volume II)*, http://dx.doi.org/10.1787/9789264267510-en.

The composition of the student population of each school is also an important factor in learning outcomes. Students in socio-economically disadvantaged schools within Portugal perform 41 score points worse in reading, even after accounting for their own

socio-economic status. The section on performance differences across regions highlights the regional nature of these uneven outcomes.

Another common equity concern relates to the outcomes of immigrant students. In most OECD countries, immigrants have lower performance. Portugal is no exception. Students with an immigrant background score, on average, 16 scale points lower in science and 25 scale points lower in mathematics on PISA 2015, after accounting for their socio-economic background. However, differences in results are mostly driven by first-generation immigrants, who in mathematics score 35 points below native-born students. There are no significant performance differences between second-generation immigrants and the native-born population after students' socio-economic status and home language have been taken into account. In fact, most of these differences in performance are associated with the language spoken at home. Students who do not speak Portuguese at home score, on average, about 20 scale points fewer in mathematics. On Portuguese national examinations, no consistent performance differences are evident between schools with high and low shares of immigrant students. Portugal's diverse immigrant profile, including multiple continents of origin, varying levels of socio-economic status and differences in parental education help explain some of Portugal's unusual patterns in immigrant student performance (OECD, 2018[24]). Chapter 3 explores the unique needs of particular immigrant student groups in more detail.

As in most PISA-participating countries, there are still inequalities between male and female 15-year-olds in respect to learning outcomes. Gender equity indicators reveal that male students outperform female students in mathematics and science. Girls outperform boys in reading following the OECD pattern (OECD, 2016[23]).

Although significant equity concerns exist along socio-economic dimensions, Portugal still has a high proportion of resilient students. Resilient students are those that despite being socio-economically disadvantaged are international top performers in PISA.[6] In Portugal, 38% of students are resilient – which compares to an OECD average of 29% (OECD, 2016[23]).

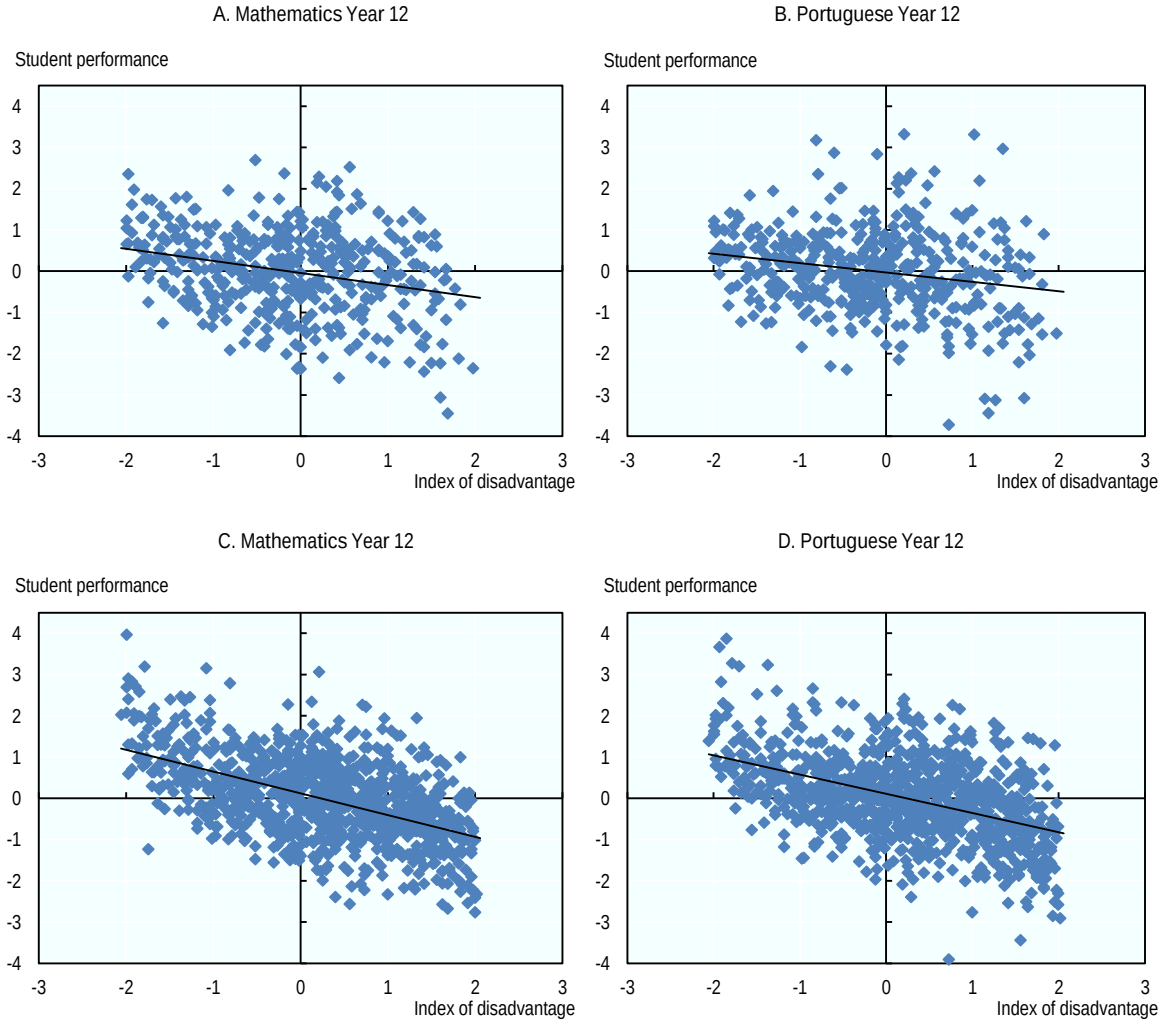
Within-country assessments of student performance also show strong relationships between student background and performance on assessments. Schools with greater proportions of disadvantaged students, as measured by receipt of social support and low average levels of maternal education, also have lower average levels of performance on national tests at both Years 9 and 12 (see Figure 1.12). This relationship is stronger at Year 9 than at Year 12, though this may be explained by the fact that the proportion of students from disadvantaged backgrounds who take the end-of-Year 12 tests is lower than those from advantaged backgrounds. Some never reach the 12th year of instruction, and others are in pathways that do not require them to take the tests.

High share of early school leavers and repeaters

Portuguese schools, and by extension its economy, still struggle with the problem of school dropout. The share of early school leavers is substantial and many of those fail to pursue additional training – 13 out of 100 18-24 year-olds have not completed upper secondary education and are not enrolled in any type of further training or education (Eurostat, 2018[25]). This rate remains above the EU target of 10% by the end of 2020. Students dropping out of formal education are often those least prepared to enter the labour market (OECD, 2012[26]). Nevertheless, Portugal has demonstrated considerable improvement as the rate of school leavers declined from 28.3% in 2010 to 12.6% in 2017 (see Annex 1.C). Expansion of compulsory education and the gradual increase in parents'

education levels may help to explain this trend. Governments in Portugal have also targeted early school leaving through measures to postpone the entry into the labour market. The expansion of vocational programming in upper and lower secondary education is an example of this type of policy (OECD, 2014[27]).

Figure 1.12. Relationship between school-level socio-economic status and average school performance, 2015/16



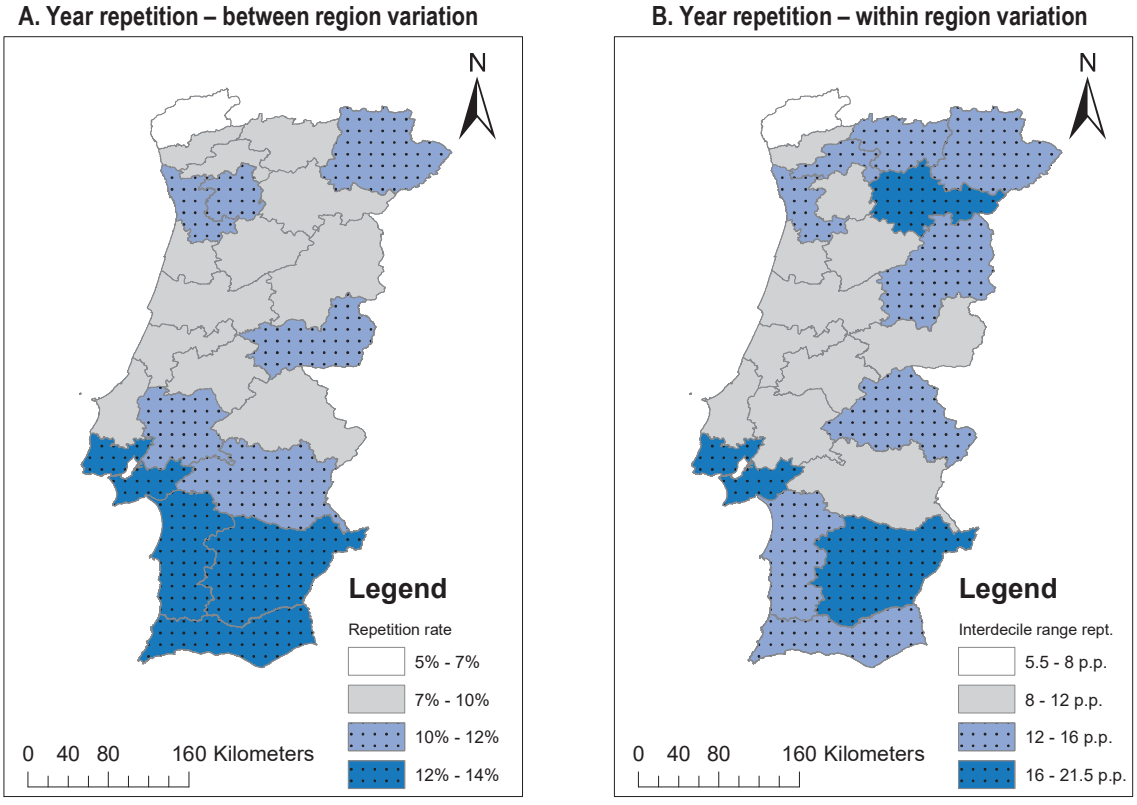
Note: Index of disadvantage (x-axis) measured by rank percentile ordering the proportion of students within a school receiving School Social Assistance (ASE) A and average years of maternal education at the school level. The average of the two ranks was then demeaned (mean = 0) and assigned a standard deviation of 1. High values of the index indicate high levels of socio-economic challenge. Average student performance (y-axis) measured by placing all national exam scores on a standardised scale by demeaning the within-year and subject exam (mean = 0) and assigning each grade's and subject's scores a standard deviation of 1.
Source: DGEEC administrative data, 2015/16.

Student repetition rates are also high. In Portugal, about 34% of 15-year-old students have repeated a school year at least once – almost 3 times as frequently as the OECD average of 12% (OECD, 2016[28]). The rates of repetition vary across education levels and regions. In 2016, these yearly repetition rates were 3.7% in the first cycle, 6.7% in the

second cycle, 10.0% in the third cycle of basic education and 15.7% in upper secondary education. Repetition often starts early in students' education. In 2016, about 9% of students in Year 2 – the first year in which year repetition is permissible – were held back, prompting central authorities to prioritise interventions at this level. Repetition also varies across geographic regions. Rates are significantly higher in the Lisbon and southern regions than in the Centre and North (see Figure 1.13, Panel A). Interestingly, the phenomenon of high repetition rates varies substantially across schools. There is a wide spread between rates of year repetition in some schools compared to others, with some schools holding back over a quarter of their students, while others have less than 5% of students repeat (Figure 1.13, Panel B). This suggests that in addition to policy design, school practices influence repetition rates in Portugal.

Figure 1.13. Year repetition rates (3rd cycle), 2015/16

Between and within NUTS III region differences



Note: The year repetition rate is the weighted average of the proportion of students who have repeated a year for all schools within a region. The interdecile range is the difference between the repetition rate for schools in the 90th percentile for rates of repetition within the region and the repetition rate for schools in the 10th percentile. For example, in the Metropolitan Area of Lisbon (AML), 3rd cycle schools in the 90th percentile of repetition rates have 22.3% of their students who have repeated a year. Third-cycle schools in the 10th percentile have 6.1% of their students who have repeated a year. Thus, the interdecile range for year repetition in AML is 16.2 percentage points.

Source of administrative boundaries: Direção-Geral do Território (2016), "Official Administrative Maps of Portugal - Version 2016 [*Carta Administrativa Oficial de Portugal - Versão 2016*]", http://www.dgterritorio.pt/cartografia_e_geodesia/cartografia/carta_administrativa_oficial_de_portugal_caop_/caop__download_/carta_administrativa_oficial_de_portugal___versao_2016/.

Source: DGEEC administrative data, 2015/16.

International research has demonstrated the undesirable effects of repetition on student achievement. If positive effects of repetition are to be found, they are often insignificant or short-lived (OECD, 2012[26]). Moreover, year repetition introduces inefficiencies in the system, as it delays entry in the labour market for those who persist through the end of secondary education, increasing the number of enrolled students and thus the amount of required funding. For younger students in Portugal, the causal evidence seems to show generally insignificant impacts on achievement. Even when significant positive impacts of repetition are detected, these are small, restricted to girls and only in the subject of mathematics (Nunes, Reis and Seabra, 2016[29]).

Repetition policies also raise equity concerns. As in other OECD countries, year repetition in Portugal is heavily influenced by students' socio-economic backgrounds. According to PISA 2015, more than 50% of 15-year-old students from disadvantaged backgrounds repeated a year at least once (OECD, 2016[23]). Furthermore, the odds of repeating a year are four times higher among disadvantaged students than among their more advantaged peers, even after accounting for students' achievement levels. Such a difference is more than double the one found on average across OECD countries (Table 1.6). In primary education, there is also evidence that the decision of holding a student back a year is influenced by non-academic characteristics. Year 4 students repeating for the first time are significantly more likely to be boys whose mother has at most primary education and come from a foreign Portuguese-speaking country (Nunes, Reis and Seabra, 2016[29]).

However, repetition rates have consistently decreased in recent years (CNE, 2017[30]). In fact, the Ministry of Education has made considerable efforts to phase out year repetition from the system. A series of successive policies to provide extra support to students at risk of failing and to prevent school dropout have been put in place in the past 10 to 15 years. Notably, beginning in 2009, the ministry introduced the Programme for More School Success (*Programa Mais Sucesso Escolar* – PMSE) which through a variety of policies targeting class size reduction, class composition and differentiated instruction intended to reduce rates of year repetition and increase student achievement (Barata et al., 2015[31]). In 2013/14, a new monitoring system to track absenteeism and student's performance was introduced. The objective was to trigger automatic and adequate pedagogical responses when risks were detected (European Commission/EACEA/Eurydice, 2015[32]). The monitoring system added additional study time and more targeted support for students identified as at risk of failing. Previous governments also attempted to address the needs of at-risk students by increasing the number of vocational courses in lower and upper secondary education, as well as through targeted programmes aimed at improving school success (OECD, 2014[27]). The most current strategies to reduce dropout rates involve tutorial support for struggling students (*Apoio Tutorial Especifico* – ATE and *Apoio Educativo Tutorial* – AET) and schoolwide projects under the National Programme to Promote School Success (PNPSE) to offer additional Portuguese and mathematics classes, train teachers and school leaders, and hire extra teaching and student support staff.

Marked differences between public and private schools

As in other OECD countries, students enrolled in private schools in Portugal show higher average academic achievement. Students in public schools generally have lower results in national exams and international comparisons of achievement. In PISA 2015, students in private schools scored, on average, 50 points higher than public ones (OECD, 2016[33]).

National examination data echo these patterns. School rankings are published every year in national newspapers since 2001. The publication of such league tables was ordered by a court responding to a request by a national newspaper. The ordering of schools is based on the average results of the students of each school in the national exams (Year 9, 11 and 12). According to the latest 2017 ranking, the first public secondary school is only ranked in the 32nd position overall. Private schools offering both basic and secondary education dominate the ranking – 57 of the top 100 schools in the ranking are private.

Crucially, the differences across type of institution are strongly associated with the socio-economic background of the students. On average, private schools in Portugal typically enrol students from higher socio-economic backgrounds than public schools, as they have greater discretion in their admission policies and attract students who select into these schools. When PISA results take the background of students into account, there is no difference between the performance of students enrolled in private and public schools (OECD, 2016[33]). Only recently have rankings accounting for differences in the socio-economic context of schools been published as a complement to the primary newspaper rankings.

There are significant performance differences across regions

Learning outcomes vary substantially across the country. There are marked differences between western coastline regions and the country's interior as well as the Algarve. Student performance on PISA 2015 is relatively higher in coastal areas such as Alentejo Litoral, Leiria and Lezíria do Tejo. The southern region of Alentejo Litoral had the highest average score in science – 35 PISA score points above the national average. The region has also simultaneously shown the smallest percentage of low performing (8.6%) and the second highest percentage of high performing students (11.6%). Similarly, Douro, in the north, has almost double the proportion of high achievers than the national level (14.1% versus 7.4%). Regions in the northeast and north interior of the country – Alto Tâmega, Tâmega e Sousa and Terras de Trás-os-montes – register relatively lower average results and larger shares of low performers. Importantly, all but one of the Centro regions performed at or above the national average. The autonomous regions of Azores and Madeira both score significantly below the national average, also registering high rates of low-performing students (see Annex 1.E).

Primary school students register relatively consistent patterns of performance on international assessments. The 2015 TIMSS assessment in science shows that the southern regions of Alentejo have lower scores than the national average. On the other hand, the regions in the Centre and North coastal areas present the best average results. There are also marked significant differences regarding the levels of proficiency defined by the test. While over 95% of the students are able to reach the basic proficiency benchmark level (set at 400 test-score points), 11% of the students in Alentejo Central and Tâmega e Sousa did not reach a basic level of knowledge in science (Marôco et al., 2016[34]).

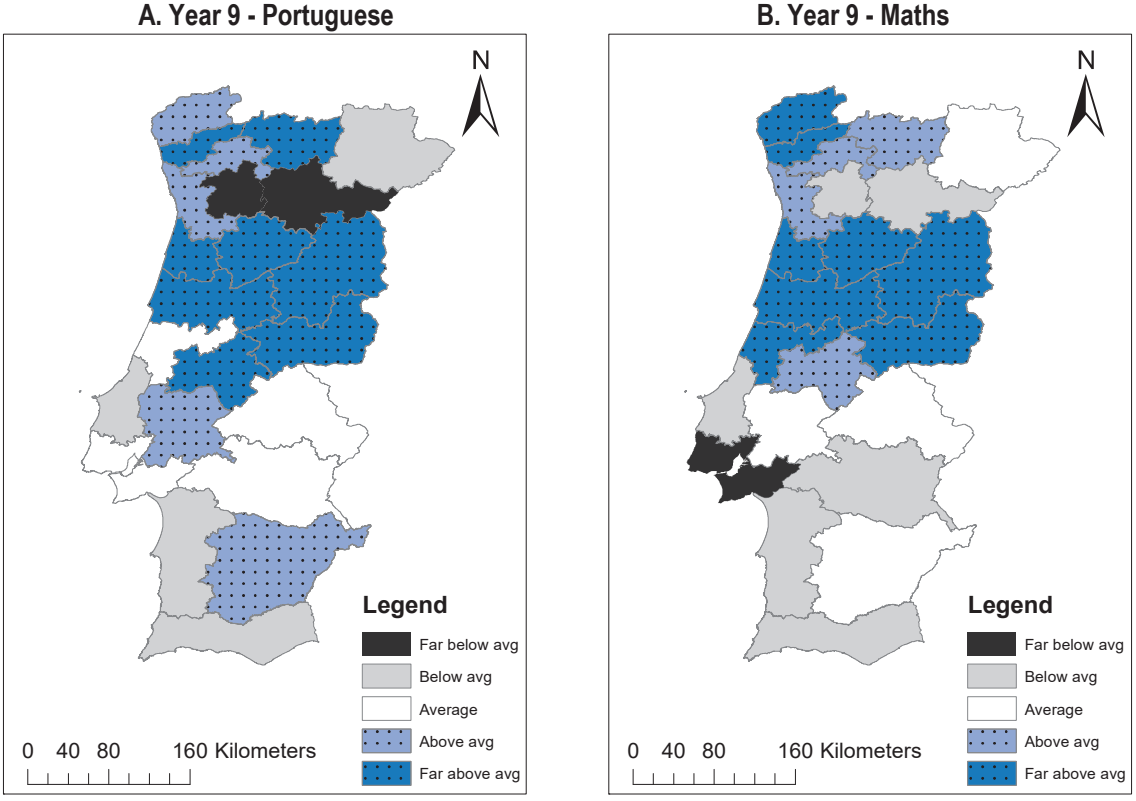
There are also performance differences between rural and urban locations. According to PISA 2015 results, there are significant differences across communities of different population sizes. Students in communities with less than 3 000 inhabitants score, on average, 80 points lower than students living in large cities – i.e. with more than 1 million inhabitants (Lisbon and Porto). This rural-urban performance gap is one of the largest in the OECD. However – similar to most OECD countries – the socio-economic characteristics of students explain most of the variation between urban and rural

locations. When the differences in socio-economic background are taken into account, there is no statistically significant difference between the results in rural and urban schools (OECD, 2016[33]).

Similarly, stark regional differences are apparent on national exams (Figure 1.14). In some cases, these regional variations in learning outcomes match the average socio-economic makeup of schools in the region (see Annex 1.F) such as in the strong performance and high socio-economic make-up of schools in the Centre region. However, the Metropolitan Area of Lisbon is a relatively advantaged region, but students in Year 9 perform far below average on national mathematics assessments.

Figure 1.14. Between-region variation in average school performance levels

By NUTS III region

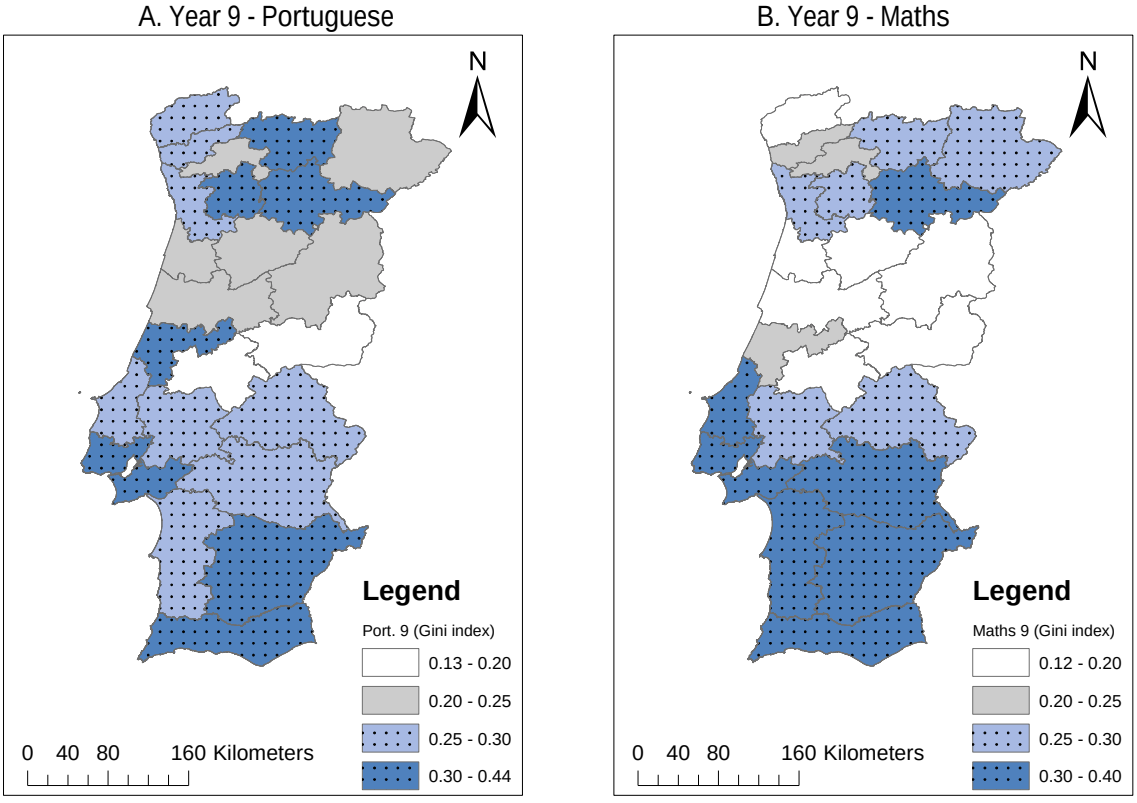


Note: Average student performance measured by placing all national exam scores on a standardised scale by demeaning the within-year and subject exam (mean = 0) and assigning each year's and subject's scores a standard deviation of 1. Regional averages calculated by computing the weighted average of all schools within each NUTS III region. Far below average: <0.3 standard deviations below 0; Below average 0.1 to 0.3 standard deviations below 0; Average: -0.1 to +0.1 standard deviations; Above average: 0.1 to 0.3 standard deviations above 0; Far above average: >0.3 standard deviations above 0. Ranges set to approximate quartiles of regional distribution across Year 9 and 12 Portuguese and mathematics exams.
Source of administrative boundaries: Direção-Geral do Território (2016), "Official Administrative Maps of Portugal - Version 2016 [*Carta Administrativa Oficial de Portugal - Versão 2016*]", http://www.dgterritorio.pt/cartografia_e_geodesia/cartografia/carta_administrativa_oficial_de_portugal_caop_/caop__download_/carta_administrativa_oficial_de_portugal___versao_2016/.
Source: DGEEC administrative data, 2015/16.

In addition to cross-regional differences, schools within regions have a wide variation in their performance profiles (Figure 1.15). Some regions around Lisbon and in the south experience school-level variation in performance three times greater than others in central Portugal. Rates of between-school performance variation in some regions are up to 1.5 and 2 times greater than those found in an international study of peer countries such as Italy and Spain using PISA 2006 data (Oppedisano and Turati, 2015[35]) and up to 4 times the achievement inequality rates found in France, Greece, Italy and Spain using PISA 2003 data (Martins and Veiga, 2010[36]). Thus, the rates of between school variation in some areas are quite striking and suggestive of either intensive between-school sorting of students or substantial variation in school effectiveness within regions.

Figure 1.15. Between-school variation in average performance levels (Gini coefficient)

By NUTS III region



Note: Student performance measured by placing all national exam scores on a standardised scale by demeaning the within-year and subject exam (mean = 0) and assigning each year's and subject's scores a standard deviation of 1. The Gini coefficient was introduced as a measure to study educational performance inequality by Thomas and colleagues at the World Bank (Thomas, Wang and Fan, 2001[37]). It ranges from 0 to 1, where 1 represents perfect inequality and 0 represents perfect inequality between sub-units.
Source of administrative boundaries: Direção-Geral do Território (2016), "Official Administrative Maps of Portugal - Version 2016 [*Carta Administrativa Oficial de Portugal - Versão 2016*]", http://www.dgterritorio.pt/cartografia_e_geodesia/cartografia/carta_administrativa_oficial_de_portugal_caop_/caop__download_/carta_administrativa_oficial_de_portugal___versao_2016/.
Source: DGEEC administrative data, 2015/16.

Notes

[1] The process for regionalisation of subnational policy has been a politically contested one. In 1998, a referendum decided against the formalisation of a tier of regional authorities.

[2] In order to make regional division clear, this report will often make use of the Nomenclature of Territorial Unit for Statistics (NUTS). NUTS is a hierarchical system to divide the territory in three regional levels (I, II and III) for statistical purposes. Portugal has 3 NUTS I – the Continent and the two autonomous regions – 7 NUTS II and 25 NUTS III. NUTS II are divided into North, Centre, Lisbon, Alentejo, Algarve, Azores and Madeira.

[3] The Maastricht Treaty (1992) set the convergence criteria to which central governments of the EU have to abide. The four criteria include targets for inflation rates, exchange rates, long-term interest rates and government finance. While the first three criteria are directly monitored by the European Central Bank (ECB) for countries belonging to the Euro area, balanced government finances is a responsibility of the member states. The convergence criteria in this area stipulate that: i) the ratio of annual government deficit to gross domestic product (GDP) must not exceed 3%; ii) the ratio of gross government debt to GDP must not exceed 60%, or if higher, be at least approaching the reference value at a satisfactory pace.

[4] Poverty rates measured by the OECD are defined differently from the at-risk-of-poverty rate measured by Eurostat through the EU-SILC inquiry. The method mostly differs in the poverty threshold considered. While the OECD definition considers the share of children under 18 years old living with an equivalised household income of less than 50% of the national median income, Eurostat sets the threshold as 60% of the national median income. Income is also considered after taxes and transfers, adjusted for difference in household size. As the household is the unit of observation, the equivalised disposable income assumes that household needs grow less than proportionally with household size. Equivalised disposable income and its distribution across age groups is computed taking this assumption into account (OECD, 2015[10]).

[5] The strategic importance of the pre-vocational offer has since been revised, after its introduction in 2013. Under the assumption that such an offer was generating early segregation of students – leading to both incomplete upper secondary education and unrecognised qualification in the labour market – the current government has cancelled the provision of pre-vocational education at lower secondary level.

[6] A student is considered resilient if he or she is in the bottom quarter of the distribution of the PISA index of economic, social and cultural status (ESCS) in the country or economy of assessment and performs in the top quarter of the distribution across all countries or economies, after accounting for socio-economic status.

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Annex 1.A. Current strategies to address student and community disadvantage

Annex Table 1.A.1. Strategies to promote equity in schools

Student profile/target	Policies focused on students	Policies focused on schools
Special needs	• Economic support • Special education teachers support (*Grupo de Recrutamento de educação Especial/Docentes de Educação Especial*) • Individual Educational Programme (*Programas Educativos Especiais* – PEI)	• Resources Centres for Inclusion • ICT Centres for Special Education • Reference schools for the bilingual education of deaf students • Reference schools for the education of the blind and low vision students • Structured teaching units for the education of students with autism spectrum disorders • Specialised support units for the education of students with multiple disabilities and congenital deaf-blindness
Families that have an itinerant work/mobility constraints		• Distance Education for Itinerant Students (*Ensino à Distância para a Itinerância*)
Integration problems in the school community	• School psychology and orientation offices	• Additional support to schools in deprived environments, according to their own needs and proposals Priority Educational Intervention Areas (*Territórios Educativos de Intervenção Prioritária* – TEIP) • Additional support to pedagogical and organisational plans to promote school success, developed by each school cluster, in collaboration with local authorities Programme to Promote School Success (*Programa Nacional de Promoção do Sucesso Escolar* – PNPSE)
Deprived socio-economic environments	• Educational resources, meals, transports (*Ação Social Escolar*)	
Learning difficulties	• Extra time and additional support from teachers to students in need (*Apoio Educativo Tutorial*), projects and clubs • Support for students retained twice in the 2nd and 3rd cycles of basic education (*Apoio Tutorial Específico*)	
Different mother language other than Portuguese	• Special classes/Portuguese courses (*Português Língua Não Materna*)	
Risk of school/social exclusion or dropout	• Intersectorial local committees (*Comissão de Proteção de Crianças e Jovens*) • Diversified education and training provision (*Percursos Curriculares Alternativos* – PCA; *Cursos de Educação e Formação* – CEF; *Programa Integrado de Educação e Formação* PIEF)	

Note: Concerning the number of students involved in the measures referred to in the previous table, TEIP has increased its numbers from 117 127 in 2009/10 to 153 577 in 2015/16. The PIEF has enrolled 2 031 students in 2009/10, reaching 3 115 students in 2011/12 but dropping since then, involving 1 945 students in 2015/16. The PCA classes were attended by 7 429 students in 2012/13; this number decreased to 4 792 in 2015/16.
Source: Ministry of Education (2018), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Portugal,* http://www.oecd.org/education/schoolresourcesreview.htm.

Annex 1.B. Portuguese Ministry of Education organisational responsibilities

Annex Table 1.B.1. Portuguese Ministry of Education organisational responsibilities

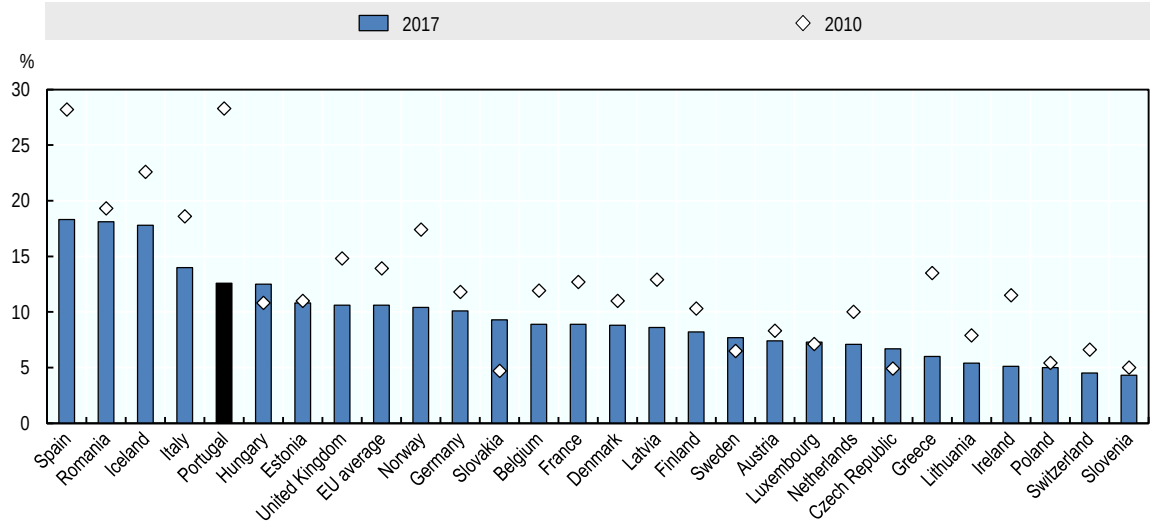
	Primary responsibilities
General Secretariat for Education and Science (SGEC)	• Responsible for quality of policy, information and communication • Provides specialised technical support to the ME (Ministry of Education) and MCTES (Higher Education) government members in conflict resolution and litigation, as well as in employment regime, human, material and financial resources management • Responsible for European affairs and international relations
General Directorate for Education (DGE)	• Ensures the implementation of policies regarding the pedagogic development of each education level and streams, providing curriculum standards, pedagogical resources certification and technical support to its implementation • Co-ordinates, collaborates and/or supervises targeted educational programmes developed in schools • Directs psychological services • Assists in defining teachers' training needs
General Directorate for School Administration (DGAE)	• Ensures the implementation of policies for strategic management • Ensures development of the human resources of education allocated to the public educational structures • Responsible for the management of the teaching workforce and the organisation of school leadership, including recruitment and selection, career progression, remuneration and training
General Directorate for Schools (DGEsTE)	• Ensures the implementation of administrative measures and the exercise of peripheral competences relating to the ME attributions • Plans the yearly definition of the school network, supervision, co-ordination and monitoring of schools • Promotes the development of school autonomy in articulation with local authorities • Includes the former five regional directorates for education
Institute for the Management of Educational Finance (IGeFE)	• Ensures the programming, financial management and the operational and strategic planning of the ME • Assures accurate execution of ME budget and its reliable and sustainable management • Provides comprehensive evaluation of policy implementation
National Agency for Qualification and Professional Education (ANQEP)	• Co-ordinates the implementation of policies regarding education and vocational training of young people and adults • Develops and manages the National System for the Recognition, Validation and Certification of Competences • Operates under the supervision of both the ME and MTSSS (Labour)
Inspectorate-General for Education and Science (IGEC)	• Ensures the legality of actions taken by services and departments of the ME (Ministry of Education) and the MCTES (Higher Education) • Monitors, audits and supervises the functioning of the technical-pedagogical and administrative-financial aspects of the activities of pre-schools, schools and out-of-school education, other educational and teaching institutions of public, private and co-operative networks, including higher education, as well as institutions teaching Portuguese abroad • Integrates special modalities of education, extracurricular education, science and technology and of the bodies, services and departments of the ME and the MCTES

General Directorate of Education and Science Statistics (DGEEC)	• Produces and analyses education and science data • Provides technical support to the formulation of policies and strategic planning • Creates and ensures a properly integrated information system for the ME and the MCTES • Manages the technological infrastructures of schools (computers, digital cloud, data communications network, internet, access control system, video surveillance system, etc.)
Educational Evaluation Institute (IAVE)	• Plans, devises and validates the tools for the external assessment of students' knowledge and ability in primary and secondary education • Responsible for the development of national tests • Processes and disseminates information related to decisions made for the improvement of the quality, effectiveness and efficiency of the national educational system • Co-ordinates the Portuguese participation in international studies related to external student assessment • Drafts tests certifying specific knowledge and abilities for other purposes and educational levels on ad hoc basis

Source: Ministry of Education (2018), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Portugal,* http://www.oecd.org/education/schoolresourcesreview.htm.

Annex 1.C. Early school leaving

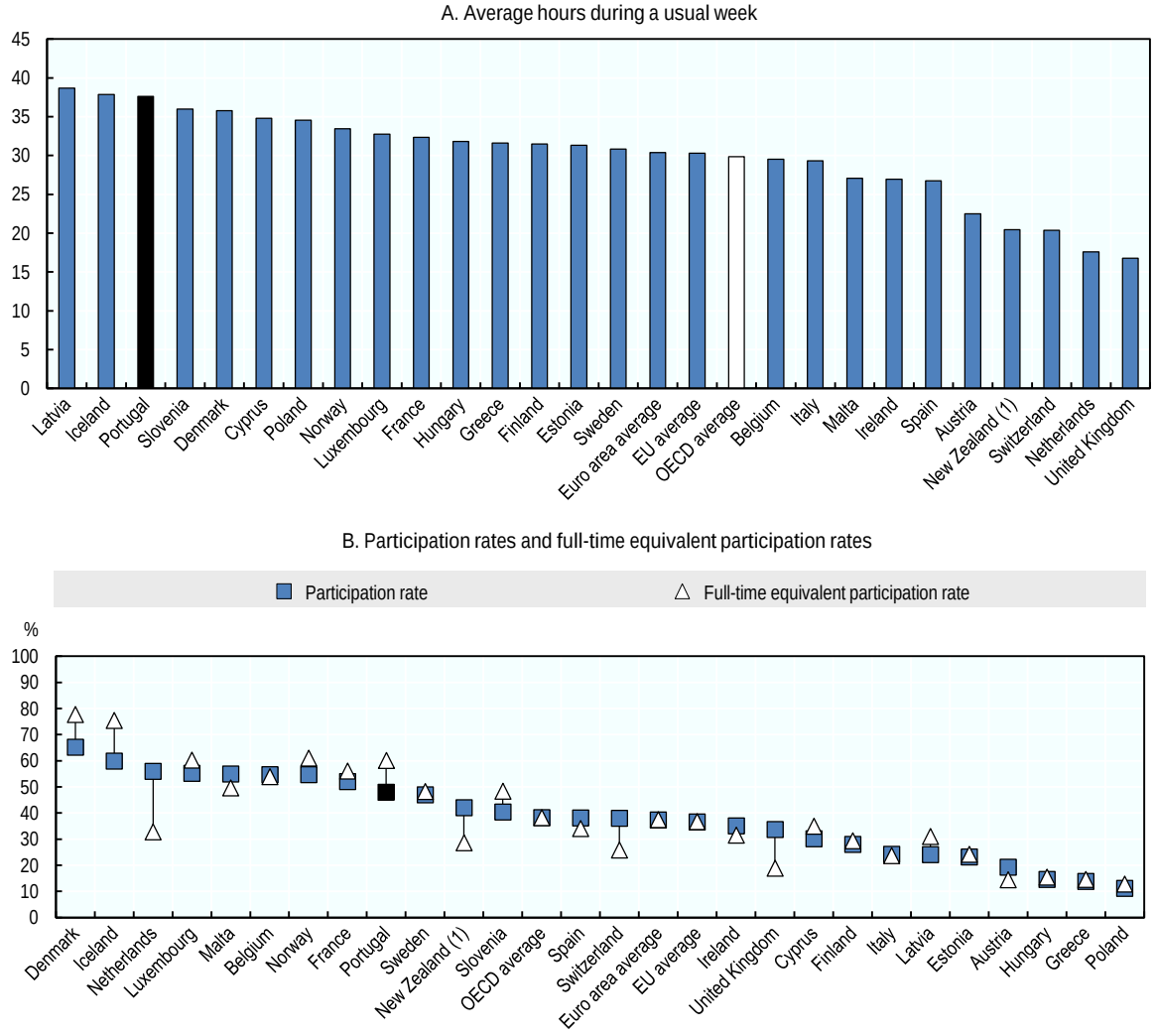
Annex Figure 1.C.1. Change in the share of early school leavers in EU countries, 2010-17



Note: The indicator is measured by the percentage of 18-24 year-olds with lower secondary education which is not enrolled in any type of further education or training. Portugal increased the mandatory age of compulsory education in 2008/09 from 16 to 18 years of age.
Source: Eurostat (2018), Early Leavers from Education and Training Database, http://ec.europa.eu/eurostat/web/education-and-training/data/database.

Annex 1.D. Enrolment in ECEC: 0-to-5-year-olds

Annex Figure 1.D.1. Average hours in formal care during a usual week and full-time equivalent participation rates for 0-to-2-year-olds in formal childcare and pre-school services, 2014



1. Data generally include children using centre-based services (e.g. nurseries or day care centres and pre-schools, both public and private), organised family day care, and care services provided by (paid) professional childminders and exclude those using unpaid informal services provided by relatives, friends or neighbours. Exact definitions do however differ across countries. For New Zealand, data cover children using licensed centre-based (e.g. 'Education and Care' services, playcentres, *Kōhanga Reo*, kindergartens) and home-based services only. All non-licensed care is excluded regardless of whether it is paid or unpaid.

Notes: Data on average hours of attendance refer to a mix of the actual hours attended by enrolled children scheduled to attend during a specific reference week and the actual hours of attendance by children who actually attended during a specific reference week.
Participation rates reflect the percentage of children under the age of 3 enrolled in formal childcare. Full-time equivalent (FTE) equivalent multiplies the enrolment rate in a given country by the average hours a child attends childcare in a given week, and divides this by 30 hours, corresponding to full-time care (OECD, 2017[38]).
Note by Turkey: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".
Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.
Source: OECD (2017), *Starting Strong 2017: Key OECD Indicators on Early Childhood Education and Care*, http://dx.doi.org/10.1787/9789264276116-en.

Annex 1.E. Regional variation of performance

Annex Table 1.E.1. Student performance means by NUTS III, PISA 2015

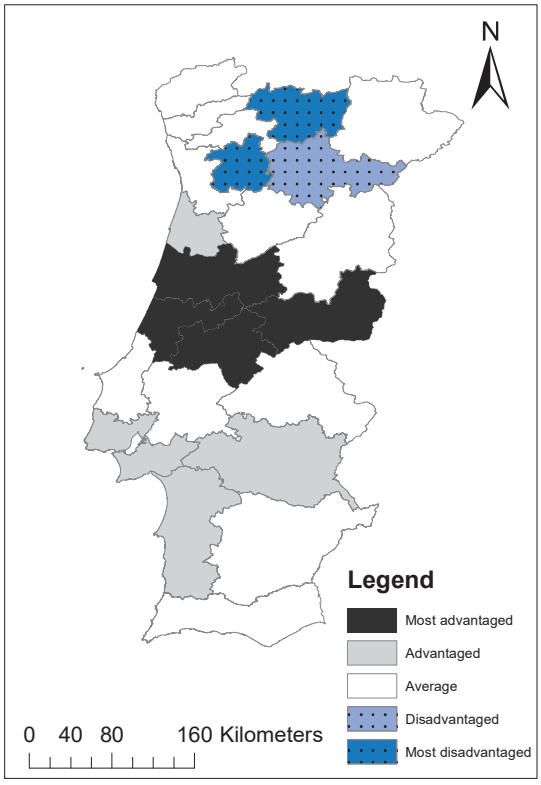
NUTS II	NUTS III	PISA science score average	Top performers in science (%)	Low performers in science (%)
North	Douro	522	14.1	14.9
	Alto Minho	517	7.3	11.3
	Porto M.A.	506	8	16.2
	Ave	489	5	19.3
	Cávado	487	4.7	19.6
	Terras de Trás-os-Montes	465	3.8	27.1
	Alto Tâmega	461	4.2	32.3
	Tâmega e Sousa	460	3.1	32.2
Centre	Beira Baixa	519	10.8	11.4
	Leiria Region	519	10.9	10.2
	Viseu Dão Lafões	515	10.4	14.9
	Coimbra Region	512	7.7	12.9
	Médio Tejo	508	8.9	15.7
	Beiras e Serra da Estrela	504	6	15.1
	Oeste	501	9.1	17.7
	Aveiro Region	498	6.7	20.1
Lisbon M.A.	Lisbon M.A.	508	8.1	15.4
Alentejo	Alentejo Litoral	536	11.6	8.6
	Lezíria do Tejo	522	10.6	9.7
	Alto Alentejo	501	8	17.2
	Alentejo Central	498	4.7	17.3
	Baixo Alentejo	470	2.7	23.9
Algarve	Algarve	485	5.5	20.6
Madeira A. R.	Madeira A. R.	487	5.8	22.5
Azores A. R.	Azores A. R.	470	4.1	27.7
Portugal		501	7.4	17.4

Note: Within each NUTS II category, the NUTS III are organised by descending order of mean performance in science.
Source: Marôco, J. et al. (2016), *PISA 2015 - Portugal, Volume 1, Literacia Scientifica, Literacia de Leitura, Literacia Matemática* [*Scientific Literacy, Reading Literacy, Mathematical Literacy*], IAVE, Lisbon.

Annex 1.F. Regional variation in school socio-economic status

Annex Figure 1.F.1. Average level of school disadvantage

By NUTS III region



Note: School disadvantage measured by the weighted average of the index of school socio-economic need. Index of socio-economic need measured by rank percentile-ordering the proportion of students within a school receiving School Social Assistance (ASE) A and average years of maternal education at the school level. The average of the two ranks was then demeaned (mean = 0) and assigned a standard deviation of 1. High values of the index indicate high levels of socio-economic challenge. Most advantaged: 0.25 standard deviations or more below 0. Advantaged: 0.1 to 0.25 standard deviation below 0. Average: -0.1 to 0.1. Disadvantaged: 0.1 to 0.25 standard deviations above 0. Most disadvantaged: 0.25 standard deviations or more above 0.

Source of administrative boundaries: Direção-Geral do Território (2016), "Official Administrative Maps of Portugal - Version 2016 [*Carta Administrativa Oficial de Portugal - Versão 2016*]", http://www.dgterritorio.pt/cartografia_e_geodesia/cartografia/carta_administrativa_oficial_de_portugal_caop_/caop__download_/carta_administrativa_oficial_de_portugal___versao_2016/.

Source: DGEE administrative data, 2015/16.

Chapter 2. The funding of school education

This chapter is about the funding of school education in Portugal. It addresses the level, management, distribution and evaluation of educational expenditures. The chapter places particular emphasis on the integration of local, national and international sources of funding. In the face of challenging economic conditions, Portugal has continued to prioritise resources for school education. Further, Portugal has begun to shift its culture of funding to measure the impact of its spending and to use these findings to inform future planning. However, significant concerns remain about the transparency of the funding process, the relatively minimal local responsibility for funds and the low levels of financial support to under-resourced students and communities. The chapter also stresses the importance of developing system-learning through regular goal setting, metric development and progress monitoring – including programme evaluation – of educational initiatives.

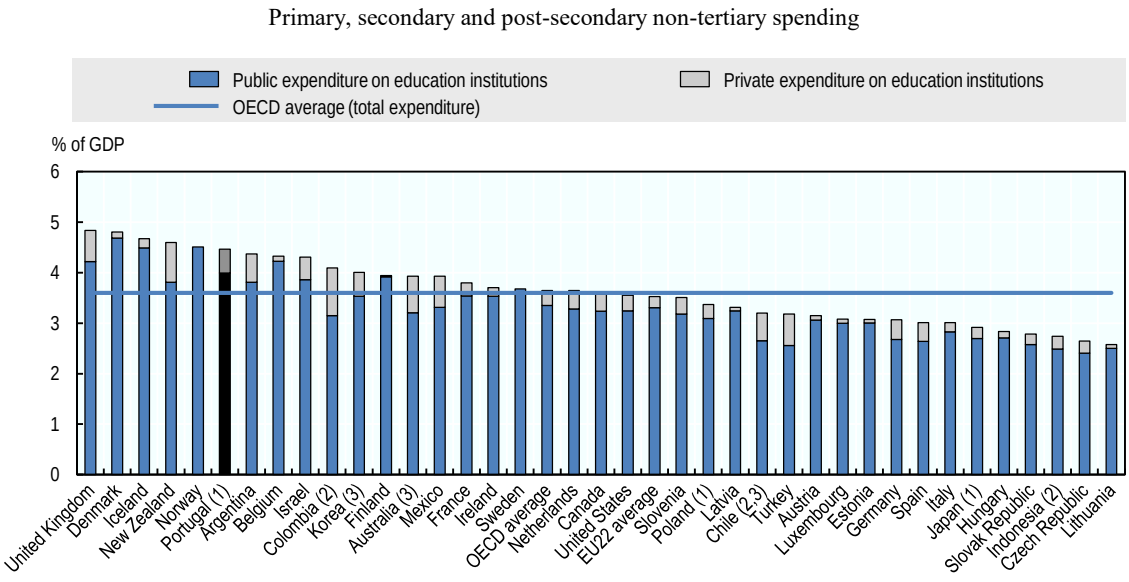
The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Context and features

Overall budget for education

Portugal invests considerably in non-tertiary education. According to OECD data, 5.1% of the added-value produced in the country (gross domestic product or GDP) in 2014 was devoted to financing early childhood education and care (ECEC) to upper secondary educational institutions (OECD, 2017[1]). Expenditure as a proportion of GDP was above the OECD average (see Figure 2.1). In fact, Portugal commits substantially more resources to education than its Southern European peers, devoting 1.2 and 1.4 percentage points more to education than Spain and Italy respectively.

Figure 2.1. Public and private expenditure on non-tertiary educational institutions as a percentage of GDP, 2014



1. Some levels of education are included with others. Refer to "x" code in Table B2.1 for details.
2. Year of reference: 2015.
3. Public does not include international sources.

Notes: Including public subsidies to households attributable for educational institutions and direct expenditure on educational institutions from international sources.
Net of public subsidies attributable for educational institutions.
Source: OECD (2017), *Education at a Glance 2017: OECD Indicators*, http://dx.doi.org/10.1787/eag-2017-en, Table B2.3. See Source section for more information and Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

But while the percentage of GDP spending devoted t/o education is high at all educational levels, both the absolute level of expenditure and expenditure per student are short of OECD averages (Table 2.1). In fact, the annual expenditure per student in secondary schooling, corrected for differences in purchasing power across countries, is about 15% below the OECD average (Table 2.1). Likewise, Portugal's cumulative educational expenditure on each student falls behind most other countries' investment. Portugal spends the equivalent of a total of USD 117 000 on students throughout their educational pathway from the start of primary through the end of secondary education, which compares to an OECD average of about USD 122 000, corrected for cross-country price differences (Figure 2.2).

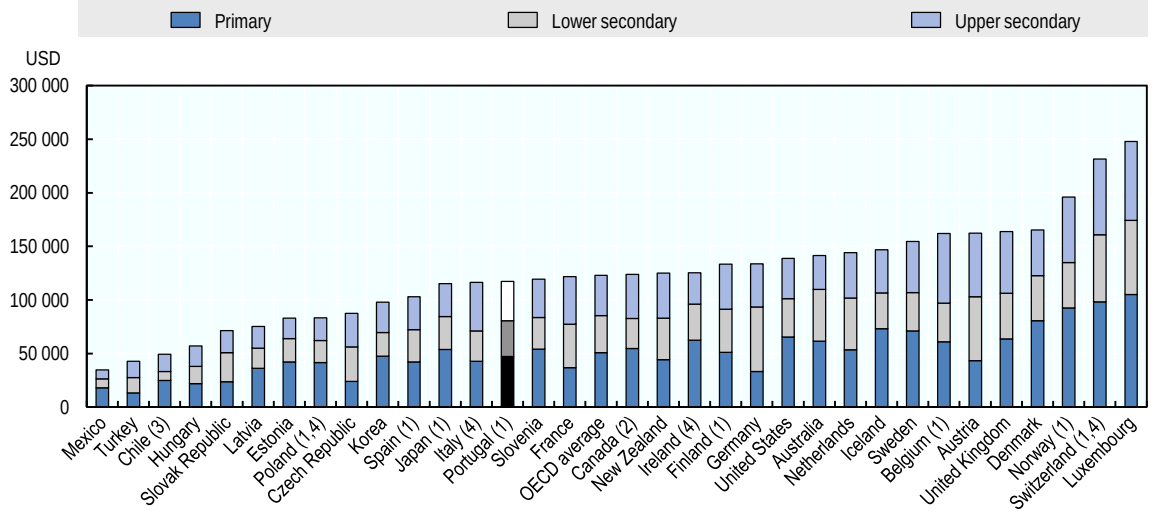
Table 2.1. Main indicators of expenditure on pre-school and school education, 2014

		Portugal	OECD average
Annual expenditure per student (in equivalent USD PPP)	Early childhood education (ISCED 0)	6 349	8 858
	Primary (ISCED 1)	6 474	8 733
	All secondary (ISCED 2-3)	8 634	10 235
	Tertiary (ISCED 5-8)	9 015	10 182
Expenditure on educational institutions (% of GDP)	ECEC (ISCED 0)	0.6	0.6
	Primary (ISCED 1)	1.8	1.5
	Lower secondary (ISCED 2)	1.3	1.0
	Upper secondary (ISCED 3)	1.4	1.2
	ECEC to secondary (ISCED 0-3)	5.1	4.2

Note: Annual expenditure per student is by educational institution and for all services.
PPP: Purchasing Power Parity.
Source: OECD (2017), *Education at a Glance 2017: OECD Indicators*, http://dx.doi.org/10.1787/eag-2017-en, Tables B1.1, B2.1, C2.3.

Figure 2.2. Cumulative expenditure per student by level of education, 2013

In equivalent USD converted dollars using PPPs



1. Some levels of education are included with others.
2. Year of reference: 2012.
3. Year of reference: 2014.
4. Public institutions only.

Source: OECD (2016), *Education at a Glance 2016: OECD Indicators*, http://dx.doi.org/10.187/eag-2016-en, adapted from Tables B1.3 and B1.4.

Expenditure per student in Portugal also disproportionately favours secondary and tertiary education levels, compared to primary ones. Expenditure on secondary education (ISCED levels 2 and 3) is 33% above expenditure on primary education, as compared to an OECD average difference of 17%. Similarly, per student expenditure on tertiary education is 39% higher than primary, as compared with an OECD average of 17% higher (OECD, 2017[1]).

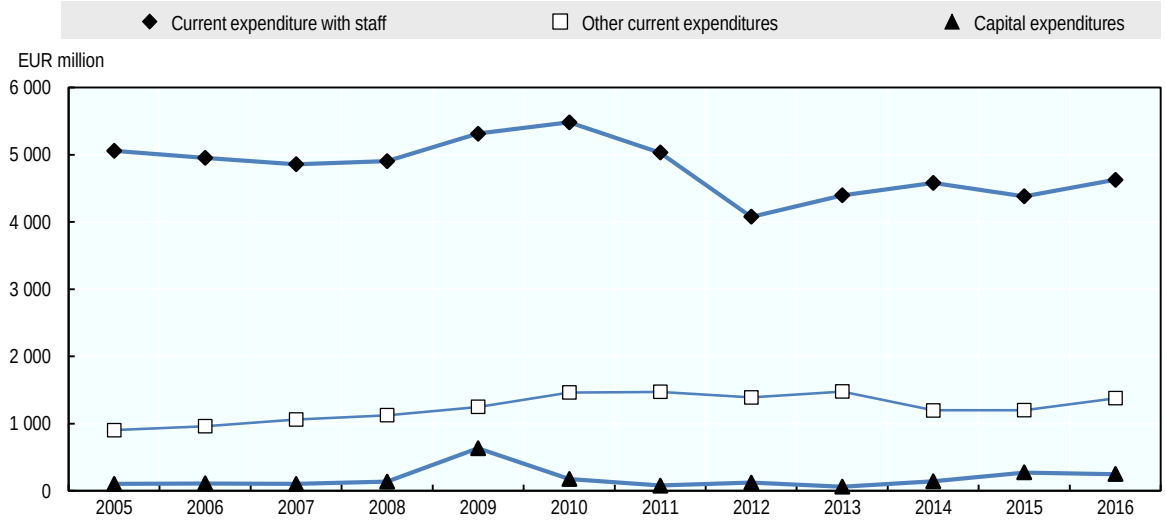
The funding of education in Portugal is largely supported by public revenues (88%) (OECD, 2017[1]). As of 2014, public spending on primary to upper secondary education accounted for 7.1% of all state expenditure, below the OECD average of 8.2% (OECD, 2017[1]). According to the latest OECD data, 85% of the funds are raised at the central level (OECD, 2017[1]). The majority of funding is then channelled to municipalities, public or government-dependent private schools through the central state budget. Schools receiving public funds can also have complementary revenues raised through services provided to the community or other private contributions (OECD, 2017[2]). In 2012, municipalities only contributed 12% of public spending on education. Expenditure from private sources in education represents 12% of total spending. Private sources of spending amount to only 0.2% of GDP in primary, 0.1% in lower secondary and 0.2% of upper secondary education – slightly above the OECD and EU22 averages of 0.1% of GDP at each level (OECD, 2017[1]).

The central budget for school education is executed by the Ministry of Education (ME), in co-ordination with multiple other ministries, according to their ascribed authorities (see Chapter 1). In face of the tightened fiscal constraints (see Chapter 1), there was a significant decrease in public funding of schools in the aftermath of the crisis in 2009. In fact, the budget of the Ministry of Education was the most severely hit by the adjustment process in the Portuguese public administration – shrinking from 5.4% of GDP in 2009 to 4.6% in 2015 (CNE, 2016[3]). Figure 2.3 showcases the evolution of the ME budget in recent years. Consolidation measures included salary cuts for all personnel above a given salary threshold. Others comprised the freezing of career progression through the steps and lanes of the salary ladder, reduction in the number of school management positions, the downsizing of regional educational administrations, a major rationalisation of ministerial services, continued consolidation of the school network and the increase in average class sizes. It is estimated that the total impact in pre-school, basic and secondary education during the period 2012-14 enabled savings of over EUR 1.1 billion. As staff expenditures make up a significant portion of the ME budget, funding cuts loomed larger than in other public services with less intense human resource requirements.

The Portuguese school system is co-funded by the European Union's European Structural and Investment Fund (ESIF), primarily through the European Social Fund (ESF) and the European Regional and Development Fund (ERDF). Between 2007 and 2015, 70% of ESF funding (just over EUR 5 billion) were devoted for building human capital skills (the design, introduction and implementation of reforms in the education and training system; measures to increase participation in education and training throughout the lifecycle; and the development of human potential in the field of research and innovation, in particular through postgraduate studies). In the same period, ERDF invested EUR 2.3 billion in education infrastructures. Between 2014 and 2020, the European Structural and Investment Funds plan to invest EUR 5.2 billion in the Portuguese education system.

Figure 2.3. Public budget for school education, 2005-16

Executed budget of the Ministry of Education, in nominal EUR million



Source: CNE (2017), *Estado da Educação 2016 [State of Education 2016]*, http://www.cnedu.pt/content/edicoes/estado_da_educacao/CNE-EE2016_web_final.pdf.

In the case of the ESF, most investments are made through the Human Capital Operational Programme (PO CH), approved by the European Commission at the end of 2014.[1] The total funds allocated to PO CH are over EUR 3.6 billion between 2014 and 2020, with 85% coming from the EU budget and 15% from national sources. These funds support the provision of school education in the North, Centre and Alentejo regions, classified as convergence areas due to their regional GDP per capita below 75% of the EU average. Funds are distributed based on five primary goals: i) to promote educational success and tackle early school leaving; ii) to increase enrolment in higher education and advanced training; iii) to enhance learning, lifelong learning and employability; iv) to improve the quality and innovation of the education and training system; and v) to provide technical support. As concerns school education, PO CH funds primarily support VET programming, teacher training, equipment procurement and targeted programmes for equity (see Annex 2A for details). Algarve and Lisbon receive national funds to further the same goals.

Distribution of funding across resource categories and governance levels

Current expenditure

For the purpose of this report, current educational expenditure refers to the costs of running the day-to-day operations of schools and the education system at its different levels of governance. It includes costs incurred by teaching and learning activities, teachers' and other educational staff's salaries and other operating costs. Operating costs refer to expenses associated with the maintenance and administration of a school (e.g. heating, electricity, small repairs, perishable instructional materials, equipment that lasts for less than one year, etc.) (OECD, 2017[2]).

According to Portuguese administrative data, current expenditures accounted for 98.4% of the total public budget on education in 2015. Current expenditures included the costs associated with the payment of staff salaries (92.1%) and other operational costs (6.3%) (Ministry of Education, 2018[4]). Internationally comparable data sets the proportion of current expenditures devoted to staff salaries in Portugal at 93% of current expenditure, around 15 percentage points above the OECD average (OECD, 2017[1]). Chapter 4 provides greater detail on the evolution of investment in human resources in recent years.

Funding for schools' current educational expenditure in Portugal is implemented by seven allocation mechanisms – approaches to distribute and transfer funds to different levels of government or school administration. Table 2.2 outlines these different funding streams, their main purpose and the basis to determine their amount. The type of allocation mechanism indicates the degree of discretion that recipients have to decide how the funds are used (OECD, 2017[2]).

As Table 2.2 demonstrates, most funding streams in Portugal are directly transferred from the Ministry of Education – with the oversight of Institute for the Management of Education Finance (IGeFE) (see Chapter 1) – to the school cluster level.[2] However, in line with a gradual process of delegation of responsibilities to subcentral levels of governance (see Chapters 1 and 3), municipalities have been progressively given more discretion over the distribution of funds, mostly in pre-primary through lower secondary education. Local authorities have the responsibility to distribute funds for current expenditures intended for educational facilities, extracurricular activities and non-teaching staff in public pre-schools, primary and lower secondary schools and, in the case of municipalities with administrative contracts granting additional responsibilities (*contratos interadministrativos* – see Chapter 1), school meals and transport.

Municipalities use resources raised through both municipal taxes and funds transferred by central authorities. The state transfers funds in a block grant (Table 2.2, Line 1: the Municipal Social Fund) to municipalities under the supervision of the Directorate General of Local Administration, except for municipalities with inter-administrative contracts that receive funds for 2nd and 3rd cycle schooling under the supervision of IGeFE. Block grants are relatively flexible since municipalities have discretion over the funds that are allocated from the central level, as long as these are assigned to broad areas of funding. The Municipal Social Fund (MSF) is determined using a combination of funding formula and administrative discretion based on spending justification by local authorities. The formula for distribution of the MSF is fixed annually by the State Budget Law according to specific weights and indicators: 35% of the allocation is based on the enrolment of children in public and government-dependent pre-school and basic education establishments; 32.5% of the allocation is based on the number of users registered with the National Health Service for a given municipality; and 32.5% based on the number of users and beneficiaries of nursery networks and pre-school education establishments located in the municipality. Execution and inter-administrative contracts (Table 2.2, Line 2) established between the Ministry of Education and municipalities also guarantee funding for operating costs, to the extent negotiated between the central and local levels. Municipalities can also further delegate responsibilities to civil parishes in the distribution of funding, resources and services to schools. Many municipalities and civil parishes also allocate funds from other sources to transportation and school meals (Line 6 in Table 2.2).

Despite the existence of several funding streams cascading from the central level to local authorities, the bulk of school funding in Portugal is directly transferred from the

Ministry of Education to the administration of school clusters. Teacher salaries are funded by earmarked grants to school clusters (Line 3) in all educational levels and so are non-teacher salaries in secondary education. Schools receive the earmarked transfers and pay teachers working in their cluster. Non-teaching staff working in 3rd cycle and upper secondary schools are paid by schools from funds transferred to the schools' administration directly from the Institute for the Management of Educational Finance (*Instituto de Gestão Financeira da Educação* – IGeFE) (Table 2.2, Line 4). On the other hand, non-teaching staff assigned to work with children in pre-schools, primary and 2nd cycle education are municipal workers and receive their salaries directly from municipalities (Table 2.2, Line 7).

Table 2.2. Funding streams for current expenditure, 2016

	Education level	Allocation mechanism	Purpose of grant	Basis to determine the level of the grant
Transferred from central government to municipalities	1. Pre-school and basic education [ISCED 0-2]	Block grant[1] (Municipal Social Fund)	For operating costs, extracurricular activities and subsidised meals, excluding teachers' salaries	Funding formula, Administrative discretion (based on spending justification by the local authority)[2]
	2. Pre-school to upper secondary education [ISCED 0-3]	Block grant (Execution and Inter-administrative contracts)	For operating costs, excluding teachers' salaries	Administrative discretion, Negotiated process
Transferred from central government to school administration	3. Pre-school to upper secondary education [ISCED 0-3]	Earmarked grant	For covering teachers' salaries	Administrative discretion based on historical trends[3]
	4. 3rd cycle and upper secondary education [ISCED 2-3]	Restricted block grant	For covering operating costs	Administrative discretion based on historical trends
	5. 3rd cycle and upper secondary education [ISCED 2-3]	Earmarked grant	For non-teaching staff salaries	Administrative discretion based on historical trends[3]
Transferred from local authorities to school administration	6. Pre-school to upper secondary education [ISCED 0-3]	Discretionary funding	For additional support to any type of current expenditure, except teachers' salaries	Administrative discretion based on historical trends
Transferred from local authorities to non-teaching staff	7. Pre-school to 2nd cycle education [ISCED 0-2]	Dedicated grant	For covering the salaries of non-teaching staff	Administrative discretion based on historical trends

1. Block grant from central authority to local authorities for operating costs, extracurricular activities and subsidised meals, excluding teachers' salaries (ISCED 0-1 first 4 years, ISCED 2): The Municipal Social Fund (*Fundo Social Municipal*) is a central budget block grant to municipalities, aimed at covering current expenses in public pre-schools and public schools offering the first 4 years of ISCED 1, namely non-teaching staff salaries, meals, extracurricular activities, school transport and other operating costs, besides teaching and monitoring staff in extracurricular activities in sports and the arts, student curricular support, health support at school and socio-educational support to students in ISCED Level 1. Furthermore, it also aims to cover expenses with school transport at ISCED level 2. If the municipality presents expenditure exceeding the budget in a given year, the excess is deducted from the grant of the following year.
2. If the municipality presents expenditure exceeding the budget in a given year, the excess is deducted from the grant of the following year. At the time of the review, representatives from IGEFE indicated that the funding formula for non-teaching costs overrides administrative discretion decisions.
3. The numbers of teaching and non-teaching staff are determined via an administrative process described in more detail in the section below on the budgeting and planning process. Once staffing levels are established, the final grant amount is determined based on salary schedules of teaching and non-teaching staff.

Source: OECD (2017), *The Funding of School Education: Connecting Resources and Learning*, http://dx.doi.org/10.1787/9789264276147-en, Annex A: Country Profiles.

Block grants, restricted to given areas of spending (Line 4), are channelled to cover operating costs related to the activity of lower and upper secondary schools. The amount is determined through the Institute for the Management of Educational Finance's (IGeFE) analysis of management indicators, prior year expenditure, expectations for changes in prices, as well as student enrolment and teaching hours projected by the General Directorate for School Administration (*Direção-Geral da Administração Escolar* – DGAE) and other relevant variables provided by the Directorate General for Schools (*Direção-Geral dos Estabelecimentos Escolares* – DGEstE). These restricted block grants for operating costs in lower and upper secondary schools, as well as the funds transferred from municipalities to schools offering other levels of education, give limited expenditure flexibility as these are expected to be just enough to pay for utility bills.

The administrative, budgetary and pedagogical management of all schools is the responsibility of the school unit, either the school cluster or a non-clustered school. Subsidiary schools within a cluster have no independent responsibilities over budget management.

Alongside the regular budget, school clusters may apply for additional resources, in order to develop specific projects and activities. These include targeted programmes addressing equity concerns, such as the Priority Educational Intervention Areas (*Territórios Educativos de Intervenção Prioritária* – TEIP) and the National Programme to Promote School Success (*Programa Nacional de Promoção do Sucesso Escolar* – PNPSE). Each application is accompanied by specific criteria, which attempt to guide schools to make evidence-informed plans. The application process evaluates schools' ability to implement the proposed initiatives. The Ministry of Education provides support in the form of training and technical resources to schools to develop both TEIP and PNPSE applications. The allocations of resources from TEIP and PNPSE come mostly in the form of the provision of extra human resources to execute the project, together with the financing of training related to the school's project.

Capital expenditures

Funding for capital expenditure covers spending on assets that last longer than one year. It includes funds for construction, renovation or major repairs to buildings, as well as on new or replacement instructional and non-instructional equipment (e.g. furniture, laboratory equipment, computers, etc.) (OECD, 2017[2]).

Capital expenditure corresponds to less than 2% of the total budget of education in Portugal (see Figure 2.3). As with the funding of current expenditures, the responsibility for distributing financial resources is shared between the central and local levels. While the Ministry of Education is responsible for investing in lower and upper secondary schools, municipalities generally have responsibility for management and maintenance of school buildings at the pre-primary and primary levels.

Capital expenditure is determined by ad hoc decisions and infrastructure investment programmes, both based on assessments of needs (Table 2.3). Local authorities are expected to finance infrastructure investment programmes in school clusters for infrastructure construction, maintenance and renovation, and the provision of non-instructional and instructional equipment in pre-primary and basic education. There is no publicly-available, system-wide information about the amount spent by municipalities on the fulfilment of this responsibility.

Table 2.3. Funding streams for capital expenditure, 2016

Education level	Allocation mechanism	Purpose of grant	Basis to determine the level of the grant
1. Pre-school and 1st cycle education [ISCED 0-1]	Infrastructure investment programme from local authorities to school providers and schools	For infrastructure construction, maintenance and renovation, provision of non-instructional and instructional equipment	Assessment of needs
2. Basic education [ISCED 1-2]	Ad hoc decisions at the central and local levels	For infrastructure construction	Assessment of needs
3. Primary to upper secondary education [ISCED 1-3]	Ad hoc decisions at the central and local levels	For infrastructure maintenance and renovation, provision of non-instructional and instructional equipment	Assessment of needs
4. Upper secondary education [ISCED 3]	Infrastructure investment programme co-ordinated by a dedicated agency (*Parque Escolar*)	For infrastructure construction	Assessment of needs
5. Upper secondary education [ISCED 3]	Ad hoc decisions from a dedicated agency (*Parque Escolar*)	For infrastructure maintenance and renovation, provision of non-instructional and instructional equipment	Assessment of needs

Note: *Infrastructure investment programme* refers to specific, initiatives targeted at infrastructure investment following medium-term development plans or strategies at the national or sector level for a fixed period of time. *Ad hoc decisions* refer to punctual agreements between the public funder and the entities receiving the funds.
Source: OECD (2017), *The Funding of School Education: Connecting Resources and Learning*, http://dx.doi.org/10.1787/9789264276147-en, Annex A: Country Profiles.

Infrastructure maintenance and renovation, the provision of non-instructional and instructional equipment (including ICT equipment) are financed by ad hoc decisions at the central level in ISCED 1-3 (Table 2.3, Lines 1-3). The central level finances infrastructure construction in ISCED 1-2 on the basis of ad hoc decisions. The Directorate General for Schools (DGEstE) is responsible for modernising and requalifying schools over which it has authority, but the amount invested in school building maintenance has declined steadily from EUR 14.3 million in 2013, to EUR 2.8 million in 2016. For a select number of schools (173) at the secondary level (ISCED 3), infrastructure construction and maintenance is financed by an infrastructure investment programme co-ordinated by *Parque Escolar* (Table 2.3, Lines 4-5).

Parque Escolar is a state-owned company, functionally dependent on the Ministry of Education, created in 2007. The main motive for the creation of *Parque Escolar* was to plan and carry out a Programme for the Modernisation of Secondary Schools, with the objectives of updating and restoring the physical, environmental and functional effectiveness of secondary school facilities. *Parque Escolar* also inaugurated a new management model for the maintenance of the intervened school infrastructures (Ministry of Education, 2018, p. 25[4]). Chapter 3 explores details of these school facilities in more depth.

Since it was launched in 2007, *Parque Escolar* has invested almost EUR 2.4 million in the requalification of 173 of the 332 public secondary school buildings initially included in the programme. The programme has mobilised a significant percentage of European Regional and Development Funds (ERDF) (almost EUR 950 million) during the National

Strategic Reference Framework for the 2007-13 period. It was awarded grants by the European Investment Bank (EIB) (EUR 900 million) and by the Council of Europe Development Bank (CEDB) (EUR 250 million). *Parque Escolar* played an important role in the economic stimulus package launched by the Portuguese Government in 2009 within the European Economic Recovery Plan (approved by the European Council in December 2008). In 2017-18, *Parque Escolar* is expected to invest an additional EUR 106 million to maintain the facilities of the original 173 schools. However, more than 100 planned school re-qualifications were suspended in 2011 and ERDF funds for this programme have been greatly reduced in the 2014-20 investment period.

School library facilities and materials are managed by the School Library Network (*Rede de Bibliotecas Escolares* – RBE), which includes all schools with more than 100 students and covers all education levels. This programme launches annual applications to support the installation of new libraries or to maintain and modernise existing libraries.

Budgeting and planning process

The budget process for financing schools is annually defined, based on information provided by schools and centrally estimated, and is anchored in past expenditure corrected for inflation. The public budget for education is proposed by the Ministry of Education, negotiated with the Ministry of Finance and finally approved by both the central government and parliament (OECD, 2017[2]). Two separate mechanisms exist for budgeting centrally distributed funds, one for the teaching salary component of the budget and the other for non-teaching salaries and non-salary expenditures.

Teaching salary budgeting

Each spring, the Directorate General for Schools (DGEstE), in articulation with ANQEP for planning VET courses, provides student enrolment projections to each school cluster administration. The school cluster administration uses this information to decide on an offering of classes sufficient to meet student need, following the guidelines presented in a governmental dispatch and formalised in the Organisation of the School Year (*organização do ano letivo*), an official regulation that defines the class size and staffing rules for schools, published on a yearly basis by the Secretary of State for Education. The school cluster proposal takes into account planned strategic projects, including PNPSE and TEIP, and the estimated number of classes previously approved by DGEstE on the basis of the estimated distribution of students. DGEstE reviews, corrects as necessary and ultimately validates the network of class offerings for each school and the entire system.

Once classes have been determined, the school cluster administration reviews the available permanent teaching staff returning to the cluster, compares the instructional need with the available human resources and submits a proposal for any missing teaching hours to the Directorate General for School Administration (DGAE) to meet its instructional needs. Similarly, DGAE reviews the proposal, corrects it as necessary, validates the number of required teachers and then assigns the required teachers following protocols articulated in Chapter 4 of this report.

Finally, the financial department within the Ministry of Education (IGeFE) receives the defined staffing levels for each school cluster and transfers earmarked funds to schools and school clusters to pay teachers' salaries.

Non-teaching salary budgeting

A parallel process exists for planning and developing the budget for the non-teaching component of schools' budgets. Each spring, school administrators prepare a proposal for their non-teaching expenses to submit to IGeFE. This proposal takes into account prior-year expenditures, planned investment in school facilities and resources, and other projects pursued by the school, all following the guidelines relating to non-teaching expenses in the Organisation of the School Year regulations.

IGeFE is responsible for analysing the budget proposal according to legal criteria and for defining the school budget. The amount requested by the school is contrasted with the results of a model recently developed by IGeFE based on historical expenses, number of students, levels of education, facilities at the schools, the existence of central heating and the geographic location of schools. This model, which was newly introduced for the 2017/18 school year and is not public, automates the rules defined for each expenditure item. During the review visit, stakeholders indicated that in the case of a difference between the amount requested by the school cluster and the amount generated by the IGeFE model, the amount allocated would default to the total determined by the IGeFE model. During the school year, IGeFE may approve additional ad-hoc funding following a justified request from a school.

Budgetary responsibilities

Schools and school clusters have limited autonomy to manage their budget. The vast majority of schools' operating budget is devoted to staffing (around 93%) but the levels of staffing, the selection of staff and the assignment of teaching staff to schools are decisions made at the central level. School clusters do control assignment of teachers to roles within a cluster as long as they respect the level and content area for which they are licensed (see Chapter 4). Though schools are granted legal autonomy over directing the non-salary current expenditure, in practice, school-level stakeholders report this amount must be used to cover basic maintenance and utility costs, leaving minimal opportunity to invest these funds in innovative projects. Carry-over of funds from one year to the next is subject to the approval of local or central authorities depending on the source of funding. During the review visit, stakeholders reported the difficulty they had in covering even minimal utility expenses with their non-salary budgets.

Funding of private schools

Despite the fact that there is no state obligation to award subsidies to private schools, the Portuguese central government has funded private schools by means of various contracts. In the 1980s, the central government started to partially fund private schools in order to provide a sufficient offer of schooling throughout the country. Under an "association contract" (*contrato de associação*) government-dependent private schools received government funding on a per-class basis. These government-dependent private schools were granted public funding in geographic areas insufficiently served by public schools. The number of association contracts has decreased over the past decade and they have also become politically controversial, particularly since a new law in 2013 allowed the central government to establish these contracts with private schools regardless of the public offer in the same area. Evidence of corruption in the management of the association contracts created further controversy.

Contracts that provide direct support to families to attend private schools are important parts of the government support of private schools, though these draw less widespread attention. Two types of family-support contracts exist depending on the educational level: "simple contracts" (*contrato simples*) provide a partial subsidy for low-income students to attend private primary and secondary schools; and "development contracts" (*contratos de desenvolvimento*) also privilege low-income students but subsidise private pre-schooling. Concerns exist as to whether the level of government subsidy fully covers the cost of attending private schools for the lowest-income families. This fact begs the question of whether these types of contracts end up serving the interests of middle-income families, and therefore, promote greater socio-economic school segregation (see Chapter 3).

A final contract category is the "sponsorship contract" (*contrato de patrocínio*) in which the central government awards a grant of 50% or more of the costs to private schools that are providing an innovative form of education in subjects that are under-served by public schools, such as specialised artistic education. These private schools may charge tuition to cover the remaining costs. Sponsorship has almost tripled during the last decade. This contract category also supports private school-aged (initial) VET-schools.

About 7% of the State budget is allocated to government-dependent private schools, representing a stable proportion between 2008 and 2015. As of 2015/16, it includes support to pre-school in social institutions (around 2%), private professional schools not supported by the European Social Fund (0.82%), private schools in areas where the public offer is not sufficient (3.19%) and specialised services for students with special needs (0.34%).

Funding for equity purposes

Equity considerations are important in the design of educational policies and involve two key dimensions: fairness and inclusion (see Box 2.1). The educational system in Portugal is built around the notion of universal quality education for all learners. Different policies to respond to the varied needs of a diverse student population have been implemented, steered by the central authority of the Ministry of Education and based on a centralised distribution of funding. While the programmatic aspects of those policies are reviewed in greater detail in Chapter 3, the budget assigned to each of these political priorities is presented in Table 2.4 and described below.

Expenditure on additional support measures focused on the needs of special education learners has increased, from EUR 197 million or 3.3% of the educational budget in 2010/11 to EUR 300 million or 5.9% of the overall budget in 2016/17. However, this has been accompanied by a near doubling of the SEN student population from 46 950 to 82 667 during the same time span, thus representing a decrease in per-student expenditure in recent years.

The most significant targeted support measure for special education students is teachers specialised in special needs education instruction. Costs for these rose from EUR 181.5 million in 2010/11 to EUR 244 million by 2016/17 but declined from 92% to 81% of the total expenditure in additional support measures due to the emergence of a variety of other expenditures that are consistent with the inclusive approach. The most relevant strategies in terms of expenditure are early intervention (EUR 20 million since its introduction in 2012/13) and the financing of resources centres and assistive technologies (stable at around EUR 20 million since 2014/15).

Box 2.1. What do we understand by equity in education?

Equity in education has two dimensions. The first is fairness, which means making sure that personal and social circumstances – for example gender, socio-economic status or ethnic origin – should not be an obstacle to achieving educational potential.

The second is inclusion, in other words ensuring a basic minimum standard of education for all – for example that everyone should be able to read, write and do simple arithmetic. The two dimensions are closely intertwined: tackling school failure helps to overcome the effects of social deprivation, which is associated with higher rates of school failure.

Both fairness and inclusion are key issues for OECD countries. Children from poorer homes in most OECD countries are between 3 and 4 times more likely to be among the poorest performers on assessments of literacy and numeracy at age 15. Three key policy areas can affect equity in education: the design of education systems, practices in and out of school and how resources are allocated.

Regarding financing, the OECD (2007[5]) report *No More Failures: 10 Steps to Equity in Education* recommends three measures:

- Provide strong education for all, giving priority to early childhood provision and compulsory schooling.
- Direct resources to the students with the greatest needs.
- Set concrete targets for increased equity, particularly related to low school attainment and dropouts.

Evidence suggests that resource allocations to address inequality have the greatest impact in addressing learning gaps if they are made early in students' educational progression. But these investments may increase inequality if they are primarily claimed by those least in need of it or if they are of low quality.

Since national education resources are limited, governments need to ensure that they are being directed to the poorer students and regions so that minimum standards are met everywhere. Many countries have special schemes to direct additional resources to schools or school areas serving disadvantaged students. Such schemes need to ensure that the extra resources are used to assist those most in need. The stigma arising from the labelling of particular schools as "for disadvantaged children" should be avoided.

As with all policy changes, governments need to be able to measure success in improving equity, performance and school dropout rates. Numerical targets can be a useful tool, by articulating policy in terms of what is to be achieved rather than in terms of formal processes. Numerical targets for reducing the number of school leavers with poor basic skills and the number of early school dropouts are particularly useful.

Source: OECD (2007), *No More Failures: Ten Steps to Equity in Education*, http://www.sourceoecd.org/education/9789264032590.

Table 2.4. Expenditure on equity and inclusion policies

In EUR thousands (nominal)

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Total education budget	5 781 189	5 019 868	4 963 184	5 052 220	4 913 288	5 123 982	5 061 986
Expenditure on targeted equity funding programmes							
Programme to Promote School Success (PNPSE) / More School Success Programme (PMSE)	..	..	..	..	..	..	32 000
Integrated and Innovative Plans to Combat School Failure (PIICIE)[1]	x	x	x	x	15 443	15 443	15 443
Priority Educational Intervention Areas (TEIP)	22 858	12 939	23 956	23 542	21 288	21 298	21 301
Tutorial Support (ATE/AET)	..	..	..	..	..	..	3 000
Expenditure on support measures for socio-economically disadvantaged students							
School Social Assistance (ASE)	129 168	124 023	125 770	125 209	116 585	116 752	..
Expenditure on additional support measures for learners with special educational needs (SEN)							
Specialist teachers	181 521	178 844	184 863	188 152	201 091	230 458	244 014
Early intervention	x	x	20 158	20 158	20 158	20 310	20 310
Resource centres and assistive learning supports[2]	15 247	15 383	16 605	20 658	20 017	20 731	20 998
Hospitals	..	..	1 746	1 746	1 784	1 746	1 784
Public kindergarten assistants	..	..	1 447	4 160	5 091	4 666	4 039
SEN transport	..	..	..	6 800	6 900	5 218	8 500
Total additional SEN support	196 768	194 227	224 819	241 674	255 041	283 129	299 645
As a share of educational budget (%)							
School social assistance (%)	2.9	3.3	3.6	3.7	3.7	3.9	..
Support measures for SEN (%)	3.4	3.9	4.5	4.8	5.2	5.5	5.9

x : Programme non-existent in these years.
.. : Data not available.

1. PIICIE funds represent EUR 108.1 million over 7 years (2014-20). Table annualises the total by dividing by 7.
2. This category collapses the following categories from the EASNIE report: Communication Tech. Resource Centre for Special Ed (CRTIC); Resource Centre for Inclusion (CRI) financing; Professionals contracted by schools in specialised units; Assistive learning products; CRTIC financing; and Specialised support units.

Note: Expenditure on equity and inclusion policies includes all nationally managed funds, combining Portuguese and European sources.

Sources: European Agency for Special Needs and Inclusive Education (2018), *Financing Policies for Inclusive Education Systems, Country Report: Portugal*, EASNIE, Brussels; Ministry of Education (2018), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Portugal,* http://www.oecd.org/education/schoolresourcesreview.htm.

The most important additional support measure is a stable programme named School Social Assistance (*Ação Social Escolar* – ASE), that supports students living in poor conditions, based on an application filled by school clusters' social workers, according to parents' official information (including tax declaration), that provide families with support for the costs of attending school, such as meals, books, school supplies, transport and accommodation. The number of students supported through this programme is high, around 35% of students, divided into three different intensities of support (School Social Assistance A, B or C).

Other important selective support measures are TEIP and PNPSE. Funding for TEIP reached EUR 21.3 million in 2016 (0.41% of the overall schools' budget) and has been relatively stable in nominal terms. Coupled with increasing school and student participation, this implies declining resources per student. Open to all school clusters excluded from TEIP, the National Programme to Promote School Success (PNPSE) was created in 2016, as an extension of a previous school success programme (More School Success Programme, *Programa Mais Sucesso Escolar* – PMSE), with a total approved budget of EUR 32 million (EUR 29 million from European funds and EUR 3 million from national funds) distributed according to specific criteria. Additional supporting funds for school clusters' PNPSE projects exist to finance teacher training, non-teaching staff levels, second-chance education, guidance and psychology network services, extracurricular activities, family training, ICT investments and other school-developed priorities as part of the EU co-financed Integrated and Innovative Plans to Combat School Failure (*Planos Integrados e Inovadores de Combate ao Insucesso Escolar* – PIICIE). Regions and municipalities apply for these funds for a three-year investment period. The total budget for the EU-sponsored Portugal 2020 investment (2014-20) amounts to EUR 108.1 million. In total, yearly spending on TEIP, PNPSE and PIICIE amounts to around EUR 69 million or just under 1.4% of the educational budget.

Unfortunately, a complete accounting of measures to promote equity in schools is impossible due to a lack of systematic recording. Other programmes to tackle specific vulnerabilities of some groups, such as Portuguese as a Second Language (*Português Língua Não Materna* – PLNM), Distance Learning for Itinerant Students (*Ensino a Distância para a Itinerância*) and tutorials for low achievers (*Apoio Tutorial Específico* – ATE and *Apoio Educativo Tutorial* – AET) exist. Data on financial expenditures on these topics are not publicly available and the ministry is not readily able to produce estimates of these.

Monitoring and assessment of financial expenditures and strategic initiatives

State monitoring of expenditures comprises a large array of procedures and systems that involve different units of the Ministry of Education (Ministry of Education, 2018, p. 119[4]). Two broad types of monitoring prevail: i) the evaluation of inputs and outputs to ensure compliance with legal requirements; and ii) the definition of desired outcomes from public expenditures and the systematic evaluation procedures to determine its effectiveness and efficiency. Some monitoring processes follow one or the other of these typologies, while other processes integrate both in their reviews.

The audit and financial control monitoring by the central government is conducted by the Inspectorate-General for Education and Science (*Inspeção-Geral da Educação e Ciência* – IGEC), within the responsibility of the Multidisciplinary Audit and Financial Control Team (*Equipa Multidisciplinar de Auditoria e Controlo Financeiro* – EMAF). In 2015, IGEC carried out auditing and financial control activities on EUR 400 million of

expenditure and EUR 480 million of revenue collected. As a result, situations were detected that were worth correcting by the audited services in the amount of EUR 95 000, to be reimbursed by employees to the Ministry of Education and EUR 166 000, related to amounts payable to school employees as a result of inaccuracies in the processing of remunerations or credits in their favour. Visualised as a percentage of total expenditure, and of total revenue audited, 0.02% and 0.03% respectively, these results reveal a system that follows financial regulations.

At the system level, the National Council of Education (CNE) prepares an annual report (the State of Education – *Estado da Educação*) on the inputs, outputs and outcomes of school education in Portugal. Further, the Directorate General for Education and Science Statistics (DGEEC) develops, monitors and disseminates indicators of school performance and compares them with their expected values taking into account the characteristics of the respective school population. A public portal called *InfoEscolas* reports in a user-friendly way system-wide averages and school-level performance for all public and government-dependent schools in Portugal. Currently in pilot phase, DGEEC has also created a website called *Escola 360* which hosts a wealth of data and allows teachers, parents and students to access comprehensive school-specific data.

Official statistics regarding system-wide performance are based on a longitudinal database entitled the Information System of the Ministry of Education, known as MISI for shorthand. This longitudinal data system covers student, human resources and school social action from pre-school to upper secondary education for public schools and private schools with association or sponsorship contracts, private professional schools of the Lisbon and Tagus Valley area and of all other private schools that express an interest in participating. DGEEC accesses the information system of schools on a daily basis and verifies its correct functioning.[3] In 2014, the MISI databases were anonymised, longitudinally aligned and placed into a secure server environment, permitting the use of these data in external research projects. These microdata permit researchers both within and outside the ministry to rigorously evaluate programmatic impacts. Similar data and course management functionality on vocational and adult education exist in the Information and Management System of the Education and Training Offer (*Sistema Integrado de Informação e Gestão da Oferta Educativa e Formativo* – SIGO) database.

At the school level, all public and government-dependent private schools are subject to compulsory inspection of their teaching and learning processes, and their operational administration by central governments' education inspection services (see Chapter 3). These inspections include both an assessment of schools' use of resources, their outputs (e.g. number of classes offered), as well as an assessment of student outcomes.

School clusters are expected to comply with laws and regulations that focus on inputs and processes within the school organisation and to report to central government directorates and inspectorates. Schools report activities, expenses and students' results in their annual activities plan. The activities and accounting reports from schools are submitted for approval to the General Council (see Chapter 3) and are disseminated on the *InfoEscolas* website. The accounting reports from municipalities are submitted to the Municipal Assembly and publicised on their websites. Each school also submits a report regarding their provision of services to students with SEN, structured around two dimensions: planning and organisation of education and educational services and the educational responses and students outcomes. Financial or administrative malpractice results in significant sanctions for school principals. A complete review of school evaluation efforts beyond financial and regulatory compliance monitoring follows in Chapter 3.

Ad hoc evaluation of particular projects exists, particularly when these projects are co-financed by the European Social Fund (ESF). With respect to European funds, performance framework conditions exist for the financial and outcome results for ESF-supported initiatives. Conditions prior to (*ex ante*) the disbursement of funds must be suggestive that successful completion of an initiative is likely. These conditions include the development of clear performance targets. Progress towards these targets is then reviewed systematically over the project's lifecycle. Between 5% and 7% of each project's funds are reserved in a performance reserve. Projects failing to meet targets see these funds reallocated to other priority areas (European Commission, 2015[6]). The first cycle of ESF fund expenditure was evaluated at its conclusion (*ex post*) (European Commission, 2014[7]), while interim results are regularly assessed (e.g. the European Commission's Surveillance Report (2017[8])).

Similarly, various national programmes have incorporated formal evaluations as part of their implementation. There is some production of evidence to inform decision-making such as in evaluations of the impact of class size in Portugal, the rates of social segregation, the impacts of year repetition and others. However, the formal evaluation approach of the ESF funds is the exception rather than the norm. National evaluations of programmes such as TEIP, PNPSE, principal training and others generally focus on input and output measures (e.g. amount invested, number of training sessions provided) and these are not sufficient to evaluate the actual effects of the programme. While extensive data monitoring and reporting systems exist, few student subpopulation or system-wide goals have been articulated and minimal support and accountability mechanisms exist. Even in the case of ad hoc reporting of outcomes, minimal interventions either in the form of support or sanction, occur in response to struggles (see below).

Strengths

Portugal expresses a strong cultural commitment to education, supported by high levels of financial investment as a proportion of GDP

Despite the economic crises that led to severe cuts in the education sector, Portugal spends a high proportion of its GDP on total and public expenditure in primary, secondary and post-secondary institutions. Additionally, local enterprises commit financial and human resources to various initiatives that foster learning and a sense of belonging in schools. These initiatives serve to illustrate the widespread cultural commitment to education among different economic, social and political actors. Despite these high levels of relative effort, the total amount of investment in education and expenditure per student remains at relatively low levels.

Further, the availability of European funds has allowed Portugal to invest in key priority areas such as vocational education and training (VET), dropout reduction and the support of struggling student populations. Portugal's future challenge is to appropriately integrate sources of local, national and international funds to support a sustainable investment in core strategic educational areas.

Demographic context provides opportunities for improvements in quality

While Portugal's predicted long-term demographic trends pose challenges to its overall economic health, the projected decline in the young population presents opportunities for the school system. As in other Southern European countries, the school-aged population is already low by international standards and is predicted to continue to decrease. For

instance, between 2015 and 2025, the overall Portuguese population is expected to decline from over 10.4 million to just under 10 million, while the share of population between 5 and 19 years old will decline from 7.5% to 6.6%, a reduction of almost 117 000 young people in Portugal or 15% of the total in the age group. By 2035, the share is anticipated to decline to 5.8%, an additional 12.8% reduction of the youth population. If Portugal can succeed in sustaining roughly the same overall levels of real educational spending, it would result in higher expenditure per student even without augmenting absolute amounts. To the limited extent that expenditure is related to quality, this has the potential to increase quality without affecting cost.

While the financial crisis forced attention on the efficient use of resources, modest economic growth offers potential for new investments in schools

Budget restraint due to the economic crises has increased awareness about the importance of efficiency in education and further fostered processes such as the consolidation of the school network that reduced the number of small schools and increased class sizes. Other current efforts that reflect the commitment to an efficient use of public resources include: the limitation of state funding to private schools only in geographic areas where the public offer is insufficient; the centralisation of wage payments: and a more thorough monitoring of fraudulent sick leave. Projections are that Portugal's economy will continue to grow (OECD, 2017[9]) and recent evidence suggests that Portugal may be surpassing even these rosy projections. Combined, these trends present an opportunity for strategic planning to target educational priorities, leveraging resources freed up through efficiency and new resources available through economic growth.

Central governmental funding authority establishes equal minimal levels of main resource allocations

As opposed to educational systems financed primarily by local taxes or private expenditure, the Portuguese system is mostly publicly and centrally financed, which allows the government to direct resources for the national public good and equalise inputs across different jurisdictions on the basis of basic resource needs for sustaining normal operations. As Figure 1.2 in Chapter 1 indicates, Portugal raises much more of its revenues at the central level, which has the potential to smooth out subnational disparities. Similarly, Figure 1.8 in Chapter 1 highlights the extent to which policy-making decisions in education are centralised in Portugal. This should allow Portugal to make choices to equalise inputs. For instance, class size minimums and maximums determine the number of classes and the number of classes and curricular requirements determine the number of teaching staff allocated to each school. In principle, this should result in equal resource allocation across the country. Non-teaching staff is allocated in similar ways, while non-salary expenditures are expected to provide just enough for operational costs required to run the school according to its location, although facilities might differ on historical grounds. Though this equity-focused steering potential exists, the reality is that inputs and outcomes vary significantly across communities (see Chapter 3).

Programmes exist to promote equity for under-resourced communities and students

The United Nations Strategic Development Goal 4.5 calls for "eliminat[ing] gender disparities in education and ensur[ing] equal access to all levels of education and

vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations" (United Nations, 2015, p. 17[10]).

Portugal has developed a series of programmes intended to combat inequality for under-resourced communities and vulnerable students. Means-tested social support exists for all students from disadvantaged socio-economic backgrounds that provide free or reduced-price school meals, transportation, textbooks and other benefits. Specific supports exist for students who are struggling in school in the form of tutorials where students receive small group support on topics they have not mastered. Students who are not native-Portuguese speakers receive specialised language instruction. The Distance Learning for Itineracy has supported mobile populations, primarily Roma communities that, as a group, have faced significant challenges in secondary school completion. Rules provide for additional staffing for students with complex special educational needs. Further, extensive networks of special education resource centres provide services and supplies to support the needs of students with SEN. In addition, to programmes targeting students, programmes such as TEIP and PNPSE provide some targeted resources to high-needs students and communities. Despite the existence of these programmes, concerns persist about whether their funding levels are sufficient and more broadly about whether they are effective.

There is a nascent focus on programme evaluation to inform decision-making that benefits from a rich wealth of data about schools and students

A wide range of data is collected at the system level and could be used to highlight strengths and challenges in the system and steer resource allocation. There exists in Portugal a growing focus on results and efficiency of resource use.

Evaluation systems have become more consolidated and informative over the past 15 years. This process began in 2006 with the development of the MISI data system, continued into 2007 with the first school evaluation cycle that included student result indicators and was furthered by the 2008 teacher appraisal reforms (see Chapter 4), Since then, Portugal has seen a growing attention to results-based decision-making. The very existence of national exams at the end of the 3rd cycle of basic education (Year 9) and upper secondary education (Year 12) ensures consistent national expectations for all students and allows for regular monitoring of quality and equity at the system level. With the extension of PNPSE to all schools not covered by TEIP, nearly 99% of schools prepare a strategic action plan based on ministry guidelines and monitor progress in relation to their strategic action plan. Projects co-funded by the European Social Fund include explicit requirements for *ex ante* and *ex post* evaluation; the last round of such summative evaluations was conducted in 2014/15.

There are various current projects to improve monitoring and transparency of financial management. In fact, under the supervision of both the Ministry of Education and the Ministry of Finances, IGeFE is developing different projects expected to improve system efficiency, including: i) the digitalisation of financial management in all schools and educational services, through a new digital platform (SmartMEC); ii) a mobile application for the civil sector, principals and staff to have access to updated school information (*APP da Educação*); iii) a central repository of financial data of education (SIGeFE); iv) a platform of predictive analysis of the financial and budgetary evolution (PredictionME); v) a tool to detect and analyse profiles of high possibility of sick leave fraud; vi) a tool to follow up contracts with municipalities to manage school resources; and vii) an accountability system to link schools budget and IGeFE (POC/SNC).

Despite the current potential for Portugal to leverage these resources to set goals, use multiple forms of data to review progress, disaggregate data for different populations and make decisions based on outcomes, these types of actions are insufficiently pursued in practice (see below).

Challenges

Funding levels for key priorities are insufficient and these priorities face further challenges if and when EU funds decrease

While Portugal spends substantial amounts on education in relation to its GDP per capita, the absolute amount of educational expenditure per student is low compared to more developed OECD nations. It is worth noting that the actual high level of relative effort is due, in part, to a reduction of GDP that was larger than the adjustment in public expenditure and both facts point to the need of sustaining investment as the economy recovers. There remains significant debate about the extent to which raw levels of expenditure are associated with better education results, at least above a minimal threshold (OECD, 2017[2]). Nevertheless, to the extent that higher levels of expenditure create the necessary pre-condition for making more informed and effective resource decisions, Portugal's low nominal educational expenditure may impose a ceiling on its ability to achieve its educational goals.

Furthermore, European funds have been used to support the expansion of educational offerings in core areas. As Chapters 1 and 3 address, public vocational education and training enrolment has expanded tremendously in the past 10 years. In the three convergence regions (North, Centre and Alentejo), 85% of the operational costs of these programmes are funded by the European Social Fund in support of Axis 1 (see 0). Similarly, Portugal has expanded its support for struggling students and communities through the development of equity funding strategies, particularly in the form of the TEIP programme.

The TEIP programme – primarily funded by the European Social Fund – continues to be the core targeted equity funding scheme to support schools serving large proportions of low-income students. Furthermore, the progress the Portuguese system has made over the past 10 years towards the goal of extending the vocational offer to 50% of secondary enrolment has also only been possible through leveraging EU funds. The Structural and Investment Fund has clear rules on the principle of "additionality", i.e. that European funds supplement national investment and that the member state should not reduce its commitment in the area (European Commission, 2015, pp. 163-164[6]). However, because the European investment coincided with expanded vocational offers and equity provisions, Portugal satisfies the "additionality" requirement while simultaneously relying on international funds to support core educational services. This creates serious challenges to the long-term sustainability of core educational offerings (i.e. VET) and key equity priorities (i.e. TEIP).

On the implementation side, the effectiveness of targeted programmes is often hindered due to long delays between schools' application and Portuguese disbursement of EU funds. Financial or human resources made available to school cluster administrations often come late during the intervention period, hindering the overall quality of the planned initiative. Stakeholders during the review visit repeatedly voiced these concerns, though national officials contend that this was primarily an issue at the start of the 2014-20 European funding cycle and that these funds now flow in a timely fashion.

The ESF has been a critical tool to enlarge and improve the Portuguese education system but the level of investment is unpredictable. Brexit is anticipated to lower ESF funding levels (Wishlade, 2017[11]) and, as regions approach convergence, they may see their funding decline. Further, the Algarve and Lisbon do not receive ESF funds, so European programmes must be replicated at the national level to ensure all regions have access to these kinds of support. Portugal faces a serious challenge to replace these resources with national funding. So far, no publicly developed strategy has been formulated to face this challenge, other than through ongoing negotiations within the European Commission to maintain this source of funding.

Funding streams are fragmented

There is fragmentation of decision-making authorities and budgetary responsibility within the central administration and between vertical levels of government. Different funding streams come from different units within the ministry and the municipal levels. Schools are supervised by different local and national authorities (IGeFE, IGEC, DGEstE, DGE), which supervise whether resources are being managed according to legal frameworks and principles of good management of public resources. The processes for the approval of schools' human resources and the distribution of funds for teacher compensation are under the responsibility of different entities within the Ministry of Education. Moreover, this fragmentation is heightened due to the absence of a single entity or a co-ordinated formal network that has an integrated overview of school resources allocation and use. Not surprisingly, there is no systematic assessment of cost effectiveness.

Decision-making about staff or non-staff allocations is insufficiently linked to quality and efficiency considerations, as the departments making these choices do not bear the cost of decisions. Specifically, different sub-entities within the ministry are responsible for the planning of the school network, the allocation of staff and the payment of salary and non-salary expenses. DGEstE estimates the anticipated population of students by schools and establishes the network of classes, thereby assuming primary responsibility for developing the school offer plan. DGAE then assigns teachers to school clusters, based on teachers' contractual status and priority in the teacher assignment ranking (see Chapter 4). IGeFE, on the other hand, is responsible for ensuring the sound financial management of the system, including ensuring that the appropriate amount of resources is allocated. Neither DGEstE, which defines the network, nor DGAE, which assigns teachers to the network, are responsible for the financial implications of these decisions. Neither DGEstE nor DGAE directly incurs the financial costs of defining too many classes or assigning too many teachers. This may partially explain the fact that the actual student-teacher ratios fall far short of the statutorily defined maxima (see Chapter 4).

Furthermore, different departments within the Ministry of Education and other ministries co-ordinate different pro-equity policies. There is a lack of strategic system- and schoolwide views, as well as weak management and evaluation of goals, either related to quality, efficiency or equity of the educational system. The separate management of specific programmes creates additional burden and fragmented reporting for schools (see below for more on this).

At the school level, there are similar divides between responsibility for spending and managing budgets. Principals have no incentives to spend less than the amount they receive in their non-salary budget, as this might reduce next year's allocation. On the other hand, it is unclear whether requests for additional funds should be granted or should result in future-year penalties as it is difficult to observe whether this over-spending is

due to real, unanticipated needs or a mismanagement of resources. Since budgets are not fungible, principals have no incentives to find efficiencies in operational expenses to be able to secure, for example, more teaching aides or teachers.

There are limited transparent and efficient mechanisms for allocating funding to either staff or operational funds, with negative consequences on efficiency

The criteria and decisions underlying the yearly estimation of school budgets are opaque to all stakeholders at all levels throughout the system (school administrators, municipal administrators, parents and citizens, politicians, etc.), including most officials in the Ministry of Education and related ministries and services. The criteria for the distribution of funds across schools are regarded as a technical detail, relevant only to the financial department within the Ministry of Education, with a lack of internal stakeholder understanding of how funding is determined.

Salary expenditures represent nearly the entire operating budget in Portugal but the processes by which different schools end up with different per-student allocations of teaching and non-teaching staff are unclear. Variation in student-teacher ratios occurs as a result of school size, population density, compensatory funding, special projects and various other factors. To stakeholders, it is not evident which of these variations are functions of strategic school system investments and which variations are only circumstantial. There is no transparent mechanism for funding in which compensatory amounts to address varying levels of student need and community challenge are discussed. Contrary to other OECD countries, there are no criteria established for how much additional resources a school should receive depending on the level of need of its student body. Instead, equity funding efforts exist as separate categorical funds that operate largely independently from the primary distribution of funds and whose totals depend on the schools' proposed strategies.

Non-salary expenditures are equally fraught with opacity. An algorithm exists to set the level of each school's non-teaching budget, but its contents are not public. Furthermore, the process for assessing schools' operational funding needs is ineffective as principals propose operational budgets every year but they are overridden the operational funding algorithm. Other than encouraging school leaders to think about their budgetary needs, the purpose of principals going through the exercise of proposing their budget when it is always superseded by the algorithm seems unclear.

Budget processes that encourage schools to negotiate the amounts they will receive can generate decision-making distortions at the school level. This is a well-documented phenomenon worldwide. According to OECD/The World Bank, the "distribution of funding on a discretionary or incremental basis is rarely efficient or equitable and tends to be associated with low levels of budget transparency" (quoted in OECD (2017[2])). Schools have no incentives to reduce their expenditures, improve their efficiency or the quality of their provision. Moreover, they might expend in excess hoping "that others absorb" their deficits and "inflate their expenditures with the aim of obtaining larger allocations in subsequent years – a practice known as "deficit budgeting" (OECD, 2017, p. 120[2]). Negotiation processes might be influenced by the strength of local actors. These sorts of incentives may lead to an extensive regulatory framework, with a simultaneous system of unwritten "norms" used to lower the expected allocation (OECD, 2017[2]). The new non-salary funding algorithm should work to minimise these negotiating strategies but the maintenance of back-and-forth proposals and counters by schools to IGeFE preserves some of these inefficiencies.

Based on stakeholder reports, "gaming" the budget system is an accepted practice. According to interviews, some school principals appeared expert in applying the rules and taking advantage of them. One example shared during the review visit was principals strategically distributing students with special educational needs across as many classes as possible, to take advantage of the legal requirement to reduce class sizes in response to the presence of one SEN student. Some stakeholders also suggested that labelling students "special needs" is at times intended to reduce class size and generate additional support. The recent important increase of the total number of SEN students might reflect this fact (see Chapter 3). Nevertheless, two national agencies (DGEstE and IGEC) analyse samples of schools to determine irregularities in both class constitution and identification rates of students with SEN.

As a consequence of strict allocation rules, schools have limited budgetary autonomy to respond to challenges

Neither school clusters nor schools, even those in municipalities with inter-administrative autonomy contracts, have budgetary autonomy. All staff is centrally authorised and financed, either through standard staffing assignment or special programmes. Furthermore, resources for non-wage expenditure are earmarked and residual, going almost exclusively to cover utility costs, leaving limited room for strategic investments such as professional development and ICT, which are mostly centrally defined.

Within the staffing portion of budgets, schools are constrained not only by the rules for standard staff assignment (see Chapter 4) but also in the strategic projects and investments they plan yearly. Limited financial flexibility exists in the context of schools' proposals for their improvement programme, either TEIP or PNPSE. In practice, all proposals' key expenditures rely on requests for additional human resources, which are ultimately satisfied by centrally allocated staff.

These same conditions of constrained local decision-making exist for the non-teaching salary component of schools' budgets. Despite the fact that on paper schools have wide discretion in how they spend their current expenditures other than teaching salaries, in practice the amount of this budget is so small that it must all be dedicated to minimal investments required to run schools – utilities, classroom materials, cafeteria staff – thereby limiting the possibility of strategic use of these funds. During the review visit to some schools, stakeholders reported that the regulations on non-teaching staff allocation were not strictly enforced and some schools did not receive the non-teaching staff that they should, based on the regulations. In other schools, stakeholders reported they did not have enough resources to turn the heating on during the winter. By contrast, even on paper, capital expenditures are closely regulated or directly determined by DGestE and *Parque Escolar*, in the case of secondary schools, or the municipality, in the case of pre-school and basic education.

A key concern with these strict norms is that homogenous rules do not allow differentiating resource levels according to particular school needs. In particular, at present, there is no transparent mechanism for funding in which compensatory amounts to address varying levels of student need and community challenge are discussed, defined and applied transparently across the board.

Centralised budget management can translate into ineffective management practices to respond to unplanned events. Several interviewees complained about the lengthy approval process by DGEstE or the municipality for even minor expenditures. When teachers are on sick leave for less than 30 days, no replacements are assigned. Even when absences

extend past 30 days, schools must follow extensive bureaucratic procedures to secure a replacement. It is not surprising that replacement teachers take a long time to be assigned when the entity experiencing the most difficulty due to the absence (the school) is not the same as the entity responsible for procuring the replacement (the central authorities). Not surprisingly, therefore, the institutional culture that predominates in schools is one of bureaucratic compliance, not of creative use of resources to respond to challenges.

Portugal's centralised resource allocation procedures are similar to those in Southern European countries (Italy, Spain and Greece) and France, but other systems such as the Netherlands, the United Kingdom and Sweden have decentralised many more responsibilities to schools so that they can be more responsive to the unexpected (OECD, 2017, p. 79[2]).

Funding is not related to goals and assessment of results; therefore, the capacity for system learning and planning is insufficiently developed

There is not a systematic definition of shared outcome goals on which stakeholders at the school, municipal and national levels agree. Interventions are not systematically evaluated to determine their efficacy. Further, there are rarely course corrections when project goals are unmet.

The budgeting process in Portugal effectively provides seats in schools and teachers for all students, but it is still insufficiently designed to achieve the more complex objectives such as learning quality or equality of opportunities. The budgeting process lacks the key mechanisms to effectively link budget planning to these policy objectives. Specifically, i) although there are strategic objectives defined for educational policies, budgets are insufficiently informed by these as inputs and rules still take primacy in planning; ii) there are no expenditure frameworks that connect spending decisions to education priorities; and iii) there is no formulation of clear targets, corresponding indicator frameworks or mechanisms to report on the system's use of resources to achieve these goals (OECD, 2017[2]).

Strategic planning is further hampered by a generalised shortage of formalised institutions to support evidence-based analysis and policy. At the central level, no unit is in charge of formulating a long-term educational strategy, neither to conduct cost-benefit or cost-effectiveness analysis of policy alternatives. In practice, there is no long-term strategy to formulate a meaningful medium-term expenditure framework or to guide annual budget planning. The possibility of strategic planning is also hindered by a lack of integration of reporting on funding outcomes, expenditure outputs and school system quality and equity. Cost-benefit and cost-effectiveness analyses are limited by the lack of integration between financial reporting and school management outcomes and outputs. There is no use of performance information in the budgeting process. Although there is the production of valuable information such as external evaluations of schools and students, this is not linked to the budgeting process.

During the review visit, the review team frequently asked stakeholders at both the central government and school levels: What are the goals and metrics you hope to accomplish with this initiative? Do you know if you've been successful? Stakeholders were rarely able to articulate what the specific goals they held were, nor whether these goals had been accomplished. School leaders could not, for instance, say what the current school dropout rate was, nor what their goal was for improving it. Central government officials could not articulate what the measurable outcomes targeted by the TEIP or PNPSE programme were, and the extent to which they were making progress towards these goals. Various

progress monitoring processes and metrics for TEIP and PNPSE do exist on paper, so it is possible that stakeholders' lack of awareness of them was either specific to the groups with which the review team met or was a function of the dynamics of the interviews. However, the near universal inability of stakeholders to articulate goals and assess progress towards them suggested to the review team a divide between the progress monitoring processes articulated on paper and the reality of how these were implemented in practice.

Similarly, there is a lack of culture of outcome-based decision-making at the ministry level with few internal stakeholders able to articulate goals and metrics for assessing the impact of system-wide initiatives. Projects are launched without a mechanism to evaluate them, either *ex ante* or *ex post*. In particular, new initiatives are not designed to be evaluated for their effectiveness or efficiency. For instance, to the review team's knowledge, there is no formal mechanism to evaluate the causal impact of programmes such as the Curricular Flexibility Project (*Projeto de Autonomia e Flexibildade Curricular*), autonomy contracts (*contratos interadministrativos*), tutorial support (*Apoio Educativo Tutorial* and *Apoio Tutorial Específico*) or *Turma+*. The only such evaluation of which the review team has knowledge is the 2012 evaluation of the More School Success Programme (PMSE) (Barata et al., 2012[12]; Barata et al., 2015[13]); however, this type of evaluation is the exception rather than the rule. The evaluations that do exist typically measure process improvements or conduct stakeholder surveys, rather than estimating changes in student learning outcomes causally generated by the programmes. Not even targeted programmes such as TEIP or PNPSE – that require the explicit formulation of an improvement programme, goals and indicators – use impact evaluation for their internal budgeting or allocation.

Pilot projects are developed in a subset of schools and then extended without a formal assessment of their impact. Programmes persist and are extended nationally, even in the absence of clear knowledge about their impact or effectiveness. This results in a series of overlapping and coincident projects without an overall strategy and goals under which all the projects fit. To the review team, this appeared to be particularly true as it relates to the priority area of addressing school failure, where such interventions as *Projeto Fenix*, *Mais Sucesso Escolar*, *Ancoragem*, *Turma+*, TEIP, *Apoio Tutorial Específico*, *Apoio Educativo Tutorial* all exist simultaneously and whose purposes appear to significantly overlap.

No formal mechanisms exist to evaluate the impact of the allocation or use of resources on processes, outputs or results. To the knowledge of the review team, there is no assessment of the impact of resources allocated and used by schools and their learning results and this possibility is limited due to the delay in the publication of the overall report of the 2nd cycle of school evaluations (see Chapter 3). Furthermore, even in its planned design, the evaluation process is not linked to the allocation of resources. Even a basic indicator such as per-student funding and expenditure data is not readily available across different sectors, programmes and levels. For instance, ministry officials were unable to provide current and historic expenditure data on programmes to support non-native Portuguese speakers, distance learning for itinerant students or even prior-year expenditure levels on the PMSE/PNPSE programmes. Similarly, requests by the review team for per-student expenditures on 3rd cycle and upper secondary vocational schooling were met with surprise by ministry officials that such information would be of interest. To the best of the review team's knowledge, regular collection of financial data for strategic policy purposes does not occur; such data is necessary for effective planning and cost-effectiveness analysis.

Portugal has a rich wealth of education data. Progress has undertaken steps to make it more accessible, with several initiatives attempting to make data more open for research purposes and protocols have been developed between the ministry, the national statistics office and research centres. Nevertheless, administrative data (MISI) might be linked to resource data (such as the SIGeFE database) to obtain an assessment of the relationship between resources and internal efficiency at the school level. While there have been recent efforts to provide access to administrative student- and teacher-level data (MISI), there is no systematic mobilisation of knowledge generated through research, programme evaluations and auditing activities. An additional challenge is the lengthy delay before individual, school and system data are made publicly (or privately) available. Currently, data for the system, schools and individuals must be validated, a process that results in a delay of around one year between the end of a school year and the release of the data. This creates significant challenges to system and school leaders interested in making rapid decisions in response to current data.

There is a lack of a system-wide strategy, vision or sufficient levels of investment to promote equity

There is a lack of a coherent strategy to promote fairness (as defined in Box 2.1) in Portuguese schools. Instead, there are multiple programmes managed by different ministerial departments. Financial supports for the educational needs of disadvantaged students are modest, uninformed by cost models to estimate additional resources required to equalise results and, overall, are likely to be insufficient to overcome disadvantage.

The lack of a system-wide strategy for equity is reflected in the lack of goal-setting and progress monitoring plans to support it. Although there is the possibility of: i) combining different sources of data for quantifying gaps between different student populations – such as family educational background, ethnic, gender, nationality or racial group; ii) estimating resources requirements to reduce them; iii) setting targets according to resources mobilised; iv) monitoring progress; and v) taking decisions on the basis of results and outcomes achieved, this is not systematically done. These types of exercises would be valuable not only at a system-level analysis but also for school and cluster management. It should be noted that some of this information, such as ethnic and racial group membership, is prohibited from being collected by official statistics, as is common in many continental Europe contexts.

Because the above process is not adhered to, it is difficult for Portuguese authorities to determine what levels of resources are necessary to address student-level challenges. As a result, the amount spent on educational fairness is likely too small compared to what is needed. The amount spent on PNPSE (including PIICIE) and TEIP is only 1.4% of the overall education budget. This is small compared to what is spent in other educational systems and with respect to the empirical estimation of what is needed to overcome disadvantage in other countries (see Box 2.2).

In fact, flagship targeted programmes, such as TEIP, do not provide sufficient additional staff resources to meaningfully alter the student-teacher ratios in schools receiving these in-kind allocations. As Figure 2.4 indicates, the student-teacher ratio in TEIP and non-TEIP schools is nearly identical (13.4 students per teacher in non-TEIP schools vs. 12.9 students per teacher in TEIP schools). In fact, as Panel B shows, within quartile of disadvantaged schools that receive TEIP support actually have slightly higher student-teacher ratios than those that do not.

Box 2.2. Equity funding in education

Why and how much does it cost?

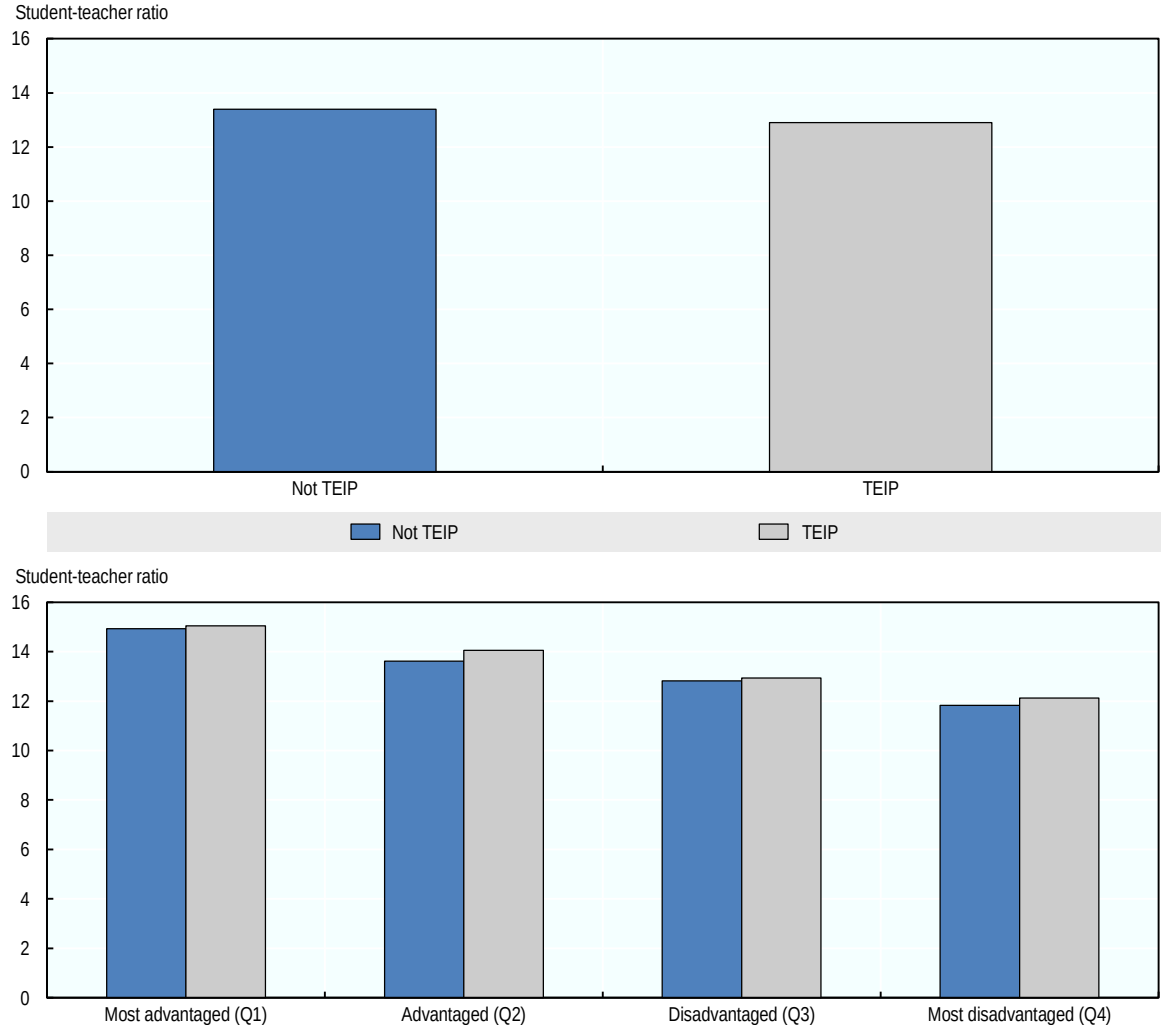
There is widespread academic agreement about the need to give more resources to certain groups of students to achieve equality of opportunities in education. Differences in learning outcomes between groups of students are substantially influenced by their educational opportunities and home and community environments. In particular, the influence of family characteristics has been extensively documented since the Coleman Report's (Coleman, 1966[14]) finding that learning outcomes are positively correlated with family socio-economic variables such as household income and parent's education (Hanushek, 1997[15]), which poses a threat to equality of learning opportunities. It is interesting to note that one of the first articles using international data on student achievement (Hanushek and Luque, 2003[16]) found that in several developed countries, schooling reduced the effect of family background through time with the sole exception of Portugal, where the gap in learning outcomes between socio-economic groups increases with the age of students taking TIMMS (Trends in International Mathematics and Science Study).

Literature founded on John Roemer's work on social justice (Roemer, 2008[17]) estimates the amount required to compensate for family socio-economic factors on labour market outcomes. Betts and Roemer (2007[18]) found in the United States context that in order to equalise black students' future wages with their white peers, school systems would need to invest eight times the current resources spent on their education. Similarly, Waltenberga and Vandenberghe (2007[19]) estimated that in order to guarantee equality of opportunity for the lowest achieving students in Brazil compensatory funding would need to increase by 6.8 times level then invested. The simultaneous redistribution of monetary and non-monetary inputs, like peer group quality and school effectiveness, considerably reduced – by around 23% – the magnitude of financial redistribution.

Finally, González and his colleagues (2004[20]) estimated that ensuring equality of opportunity in Chile required an increase between 50% and 200% of the resources allocated to the lowest two income and educational quintiles to grant this group of students similar learning results as the rest of the student population. This estimation was later translated into policy as explained in Box 2.5.

Sources: Coleman, J. (1966), *Equality of Educational Opportunity*, US Government Printing Office; Hanushek, E. (1997), "Assessing the effects of school resources on student performance: An update", *Educational Evaluation and Policy Analysis*, Vol. 19/2, pp. 141-164.; Hanushek, E. (2003), "Efficiency and equity in schools around the world", *Economics of Education Review*, Vol. 22, pp. 481-502; Roemer, J. (2008), *Equality of Opportunity*, Harvard University Press; Betts, J. and J. Roemer (2007), *Equalizing Opportunity for Racial and Socioeconomic Groups in the United States through Educational Finance Reform*, Schools and the Equal Opportunity Problem, MIT Press; Waltenberga, F. and V. Vandenberghe (2007), "What does it take to achieve equality of opportunity in education?: An empirical investigation based on Brazilian data", *Economics of Education Review*, Vol. 26/6, pp. 709-723; González, P., A. Mizala and P. Romaguera (2004), *Recursos Diferenciados a la Educación Subvencionada en Chile (Differentiated Resources for Subsidized Education in Chile)*, http://www.dii.uchile.cl/~cea/sitedev/cea/www/index.php?page=view_publicaciones&langSite=es&agno=2002&id=20030325135657.

Figure 2.4. Average student-teacher ratio for TEIP and non-TEIP schools, by quartile of disadvantage



Note: Index of socio-economic need measured by rank percentile-ordering the proportion of students within a school receiving Social Support A and average years of maternal education at the school level. The average of the 2 ranks was then demeaned (mean = 0) and assigned a standard deviation of 1. Schools divided into quartiles of disadvantage. Q4 has highest levels of disadvantage (high SSA and low maternal education).
Source: DGEEC administrative data 2015/16.

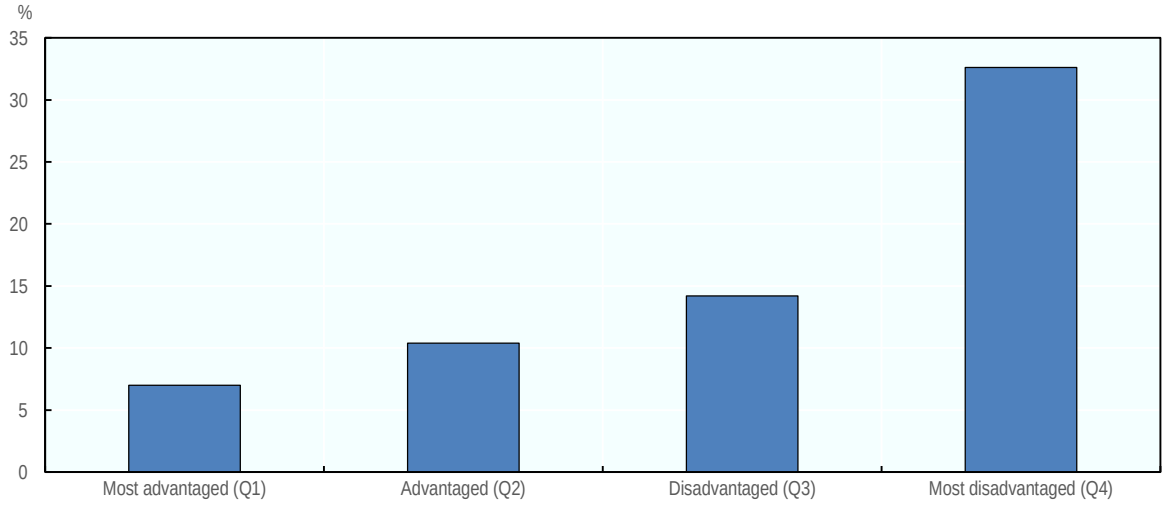
There are a handful of other targeted equity strategies such as Portuguese as a Second Language (PNML) and Distance Learning for Itinerant Students, but ministry officials do not disaggregate expenditures on such programmes. Failure to account for such expenditures precludes a complete summary of equity efforts, but the totals spent on these interventions are small and unlikely to alter the overall conclusion that Portugal spends less than most countries and these amounts are insufficient to address disadvantages.

Equity resources are also insufficiently tailored to the specific needs of under-served students and communities, limiting the effectiveness and equality of opportunities. Targeted funds result in an in-kind attribution of additional teaching staff, but these are often not matched to school-specific challenges and there is insufficient specific training

of these teachers to support at-risk students. Chapter 4 treats this problem in greater detail.

While Portugal has some clear strengths in its inclusion of students with special educational needs (see Chapter 3), there are some concerns with respect to the inclusion (Box 2.1) of all students and schools in its equity funding scheme. Several of Portugal's equity funding measures are based on school and student applications and not on needs, as in the case of inclusion mechanisms that follow a rights-based approach. As a result, the capacity to acquire compensatory funding depends on schools' initiative and the capacity to apply for supplemental funding. This raises additional equity concerns in the levels and strategic value of funds. Figure 2.5 presents evidence that while schools with the highest proportion of students receiving social support and with the lowest levels of maternal education are most likely to receive TEIP support, there are nevertheless schools educating primarily students from favoured backgrounds that also receive TEIP funding. This may be partially due to the fact that school clusters were placed into the TEIP programme in 2007. Even if their student population changed or they added economically advantaged schools in the clustering process, all clusters (and newly added schools) remained in (or were added to) TEIP. Nevertheless, the pattern revealed in Figure 2.5 runs counter to the fairness principle of targeting equity funding to students with the highest level of need and is only possible in the absence of defined funding criteria for students from under-resourced backgrounds.

Figure 2.5. Proportion of TEIP-recipient schools by quartile of disadvantage



Note: Index of socio-economic need measured by rank percentile-ordering the proportion of students within a school receiving Social Support A and average years of maternal education at the school level. The average of the 2 ranks was then demeaned (mean = 0) and assigned a standard deviation of 1. Schools divided into quartiles of disadvantage. Q4 has highest levels of disadvantage (high SSA and low maternal education).
Source: DGEEC administrative data 2015/16.

Central officials support schools in applying for TEIP and PNPSE projects, PO CH in the case of ESF funded projects and DGE for national initiatives requiring applications. Nevertheless, during the review visit, some schools receiving TEIP funds reported much higher levels of support and sophistication in the project they developed than others. Moreover, additional equity concerns have been expressed regarding the unevenly distributed capacity for project management, although national authorities are aware of the issue and supervise such processes and target support to some schools.

A similar concern about the effects of the unequal distribution of capacities relates to the possibility of local fundraising. While some municipalities and school clusters have been active in raising additional local resources from business communities and families, the amount of resources is unknown. This raises equity concerns as more affluent local communities are likely to have stronger resource bases and capacities to mobilise in support of their schools. There is no proper accounting of these resources and some might be difficult to quantify in financial terms. An accounting peculiarity makes tracking this money particularly challenging. Schools do not have Fiscal Identification Numbers (*Número de Indentificação Fiscal* – NIF); therefore, all donations must go to a central account, and then the school must request to use the money in a lengthy process. Due to this complicated process, schools avoid taking on donations themselves and have parents contribute to the parents' association which acts as a legal entity but is not tracked as part of schools' resource utilisation.

Policy recommendations

Improve governance using combined budget and education information systems, moving from a focus on inputs and rules to results and processes

While resources alone are not sufficient to ensure excellent and equitable outcomes, they are a pre-requisite to design smart policies that invest limited resources wisely. A funding system based on the allocation of inputs and the compliance with rules, even with an inclusive focus, does not maximise the capacities that are available in each school and local community to respond creatively to each student needs.

A first step is to improve governance mechanisms to reduce inefficiencies and bureaucratic controls. One simple initial practice would be to eliminate duplicative budgeting efforts on all non-teaching staff and operational expenditures so that school administrators do not complete tasks rendered irrelevant by central algorithms. A more fundamental improvement would be the establishment of a co-ordination mechanism that aligns the goals of various entities responsible for planning and implementing the budget. The goal would be not only to eliminate duplications and improve processes but to achieve a more systemic vision towards the achievement of long-term objectives based on outcome measures. A management and control system based on key educational and financial indicators might be built, allowing online monitoring of expenditures and activities, and evaluating whether the ways in which funds are currently spent impact student outcomes or other educational objectives in close to real time.

Portugal might also consider increasing school level responsibility for management of budget on non-staff expenditures to promote responsivity to local needs while gradually increasing the allocation for this purpose to bring the country more in line with international standards (this would improve the physical and IT infrastructure challenges outlined in Chapter 3). It is impossible that all relevant decisions for student learning flow adequately from bottom (the classroom or the school) to top (the Ministry of Education) such that timely decisions are taken in the best interest of the child learning at the classroom or school level. This requires giving teachers and principals more control over their environment while making them fully responsible for their decisions. Concerned officials could still ensure appropriate fiduciary responsibility through standard accounting procedures and periodic auditing. These shifts should be accompanied by strengthening management capacities at the school cluster level (see Chapters 3 and 4).

At the same time, centralised support systems should be strengthened. Distilled information, useful for decision-making, must be offered to principals and teachers. Systematic approaches (such as Deming's (2000[21]) Plan-Do-Study-Act Cycle) that provide practitioners and policy makers with sound information, support them to design clear interventions utilising widely agreed on outcome measures, generate regular process and outcome data, create opportunities to review this progress and adjust course are critical to school and system improvement efforts. This cannot occur without intentionally designing an information system capable of facilitating learning of what works and what does not.

At the same time, there are some elements of non-wage expenditure that are more efficient if managed at the central level. A good example is a national auction for the provision of textbooks. If different printing houses compete to supply a large number of the same textbook to students, economies of scale might be achieved. On the other hand, schools might benefit from selecting the textbooks that are best suited to their students' needs. A combination of choice and central provision might achieve both objectives. Countries such as Chile have achieved up to a 90% reduction of the price of textbooks thanks to a well-designed public tendering while allowing schools to choose between 3 or more centrally provided textbooks.

Finally, in the long term, Portugal could consider strategies to devolve full budgetary responsibility, including decisions over staffing to the school level (see Chapter 4). This should be framed in appropriate funding formulas discussed next.

Initiate steps to shift to a transparent, publicly-debated weighted student funding formula

The complex and non-transparent budgeting process generates too many distortions that might be corrected by shifting gradually to a transparent, publicly-debated weighted student funding formula. This formula should be based on the true costs of school provision and equity considerations. Costs of school place provision should be determined by the number of students in a school and its geographic location, followed by a public discussion about the values implied by funding different levels of schooling at different amounts. More resources should be allocated to students from disadvantaged backgrounds and to schools educating large proportions of these students to respond to equity concerns. Key considerations in the design of a funding formula are described in Box 2.3. Box 2.4 presents various estimates of the costs of achieving an equalisation of opportunities across different student populations.

When funds are distributed via formula rather than the allocation of staff and resources, it creates the potential for local decision-making on the use of these funds. Important considerations exist to ensure these funds are used wisely. Ross and Levačić (1999[22]) recommend retaining, when designing a funding formula, a proportion of funding at a central level. This allows the system to respond to immediate or emergency expenditures with uneven incidence across schools (e.g. structural repairs, early staff retirement). Moreover, a funding formula increases efficiency only insofar as principals and school clusters have the managerial capacities to take advantage of this flexibility and allocate and use this funding with effectiveness. This requires capacity building at the school level. At the same time, localities should be made responsible and accountable for results achieved with this funding or whatever other degrees of freedom are transferred to the local level.

Box 2.3. School funding formula development

"A general principle for a more effective funding distribution is to ensure that funds are allocated in a transparent and predictable way. Ensuring a stable and publicly known system to allocate public funding allows schools to plan their development in the coming years. This requires stability in the principles and technical details of the funding distribution system" (OECD, 2017, p. 21[2]).

A well-designed funding formula avoids the fragmentation of the budgeting process, the lack of strategic co-ordination and transparency, the incentive problems against efficient decisions and the absence of rewards for good management and planning.

Adequate stakeholder consultation is important to increase the perceived fairness of an allocation system and can help ensure that funding mechanisms respond to challenges that are not anticipated. Design of the funding formula must take into account horizontal equity (ensuring similar funding levels are allocated to similar types of provision) and vertical equity (differential amounts can be added according to the degree of educational need).

To determine the exact amount to be transferred per student, coefficients should take account of different costs of educating students from different locations, social backgrounds and studying in different levels or sectors. A balance needs to be struck between a simple formula, which might fail to capture school needs with full accuracy, and a sophisticated formula, which may be difficult to understand and discuss (OECD, 2017[2]).

Funding formulas should include the following four elements: i) a basic allocation per student or per class that may be differentiated according to the school year or stage of schooling; ii) an allocation for specific educational profiles or curriculum programmes, such as a focus on the arts, sports, different vocational fields or special educational needs programmes; iii) an allocation for students with supplementary educational needs adjusting for different student characteristics or elements of disadvantage; and iv) an allocation for specific needs related to school site and location, adjusting for structural differences in operational costs, such as for rural areas with lower class size.

Source: OECD (2017), *The Funding of School Education: Connecting Resources and Learning*, http://dx.doi.org/10.1787/9789264276147-en.

Box 2.4. Funding formulas to reduce inequalities of opportunity

There are different approaches embedded in school funding formulas to reduce inequality of educational opportunities between different social groups.

In Belgium, operating grants for staff allocation to schools include weightings for student socio-economic characteristics and special educational needs and also for school location. The payment of educational staff salaries takes into account student socio-economic characteristics and special educational needs. There is also additional targeted funding for specific groups, including students from disadvantaged backgrounds, newly arrived immigrants and refugees (OECD, 2017[2]).

Lithuania's formula has 67 weighting coefficient values that include student (school year, special educational needs and ethnic minority) and school characteristics (size, location and type) (Shewbridge et al., 2016[23]).

Levačić (2006[24]) reviews school funding formulas for seven European countries (England, Finland, Iceland, the Netherlands, Poland, Russia and Sweden). In the Netherlands, the funding formula encourages inclusion. If a student with an indication for a particular type of special school, in fact, attends a mainstream school, this generates additional funding for both the mainstream school and the special school, which plays a supporting role.

Chile introduced a means-tested voucher in 2009, which allocated schools 50% more resources for students from vulnerable families and provided incremental funding according to the concentration of vulnerable students in the school. To use this extra funding, some schools are required to present to the Ministry of Education an improvement plan and contract the services of an accredited external agency. Well before, in 1994, a correction to the flat voucher introduced by the dictatorship in 1981, recognised differences in average costs between urban and rural schools that varied according to the degree of dispersion of the population in the area.

After democratisation, South Africa introduced a progressive funding formula for non-salary expenditure prepared with the support of the World Bank (Crouch, 1996[25]). Schools are classified into quintiles according to the average household income in the area and the allocation increases with the level of vulnerability of the student population, going from a minimum of 5% of the total allocated to schools in the lowest need quintile to 35% of the total distributed to schools with the highest need (Mashau, 2015[26]). In other words, schools attended by the most vulnerable students received seven times more resources for other current expenditure than schools attended by the least vulnerable households. To deter high- and middle-income families from leaving the public school system due to this progressive funding formula, schools serving the two upper-income quintiles were allowed to charge fees. This provision has been widely criticised for generating further inequities.

A common shortcoming of these experiences (e.g. Chile, Lithuania and South Africa) seems to be that there is little systematic evaluation of their results by the Ministries of Education. Evaluation is limited to inputs, not processes or outcomes. This is an area that might illustrate the importance of a strong research community and a fruitful communication with the Ministry of Education. For instance, Fernández (2017[27]) finds that the introduction of the means-tested voucher had a positive impact in vulnerable

students results but an additional 50% increase of the means-tested voucher is required to level the playing field between the two lowest income quintiles and the rest of the population. Moreover, the very introduction of a means-tested voucher in Chile was based on academic work (González, Mizala and Romaguera, 2004[20]) contracted by the Ministry of Education and the fortunate circumstance that one of the researchers was later appointed Undersecretary of Education. Conversely, despite rhetoric in favour of inclusion, research has also shown that Chile's funding formula has a bias in favour of segregated schools for special needs, as the special needs voucher for mainstream schools is below the costs of properly integrating a student with special needs while segregated schools' costs are covered with amplitude, generating a profit (Bosch, 2005[28]).

Sources: OECD (2017), *The Funding of School Education: Connecting Resources and Learning*, http://dx.doi.org/10.1787/9789264276147-en; Shewbridge, C. et al. (2016), *OECD Reviews of School Resources: Lithuania 2016*, http://dx.doi.org/10.1787/9789264252547-en; Levačić, R. (2006), *Funding Schools by Formula;* Crouch, L. (1996), "Public education equity and efficiency in South Africa: Lessons for other countries", *Economics of Education Review*, Vol. 15/2, pp. 125-137; Mashau, T. (2015), "Equity, equality and fairness: Funding for quality education in South Africa", *International Journal of Educational Sciences*, Vol. 10/3, pp. 435-441; Fernández, A. (2017), *Análisis de la Eficiencia Técnica Escolar en Chile para la Propuesta de un Monto Eficiente de Subvención Preferencial [Analysis of the Technical Efficiency of Schools in Chile for the Proposal of Sufficient Levels of Preferential Subsidies, Masters Thesis in Public Policy and Management]*, Tesis de Magister en Gestón y Políticas Públicas; González, P., A. Mizala and P. Romaguera (2004), *Recursos Diferenciados a la Educación Subvencionada en Chile (Differentiated Resources for Subsidized Education in Chile)*, http://www.dii.uchile.cl/~cea/sitedev/cea/www/index.php?page=view_publicaciones&langSite=es&agno=2002&id=20030325135657.

Improve strategic thinking around use of funding to increase equality of opportunity

Portugal should consider shifting away from addressing inequality of opportunity through a series of nationally-managed, application-based, categorical funding initiatives that lack an overall strategy to a comprehensive strategy for equity funding. The most straightforward way this could be accomplished is through the funnelling of these equity funds into the weighted-student formula described above. However, in the near-term, Portuguese authorities could consider implementing a process inclusive of a broad cross-section of educational stakeholders to develop a comprehensive equity policy that ensured programmes did not duplicate efforts and were adequately funded. This approach would be facilitated by an estimation of the true costs required to provide equal educational opportunities.

Independent, but concomitantly necessary, of a comprehensive equity strategy, Portugal should consider increasing the share of the educational budget targeting students from under-resourced communities and who face learning obstacles. As detailed above, Portuguese equity resources are trivial portions of the school budget and lower than international norms. Portuguese authorities could achieve increases in educational equity funding by adding resources to the overall budget. Alternatively, resources from the general school funds could be re-allocated for equity purposes. This would require clear, public communication explaining the rationale for this re-allocation and justifying it on equity grounds to avoid potential conflict over shifting resources away from more resourced students.

Finally, resources deployed to address inequality should be targeted to fit the actual needs of schools, including specialised autonomies and flexibilities in how these funds are

spent. Chapter 4 suggests some strategies for how this might be accomplished for human resources.

Improve learning capacity of the system through more transparent and widely shared performance indicators, data access and a culture of planning and evaluation

Portuguese central authorities should consider re-establishing a division within the Ministry of Education with planning and evaluation responsibilities similar to those of the former Office of Foresight and Strategic Management in Education. This unit should co-ordinate the formulation of a shared strategic medium- and long-term vision and estimate resource needs to achieve this vision. It might then prepare a medium-term expenditure framework in close collaboration with the Ministry of Finance, to guide each annual budget process.

Portugal can connect financial and educational indicators to better evaluate whether the ways in which funds are currently spent impact student outcomes and produce a better monitoring system for resource management. Having done so, both internal and external researchers could conduct cost-effectiveness, cost-benefit and multi-criteria analysis to decide on the allocation of new resources or the reduction of allocations. Pilot programmes should be designed with an embedded experimental evaluation to support scaling up decisions and with a proper theory of change for system learning. Over the long-term, Portugal could consider a gradual shift to outcome-based budgeting procedures that increase funding for successful initiatives and cut those that are unsuccessful.

While limits exist regarding the collection of certain kinds of demographic data in the Constitution, ad hoc processes with the authorisation of the National Data Protection Commission could be explored to receive special permission to conduct analyses of educational outcomes for disfavoured groups. This could take the form of voluntary surveys, sophisticated sampling and imputation methodologies. Such an effort was recently undertaken to conduct the *Questionnaire within the Framework of the National Strategy for the Integration of Roma Communities* and similar efforts could be pursued for other groups.

Broad-based discussions should be initiated involving multiple stakeholders to identify measurable outcomes for the system: performance targets, metrics and progress monitoring processes. Critically, a culture change this significant will require building national and local staff's capacity to use outcome-based approaches to guide their work.

Portugal can continue to expand partnerships with external researchers to deepen the empirical knowledge base on the Portuguese education system. Various countries support research that has utility for policy purposes through public investment. Others have established knowledge brokers to fill the gap between research and policy making, to reach more informed decisions (see Box 2.5). To maximise efforts in these areas, Portugal can expand links across datasets, including those administered by different Ministries and make them available to researchers. Linkages across existing individual-level microdata sets such as school education records (MISI for public and INQ-PRIV for private school students), students' reported expectations and experiences at entry, during and after upper secondary education (OTES) and labour market outcomes in the form of personnel records (*Quadros de Pessoal*) would permit better estimates of the impacts of policies, which would in turn allow research to better inform policymaking and public debate.

Box 2.5. Linking educational research and policy

One of the key problems in promoting the use of research-based insights in schools is that researchers, on one hand, and policy makers, school administrators and teachers, on the other, have different training, agendas and pressures that lead to a serious communication gap between both communities. Early solutions proposed the "appointment of formal positions at the state or local level whose occupants, sensitive to both audiences and their work styles, would link basic and applied research to educational policy analysis" (Hallinan, 1996[29]).

Several organisations perform this function of mediating the research, practice and policy connections in countries around the world (OECD/CERI, 2007[30]):

- What Works Clearinghouse (United States)
- Evidence for Policy and Practice Information and Co-ordinating (EPPI) Centre (United Kingdom)
- Iterative Best Evidence Synthesis Programme (New Zealand)
- Canadian Council on Learning (Canada)
- Knowledge Clearinghouse (Denmark)
- Knowledge Chamber (Netherlands)
- Social Care Institute for Excellence (United Kingdom).

Drawing on the cases presented in Finnigan and Daly (2014[31]) and concurrent efforts in the field, Tseng and Nutley (2014[32]) suggest four ways to improve these connections: build relationships and trust; shore up capacity; create conditions for evidence integration; and develop partnerships.

Chile is a case where educational research was limited and not connected to policy issues. Until 1994, the country lacked proper strategic planning and research departments, except for the production of statistics requested by the United Nations Educational, Scientific and Cultural Organization (UNESCO). The development of planning and research departments were critical to the 1996 educational reform that included a move from double and triple shift use of school buildings to a single school day and actions to improve the social status of the teaching profession (Elacqua and González Soto, 2013[33]). Educational research outside the Chilean administration started to flourish in 2006 with the creation by the Ministry of Education of the National Fund for Research and Development of Education, with the explicit mission to bridge the gap between research and policy through an annual competition with focus on relevant policy issues, and two educational research consortiums that were awarded by the National Science Commission (CONICYT) through open competition to leading universities. The research department of the Ministry of Education produces regularly compendiums of evidence in different policy-relevant issues and makes available data that link individual students' results, teacher and school characteristics.

Sources: Hallinan, M. (1996), "Bridging the gap between research and practice", *Sociology of Education*, Vol. 69, pp. 131-134; OECD/CERI (2007), *Evidence in Education: Linking Research and Policy*, https://doi.org/10.1787/9789264033672-en; Tseng, V. and S. Nutley (2014), *Building the Infrastructure to Improve the Use and Usefulness of Research in Education*, Springer; Elacqua, G. and P. González Soto (2013), *Education: Freedom of Choice or Enterprise?*, Lynne Rienner Publishers.

Initiate plan to incorporate core budget priorities into national budget, reducing reliance on European funds

Portugal currently relies on international funding to support what have become key priorities in its educational strategy. To buttress against the potential decrease of these funds, Portugal should consider gradually absorbing some of these funds into the national budget. The first priority should be to shift the funding of equity programming to national funds. Equity funds currently represent a much smaller portion of the overall budget than other priorities supported by international funds, so this is a more easily accomplishable goal in the short term given fiscal realities. Such a step will likely require hard trade-offs between such goals as universal reductions in class size and targeted support for students from under-resourced communities. However, this might be somewhat cushioned if efficiencies are captured in the system planning process by aligning responsibilities for setting the school class network and paying for it (see above). When economic conditions permit, Portugal can explore assuming more national responsibility for the budget for vocational programming.

Notes

[1] The POCH programme is managed by an Inter-ministerial Co-ordination Commission (CIC PT2020), supervised by the ministers of the ME, MTCES and MTSSS. The Agency for Development and Social Cohesion (AD&C) is responsible for the co-ordination with the EC, while the Inspectorate-General of Finance (IGF) audits the management of the funds. The decisions for the application of the financing were delegated to IGeFE and ANQEP.

[2] Allocation mechanisms refer to the different approaches to distributing and transferring resources and funds for current expenditure to different levels of governance and administration, to school providers and to schools. The mechanisms are primarily based on the level of discretion that the recipient has in deciding on how the funding is used. *Block grants* consist of funds that recipients (subcentral authorities or schools) can use at their own discretion for current expenditure in early childhood or school education. *Restricted block grants* consist of funds that recipients (subcentral authorities or schools) can use at their own discretion, but within given areas of spending (e.g. operating costs). *Earmarked grants* consist of funds that recipients (subcentral authorities or schools) are required to use for specific elements/items of current expenditure in early childhood or school education (e.g. teacher professional development, extra funds for special needs education). *Dedicated grants* consist of funds which are not administered by the school but are passed through the school or government unit for payment to another entity (e.g. teacher salaries which are directly paid by the relevant authority; operating costs directly paid by the relevant authority). In this case, funds are not transferred to schools' administration, rather they are responsible for distributing the funds to others.

[3] Data collection is carried out through the export of information from ME-certified school management programmes in educational establishments. DGEEC runs daily a sequence of queries to the MISI database for information validation and control and has a team that liaises directly with schools to request the necessary corrections and to provide clarifications and support in the correct insertion of the data.

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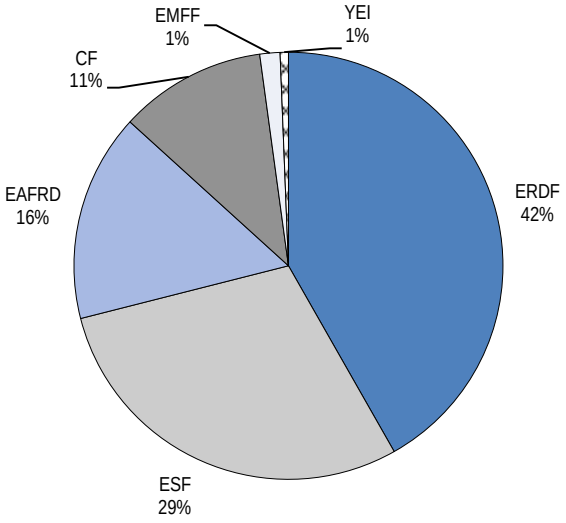
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Annex 2.A. The funding of the education system through European funds

Portugal benefits from European Structural and Investment Funds (ESIF), the main investment policy tool of the EU, for the period 2014-20. It combines five different major funds: the European Regional Development Fund (ERDF), the European Social Fund (ESF), the Cohesion Fund (CF), the European Agricultural Fund for Rural Development (EARFD) and the European Maritime and Fisheries Fund (EMFF). The country also receives support from the Youth Employment Initiative (YEI).

The country has been allocated a total amount of EUR 25.79 billion, about 15% of the GDP for 2016, with an additional EUR 6.89 billion of national contribution. Figure 2.A.1. depicts the relative prominence of each fund in the total amount for the period 2014-20.

Annex Figure 2.A.1. Distribution of ESI Funds in Portugal, 2014-20



Note: ERDF: European Regional Development Fund; ESF: European Social Fund; EAFRD: European Agricultural Fund for Rural Development; CF: Cohesion Fund (CF); EMFF: European Maritime and Fisheries Fund; YEI: Youth Employment Initiative.
Source: European Commission (2016), *European Structural and Investment Funds – Portugal*, http://ec.europa.eu/regional_policy/sources/policy/what/investment-policy/esif-country-factsheet/esi_funds_country_factsheet_pt_en.pdf.

The application of European funds will have an important impact on the education system. For instance, education and vocational training is the second highest priority for the allocation of the ESIF budget, totalling EUR 5.2 billion. The funding dedicated to the education system is mainly channelled through the Human Capital Operational Programme (PO CH).

The PO CH aims to improve the quality of school education, support the access to higher education and raise the education level of workers and job seekers. It is targeted at reducing early school leaving rates to 10%, supporting secondary vocational courses to better prepare young people to find employment and broadening the access to pre-primary, primary and secondary levels of education, thereby reducing the risk of social exclusion. At the higher education level, it aims to provide grants to 124 000 graduate and undergraduate students and 4 300 doctoral students and to open short-cycle tertiary education programmes (ISCED 5) to 23 000 students. Financial support will also be directed to adult and lifelong learning. The programme seeks to improve the level of qualification of the working-age population, with around 30 000 adults expected to complete training courses that lead to certified skills. The distribution of funds is structured according to five main axes. Table 2.A.1 provides the programmed actions and measurable goals under each axis, as well as the funding sources for fulfilling the stated objectives.

Annex Table 2.A.1. Main programmed actions and measurable targets by axis of the PO CH, 2014-20

Programme axes	Main programmed actions	Measurable goals (for 2023)	Sources of funding
Axis 1: Promotion of educational success, tackling early school leaving	• Vocational courses at basic level (ISCED 2) for students over 13 years of age and with at least 2 failed school years [suspended in 2017] • Youth Education and Training Courses for young people aged 15 or over, in 6th year of schooling • Specific support for schools' social services (school manuals) • Qualification for early intervention in childhood and special education • Support for vocational courses at upper secondary level and specialised arts education in basic education level	• 80% of graduates in the training offers aimed at promoting educational success at the basic level (ISCED 2) • 95% of students approved for the next school year, in vocational courses at the basic level (ISCED 2) • 70% of graduates in double certification courses at the secondary level (ISCED 3)	• European Social Fund (ESF): EUR 1 445 million • National contribution: EUR 255 million
Axis 2: Increase enrolment in higher education and advanced training	• Grants for underprivileged students and loans • Professional Higher Technical Courses (TeSP) for students between 17 and 30 years old, with complete or incomplete secondary education degrees • Doctorate programmes and post-doctorate grants • Pedagogical training programmes for higher education teaching staff	• 88% of students supported by social services in higher education achieving their graduation degree • 68% of students certified as having the Professional Higher Technical Courses (TeSP) • 75% of completed doctorate degrees	• ESF: EUR 932 million • National contribution: EUR 164.5 million
Axis 3: Learning, lifelong learning qualifications and increased employability	• Qualifica centres and processes of recognition, validation and certification of competences (RVCC) • Learning courses for youth in their 9th year of school or above, without completion of their secondary education • Adult education and training courses (EFA) • Back-to-school education courses for students without a complete secondary education	• 60% of adults certified in training courses with school certification and/or vocational training • 61% of graduates in double certification courses at secondary level (ISCED 3)	• ESF: EUR 503 million • National contribution: EUR 88.8 million

Programme axes	Main programmed actions	Measurable goals (for 2023)	Sources of funding
Axis 4: Quality and innovation of the Education and Training System	• Specific and innovative interventions aimed at improving the quality and efficiency of the education and training system • Ongoing training of teachers and school managers • Qualification of educators and other training staff for individuals wanting to acquire the Pedagogical Competency Certificate (CCP) • Enhancement of schools' autonomy • Development of psychology and counselling services (SPO) in basic and secondary schools • Social innovation actions to experiment and test new approaches to the educational field • Interventions and specific activities to promote management quality and support to innovation and transnational co-operation	• 50% of teaching staff will have concluded their ongoing training in specific educational tools • 1 140 students per psychologist or guidance counsellor	• ESF: EUR 150 million • National contribution: EUR 26.5 million
Axis 5: Technical support	• Operation of technical support structures for PO CH management • Developing initiatives for information, spread and promotion of PO CH • Developing of PO CH assessment studies • Development, adaptation and maintenance of the modules for the PO CH Integrated Information and Monitoring System and the Intermediate Agencies responsible for the management of each of the intervention measures • Development of the centralised information system and indicators for higher education	• 6% of expenses covered by monitoring actions on site	• ESF: EUR 56 million • National contribution: EUR 9 million

Source: PO CH (n.d.), *Programa Operacional Capital Humano [Operational Programme for Human Capital]*, https://www.poch.portugal2020.pt/en/Pages/default.aspx%20 (accessed 31 July 2017).

Annex 2.B. Expenditure by educational level

Between 2008 and 2016, public education accounted for between 93.9% and 96% of the total budget of the Ministry of Education, while transfers to private education represented between 3.7% and 5.4% (above 5% until 2010, around 4% thereafter). Programmes abroad attained a maximum of 0.7% before 2010, where they declined abruptly to 0.2%, increasing slightly afterwards, attaining 0.4% or EUR 19 million in 2016. Expenditure in pre-school education represented between 9.1% and 10% of the public education budget between 2008-11, increasing until attaining 12% in 2013, subsequently declining until attaining 10.8% in 2016.

Spending in special education has remained more or less stable since 2010, at between EUR 220-240 million, except in 2012. Budget for initial VET (targeting young people under 25 years old), nowadays an alternative path to general secondary education, increased from EUR 389 million to a peak of EUR 551 million in 2010, declining gradually (except for a short-lived recovery in 2013) to EUR 388 million in 2016. Similarly, expenditure on after-school programmes attained a peak of EUR 103 million in 2009, declining systematically thereafter.

Annex Table 2.B.1. Expenditure by educational level and sector, 2008-16

In EUR millions (nominal)

	2008	2009	2010	2011	2012	2013	2014	2015	2016
1) Public education	4 884	5 574	5 588	5 211	4 358	4 635	4 596	4 685	4 894
Of which pre-schooling	*501*	*540*	*580*	*543*	*517*	*581*	*555*	*534*	*551*
Of which basic and secondary	*4 382*	*4 734*	*5 008*	*4 668*	*3 841*	*4 053*	*4 041*	*4 151*	*4 343*
2) Private education	279	294	307	211	193	184	178	187	209
3) Programmes abroad	37	40	10	8	9	12	15	16	19
4) Special education	194	213	232	234	189	219	218	226	244
5) VET – young people	389	476	551	507	448	496	420	406	388
6) VET – adults	30	55	55	55	29	43	39	38	49
7) School social assistance	156	346	178	174	198	189	189	185	259
8) After-school programmes	97	103	100	98	94	77	48	32	32
9) Administration and services	96	96	99	84	73	78	78	79	87
10) Termination programme by mutual agreement	0	0	0	0	0	0	138	0	0
Total	5 200	5 908	5 906	5 430	4 559	4 831	4 790	4 888	5 122

Source: Ministry of Education (2018), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Portugal*, http://www.oecd.org/education/schoolresourcesreview.htm.

Chapter 3. The organisation of the school network

This chapter examines how the Portuguese school system is managed, and the school opportunities available to students from a variety of backgrounds. In particular it attempts to address the question of whether the system is currently structured to promote the success of all students, including those for whom traditional schooling structures have been ineffective. Portugal has made considerable advances in designing a well-organised school network over the past 15 years, including consolidating many under-resourced schools, investing in some of its school buildings and expanding access for students with special education needs. However, important challenges remain related to shifting demographics, many deteriorating buildings and substantial regional- and school-level inequalities. The chapter makes a number of recommendations to address these challenges, particularly as it relates to the governance of schools.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Context and features

System-level governance

As described in Chapter 1, the governance of the Portuguese education system is relatively centralised; however, there has been a long-term, gradual shift towards decentralisation. Decentralisation in the education sector is not isolated but constitutes part of a gradual delegation of responsibilities to the local level in public sectors such as health and transportation. The education sector was one of the first to begin decentralising after the Revolution. Initially, municipalities were responsible for student transportation, meals and facilities management. In 1984, municipalities also became responsible for the construction and maintenance of buildings and equipment for early childhood education and care (ECEC), primary education and adult education, and for managing socio-educational activities (Ministry of Education, 2018[1]). During the past decades, more financial authorities and executive powers have been assigned to municipalities concerning school buildings, equipment, non-teaching staff and Curriculum Enrichment Activities (*Atividades de Enriquecimento Curricular* – AEC) in pre-school and the 1st cycle of basic education. Since 2015, the decentralisation process has been accelerated by the introduction of a four-year pilot with inter-administrative contracts (*contratos interadministrativos*) between 13 municipalities and the central government. These contracts expand the financial authorities and executive powers of municipalities in such areas as hiring non-teaching staff, social support at school, construction, maintenance and equipping school buildings in the 2nd and 3rd cycles, transport, family support and AEC in pre-school and the 1st cycle of basic education.

The decentralisation process involves multiple subnational entities: inter-municipal associations, municipalities and parishes. Parishes operate under municipal structures. In the Lisbon Municipality, the responsibilities for pre-school education and the 1st cycle of basic education have been further decentralised from the municipal level to the civil parishes, by means of inter-administrative contracts. In this way, Lisbon parishes play an important role in education by undertaking maintenance of buildings, hiring non-teaching staff, organising study supervision and support, social support, extracurricular activities and school holiday activities, providing meals and launching specific educational projects. Outside Lisbon, parishes have fewer responsibilities, only organising study supervision and support, undertaking small repairs or providing school bus transport.

The decentralisation goal articulated by the current government in education is to provide autonomy to municipalities to distribute funding for current spending on education – except teachers' salaries – and capital expenditures in schools under their jurisdiction. This would allow municipalities more discretionary power, thereby promoting responsive governance close to the needs of its citizens and efficient in its operation. Current government leaders stressed during the review visit, however, that they intended to keep centralised responsibilities related to teacher hiring, placement and pay, as well as curriculum and the planning of the school network.

Organisation of the school offer

Public schooling

The Portuguese public school offer is organised in three sequential levels described in Chapter 1. Both public and private providers guarantee the school offer in Portugal. The

Continental school network consists of 5 729 public schools and 2 569 private schools (CNE, 2017, pp. 45, 49[2]). The public school network is structured in school clusters that integrate schools from different education levels in one organisation. In 2016, there were 713 school clusters and 98 non-clustered schools. Almost all non-clustered schools provide secondary education exclusively (Ministry of Education, 2018[1]).

The average individual school size varies significantly across regions, often as a function of the regions' population density. Panel A of Figure 3.1 shows the average school size by region. In the Lisbon Metropolitan Area and in the upper northwest around Porto, individual schools enrol on average more than 600 students, whereas in the rural northeast and in the western part of Alentejo, schools enrol, on average, 350 to 425 students.

The average size of clusters also varies significantly, including substantial regional variation. The modal school cluster size is five to nine schools, but clusters range from as small as two schools to as many as 30 schools (Figure 3.1, Panel C). In the Lisbon Metropolitan Area, the average school cluster size consists of five to six schools, whereas in rural areas of central Portugal, school clusters are composed of, on average, more than ten schools (see Figure 3.1, Panel B).

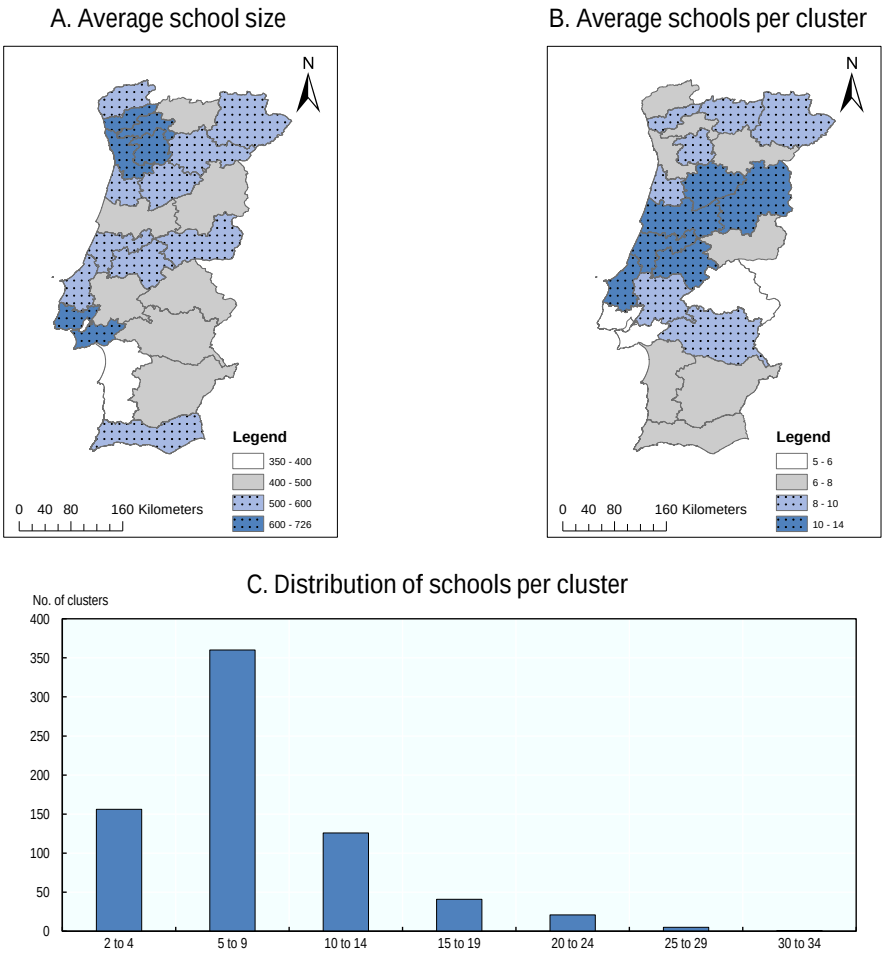
Central authorities in Portugal define the legal standards for class size. In 2013, the maximal number of students per class was legally increased by 2 students per class in basic and general secondary education (typically from 24 to 26 students), and by 6 students per class in vocational courses (typically from 18 to 24 students) but the new government has prioritised class size reduction and plans to reduce the sizes to pre-2013 levels in 2018/19 (Ministry of Education, 2018[3]). However, as Chapter 4 discusses in detail, even after the changes to class size maximums, the actual class sizes in Portugal are around the OECD average of 21 and 23 in primary and secondary schools respectively.

A regular school day comprises of five to eight hours of classroom instruction, divided by some short breaks. School day extension is becoming more common in Portugal: an increasing number of students have lunch at school and spend additional time in extracurricular activities (Ministry of Education, 2018[3]). The majority of students (86% in 2015/16) enrol in the full-time school programme for the 1st cycle of basic education. The current government aims to extend this full-time school programme to other educational levels. In addition to standard academic programming, 797 of 809 school clusters and non-clustered schools offer school sports clubs (*Desporto Escolar*). Students remain at school after the standard school day free of charge and may participate in 36 different sports with over 7 000 teams across all municipalities. To date, however, no comprehensive evaluation of the impact of *Desporto Escolar* on students' health or well-being has been conducted.

Simultaneous to the extension of the school day for many students, 10% of schools still work in double shifts where some groups of students have classes only in the morning, while others attend only in the afternoon, especially in the densely populated suburbs of Lisbon (Ministry of Education, 2018[3]).

Figure 3.1. Variation in average school size and number of schools per cluster, 2015/16

By NUTS III region



Source of administrative boundaries: Direção-Geral do Território (2016), Official Administrative Maps of Portugal - Version 2016 [*Carta Administrativa Oficial de Portugal - Versão 2016*], http://www.dgterritorio.pt/cartografia_e_geodesia/cartografia/carta_administrativa_oficial_de_portugal_caop_/caop__download_/carta_administrativa_oficial_de_portugal___versao_2016/.
Sources: CNE (2017), *Estado da Educação 2016 [State of Education 2016]*, Conselho Nacional de Educação, Lisbon, http://www.cnedu.pt/content/edicoes/estado_da_educacao/CNE-EE2016_web_final.pdf, Tables 2.1.1 and 2.2.2; DGEEC administrative data, 2015/16.

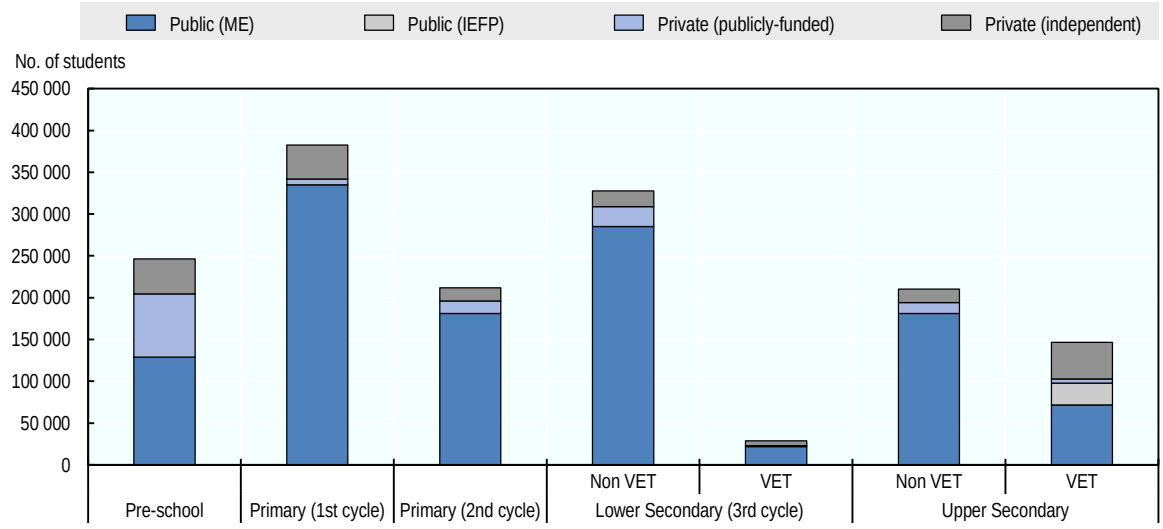
Private schooling

According to the Constitution of the Portuguese Republic and the Comprehensive Law on the Education System (see Chapter 1), the state has the duty to provide public education to all, as well as the duty to allow and to certify private initiatives in education. So, families have the right to attend private schooling, but at their own expense, unless there is no public offer where they live or their child has a specialised need not met in the local public schools.

Almost a third (30%) of Portuguese schools are private, either government-dependent and privately run, or private independent. The share of private schools has increased substantially in recent years for various reasons. The number of public schools was nearly halved from 10 443 in 2006/07 to 6 078 in 2015/16, whereas the number of private schools grew from 2 587 in 2006/07 to 2 708 in 2015/16.

Private independent schools are self-financed through attendance fees, charged to students' families. On the other hand, government-dependent private schools utilise a variety of contracted funding models with the government (see Chapter 2). Figure 3.2 presents total student enrolment numbers in public, government-dependent private and private independent schools by education level. Government-dependent private schools are most prevalent in the ECEC sector in institutions jointly financed and managed by the Ministry of Education and the Ministry of Labour, Social Security and Solidarity (MTSSS). Private independent schools serve students in all levels but especially in VET programmes in upper secondary, as well as at the ECEC and 1st cycle primary educational levels. Annex A describes this distribution by the number of schools and highlights the dominance of private providers in the ECEC sector.

Figure 3.2. Student enrolment by type of provision and programme orientation, 2015/16



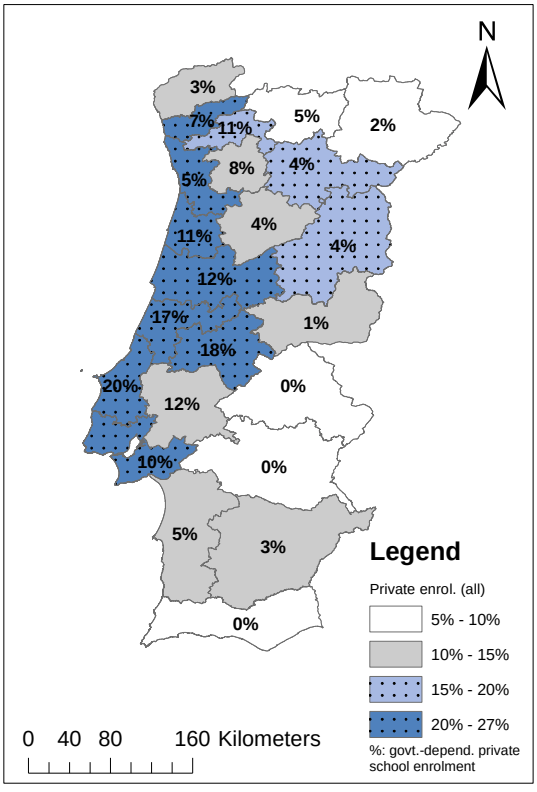
ME: Ministry of Education; IEFP: Institute for Employment and Vocational Training.
Source: Ministry of Education (2018), OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Portugal, Ministry of Education, Lisbon, http://www.oecd.org/education/schoolresourcesreview.htm, Table 2.2.

Government-dependent private schools are intended to fill gaps in the public supply of schooling in oversubscribed locales, remote locations, specialised artistic areas or special education. Figure 3.3 displays geographic patterns of enrolment in *all* private schools (shaded areas) and in *government-dependent* private schools (numbers). While some regions of Portugal have high rates of private school enrolment (up to one-quarter of all students), for the most part, the provision of private school places subsidised by the government exists only in areas where public school capacity is strained. Across the 278 Continental municipalities, there are only 21 municipalities in which the rate of government-dependent private school enrolment is over 10% and where fewer than 20% of schools at any educational level are over-capacity (defined here as having a total

number of classes that exceed the number of available classrooms by 5% or more). In 8 of these 21 municipalities, no educational level has more than 20% of schools operating over capacity. Thus, with the exception of these few municipalities with no capacity issues but high government-dependent private enrolment, government-dependent private schools seem to be authorised, in line with stated priorities, to respond to the demand the public schools are unable to meet.

Figure 3.3. Private school enrolment

By NUTS III region



Note: The shaded regions on the figure display the proportion of students enrolled in all private schools in that region. The percentages inside the regions display the proportion of all students enrolled in government-dependent private schools. Government-dependent private schools are private schools with an association contract (*contrato de associação*), sponsorship contract (*contrato de patrocínio*) or any other type of agreement with local or central education authorities that provides public funding directly to schools. Schools enrolling students who receive direct financial assistance from the government that covers tuition fees in private schools are not considered government-dependent.
Source of administrative boundaries: Direção-Geral do Território (2016), Official Administrative Maps of Portugal - Version 2016 [*Carta Administrativa Oficial de Portugal - Versão 2016*], http://www.dgterritorio.pt/cartografia_e_geodesia/cartografia/carta_administrativa_oficial_de_portugal_caop_/caop__download_/carta_administrativa_oficial_de_portugal___versao_2016/.
Source: DGEEC administrative data, 2015/16.

Government-dependent private schools must obey the same set of criteria for the selection of students as those for public schools. Private independent schools have no specific regulatory constraints for the selection of students. They are free to set their own

criteria as long as these do not violate non-discriminatory principles. As a consequence, private schools may give preference to children from specific backgrounds. Access to, or exclusion from, private independent schools is not subject to government inspection (Glenn and De Groof, 2002[4]).

The pedagogical and academic level of the curricula in government-dependent private schools must meet the national standards of general education policy. Independent private schools can follow the national curriculum or offer an alternative to be approved by the Inspectorate-General for Education and Science (*Inspeção-Geral da Educação e Ciência* – IGEC). In order to gain this approval from IGEC, schools must disclose the qualifications of their non-teaching staff, account for their educational philosophy by spelling out its educational orientation, explaining the principles by means of its "educational project" (*projecto educativo*) and show adequate physical facilities (Glenn and De Groof, 2002[4]). All private schools have the authority to determine what will be taught in at least 20% of the instructional time and choose textbooks and other materials without prior government approval. Private schools regulate their teachers' salaries in function of a pay scale which is based off the one used at public schools, though some divergence is possible (Ministry of Education, 2018[1]). With respect to accountability, government-dependent private schools are subject to compulsory inspection of their teaching, learning and administrative processes by the Ministry of Education's inspection services, though these take place outside of the regular external evaluation process. Inspection of private schools can include an evaluation of teaching methods, as long as the technical judgment is not of the ideological, philosophical or religious basis of the teaching (Glenn and De Groof, 2002, p. 422[4]).

School governance, performance evaluation and accountability

School governance

Due to the strong position of the central government in education and the relatively centralised decision-making, school-level governance in Portugal has traditionally been weak. It has long been characterised by limited school leadership skills and responsibilities. Teachers' pedagogical approaches and curricular decisions tend to be dictated by central fiat (Ministry of Education, 2018[1]).

The nature of school-level governance changed in 2008 when the structure of schools and school clusters was recalibrated and professionalised; this provided more responsibilities to school cluster management and increased accountability. Today, a management team consisting of the principal and deputies manages each school cluster or non-clustered school. Most cluster principals now have some form of formal leadership training and ongoing professional leadership development courses are offered. Nonetheless, principals and other administrators continue to be conceived of within the profession as teachers on assignment, rather than professional managers (see Chapter 4). The management team shares its policy- and decision-making powers with and is assisted by a pedagogic council (*Conselho Pedagógico*), consisting of heads of subject departments and educational staff, and an administrative council (*Conselho Administrativo*), consisting of the principal, a deputy and financial staff. Chapter 4 explores leadership responsibilities and school management structures in more detail.

The formal governing body of each school cluster (and non-clustered school) is the General Council (*Conselho Geral).* The General Council is composed of teachers, non-teaching staff, parents, secondary students, representatives from the municipality and

representatives co-opted by the elected membership. The General Council selects the school cluster principal, approves the educational improvement plan for the school, and conducts the school's internal evaluation Since the beginning of the process of democratisation, school autonomy has been framed in terms of participation and democracy at subcentral levels; a primary justification for the inclusion of teachers, students, parents and local stakeholders in school governance is this goal of democratic participation. The inclusive representation on the General Council is broader in Portugal than in many other democracies (Glenn and De Groof, 2002[4]).

Despite the original intent of a broad-based, representative local governance structure, due to lack of community participation and shifts in General Council membership, concerns have arisen about whether the General Councils continue to promote a governance structure that is fully accountable to all stakeholders and student interests. In the 1990s, the predominance of teachers in decision-making and the powers they were granted became a topic of contention. Debates ensued about the extent to which parents and members from local communities should participate in school governance (Eurydice, 2007, p. 11[5]). At the turn of the century, the vision of school autonomy gradually shifted from a political-administrative reform to a mechanism to improve the quality of education, emphasising the link between pedagogical and curricular autonomy and school success.

As it stands today, provisions for school autonomy in the governance of educationally important decisions are limited. The current pilot autonomy contracts (Pilot Project of Autonomy and Curriculum Flexibility) in Portugal allow for the carving out of time in school schedules during which modest amounts of the national curriculum (up to 25% of teaching time) may be tailored by the school to the specific needs and interests of its students. All schools will be eligible to participate starting in the 2018/19 school year. Additionally, starting in 2016/17, seven school clusters launched a separate Pedagogical Innovation Pilot Project (*Projeto-Piloto de Inovação Pedagógico* – PPIP) providing more complete curricular and scheduling autonomies with the goal of improving learning outcomes and reducing year repetition rates to zero. However, other types of school autonomy such as the autonomy to manage financial resources within the school cluster by means of a lump-sum budget instead of earmarked funding, or autonomy to manage human resources such as the freedom to select teachers, are not typically part of the policy discussions around school autonomy.

School accountability

According to international classifications of accountability in education, the current school accountability mechanisms can best be characterised as strong regulatory school accountability complemented with modest elements of school performance accountability (Hooge, 2016[6]). Strong regulatory school accountability enforces compliance with laws and regulations and focuses on inputs and processes within the school by means of reporting to the central government (Hooge, 2016[6]). It is a vertical accountability mechanism: top-down and hierarchical. The traditionally strong emphasis on the use of regulatory school accountability in Portugal corresponds with its highly centralised government and legalistic approach of educational policy- and decision-making.

Recently, Portugal has introduced some elements of school performance accountability on top of regulatory school accountability. School performance accountability mechanisms focus on outputs of schools such as efficiency and effectiveness, holding schools accountable for the use of resources in relation to the quality of education they

provide (Hooge, 2016[6]). The new forms of school performance accountability introduced in Portuguese education are periodic school performance evaluations. By design, they were intended to involve a five-year evaluation cycle which would include a visit from an external inspection team examining: i) student performance data; ii) the quality of education service provision; and iii) leadership of the school. Coupled with the internal evaluation, schools were required to draft improvement plans based on the results of these external evaluations and a follow-up was planned to assess the extent to which the school was making progress towards these goals (Santiago et al., 2012[7]).

However, the 2nd cycle of external evaluations concluded in 2017 and at the time of the site review, no external evaluations were underway. Stakeholders reported that, during the 2017/18 school year, they were conducting internal evaluations but no external evaluations were taking place. Furthermore, at the time of the drafting of the report, no overall cycle report had been completed for the 2012-17 evaluation cycle. Finally, though a working group was meeting to discuss details of the 3rd evaluation cycle, no framework or schedule of evaluations had been created (IGEC, 2018[8]). Thus, for the 2017/18 school year, no external evaluations were to be conducted. In practice, therefore, Portugal's form of performance accountability recently has been accomplished by means of common student assessments and by public reporting of school performance. While the public reporting of performance is a form of performance accountability, even on paper Portugal's inspection and testing regime are relatively low-stakes compared to contexts in which poor performance can result in sanctions and high performance may result in additional autonomies or incentives.

Distribution of students to schools

In the 2015/16 school year, more than 1.5 million children and youngsters went to school in Portugal. The enrolment in pre-school education is above international averages (see Chapter 1). Particularly the share of 3-year-olds in ECEC has increased by 17 percentage points during the last decade, from a 63% enrolment rate in 2006/07 to 80% in 2015/16 (CNE, 2017, p. 81[2]). The enrolment in Portuguese basic education overall has been stable during the past decade. Almost all 15-year-olds (97%) are enrolled in the 3rd cycle of basic education, which is at the OECD average (OECD, 2017, p. 257[9]). As Chapter 1 highlights, total student enrolment has remained relatively stable over the past decade, reflecting countervailing trends of increased ECEC and upper secondary enrolment and declining basic education enrolment. Given that Portugal is approaching the upper bounds of enrolment rates and it is experiencing a long-term decline in its school-age population, it is expected to see a decline in overall enrolment in the coming years.

As discussed in Chapter 1, Portugal relies on geographic assignment to schools. While siblings' enrolment is considered first, this, of course, is dictated by the initial enrolment of the oldest child. After special educational needs are considered, students' legal residence is the next and most influential factor in school assignment. Thus, for parents enrolling their children in the public school system, the primary mechanism by which they can influence the school their child attends is through their choice of residence and to a lesser degree their choice of employment location. As a result of concerns about some families manipulating their residential or occupational address to access a more desirable school, for the 2018-19 academic year, the criteria have been changed to require students to use their legal address, defined via the tax declaration process, for their public school application. Additionally, as noted in Chapter 1, new for the 2018-19 academic year, students receiving social support will have preferential status after the above factors

are applied in an attempt to increase opportunities for low-income students and increase socio-economic integration in schools.

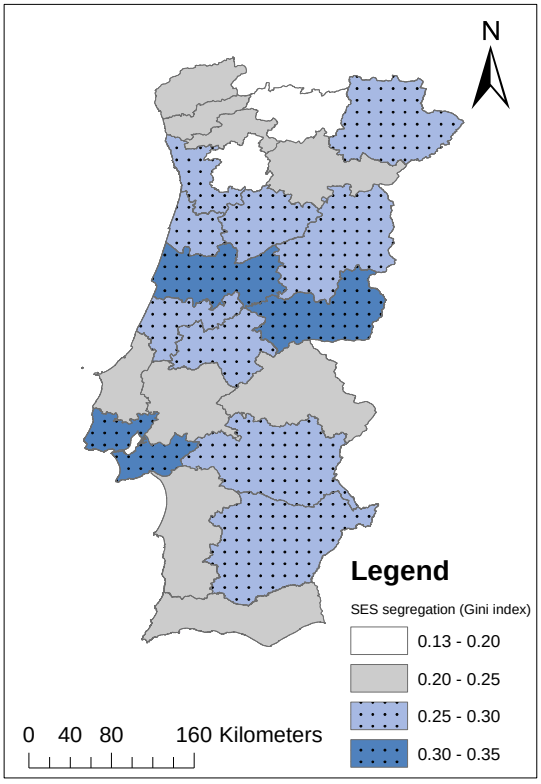
Parents' choices of residence, and by extension schools, are heavily influenced by public reporting on school quality. The yearly coverage by the media of school rankings based on average scores in national tests during the past decade and a half has generated competition between schools and led to socio-economic- and achievement-based segregation between schools (Ministry of Education, 2018[1]). Until recently, the school rankings published in Portugal did not take students' demographic characteristics into account. Currently, the Directorate-General for Education and Science Statistics (*Direção-Geral de Estatísticas da Educação e Ciência* – DGEEC) publishes performance ratings of schools that consider the demographic characteristics of their student bodies following recommendations from the OECD *Review of Evaluation and Assessment in Education* (2012[7]). The DGEEC also publishes indicators of school performance online in the Schools Portal (*InfoEscolas*) and the IGEC external evaluation reports of all public schools are available on the internet. However, the most intensive media attention remains on the raw rankings based solely on test scores published in leading newspapers.

The results of a recent study show that the reporting of school rankings in Portugal has had significant effects on families' choices. Specifically, an improvement of 10 ranking places for the average school is associated with an increase of about 0.4 percentage points in the number of enrolled students. Additionally, lower performing schools, particularly private ones, are more likely to close since the public release of rankings (Nunes, Reis and Seabra, 2016[10]).

Residential segregation, geographic assignment and public rankings all contribute to the fact that the level of *between-school socio-economic segregation* in the Portuguese education system is substantial. Figure 3.4 and Figure 3.5 display the unevenness in the distribution of students across schools across regions in the country. Figure 3.4 reveals the high degree of between-school segregation, in which children receiving School Social Assistance (*Ação Social Escolar* – ASE) and who have low levels of maternal education are concentrated in particular schools. In half of continental Portugal's NUTS III regions, including the most populated areas of Lisbon and Porto, the Gini index measuring between-school socio-economic variation is above 0.25. This is higher than the findings in a recent study that found between-school socio-economic variation in the 100 largest United States metropolitan areas registered a Gini index of 0.23 (Owens, Reardon and Jencks, 2016[11]). These findings accord with a recent DGEEC report finding high rates of socio-economic segregation within 2nd cycle schools. In particular, the report found a startling difference in the school enrolling the highest percentage of students receiving School Social Assistance (78%) in the Lisbon municipality and the school enrolling the lowest percentage (8%). Even more startling, in the 2nd cycle Lisbon school with the lowest levels of maternal education, 91% of students had mothers who had not completed secondary education. Conversely, in the school with the highest level of maternal education, only 2% of students had mothers who had not completed secondary education (Oliveira Baptista, Pereira and DGEEC, 2018[12]). Similar variation held in the Porto municipality as well.

Figure 3.4. Level of student segregation across schools by socio-economic status (Gini coefficient)

By NUTS III region

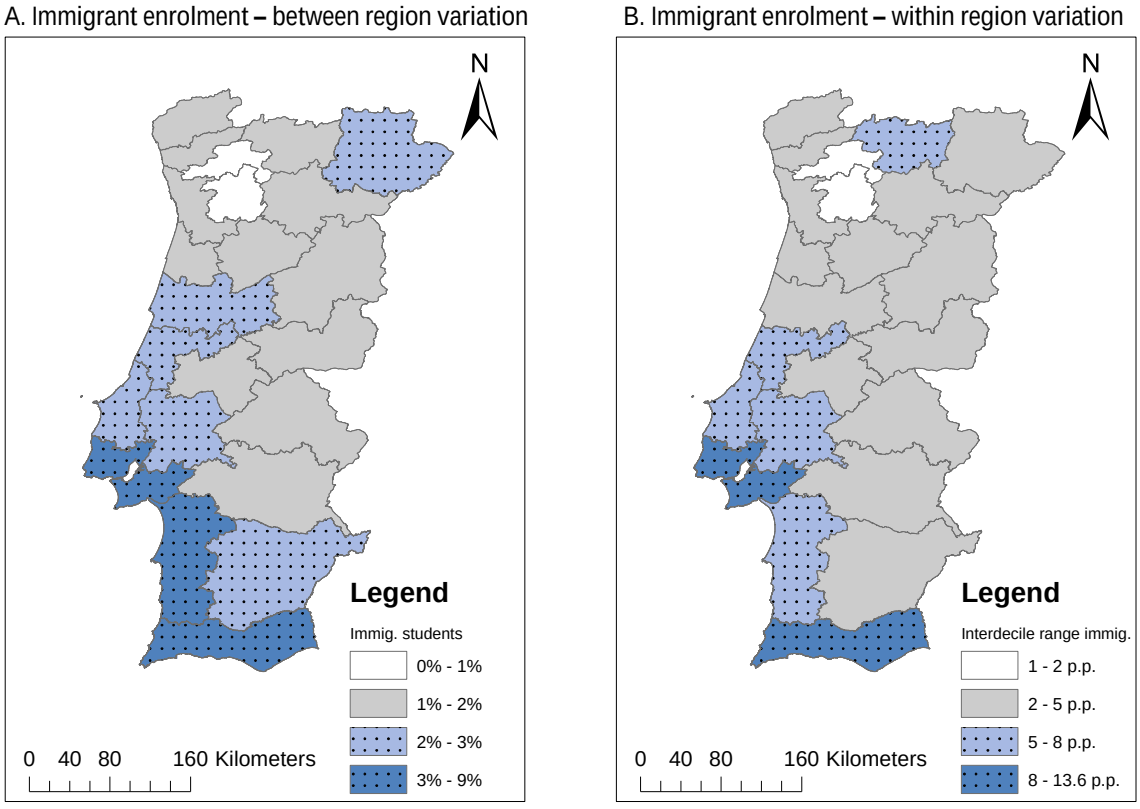


Note: Index of socio-economic need measured by rank percentile-ordering the proportion of students within a school receiving School Social Assistance A and average years of maternal education at the school level. The average of the 2 ranks was then demeaned (mean = 0) and assigned a standard deviation of 1. High values of the index indicate high levels of socio-economic challenge. A within-NUTS III region Gini index was calculated based on the standardised value of school-level disadvantage. The Gini coefficient ranges from 0 to 1, where 1 represents perfect inequality and 0 represents perfect inequality between subunits.
Source of administrative boundaries: Direção-Geral do Território (2016), Official Administrative Maps of Portugal - Version 2016 [*Carta Administrativa Oficial de Portugal - Versão 2016*], http://www.dgterritorio.pt/cartografia_e_geodesia/cartografia/carta_administrativa_oficial_de_portugal_caop_/caop__download_/carta_administrativa_oficial_de_portugal___versao_2016/.
Source: DGEEC administrative data, 2015/16.

Similarly, while the overall proportion of immigrants in Portugal tends to be low, immigrant students are more common in some regions and are concentrated in a small number of schools. Immigrant student enrolment is highest in Lisbon and southern Portugal, whereas there are relatively few immigrant students in eastern Alentejo, the Centre and the North. More striking is the range of immigrant enrolment across schools in those areas that do have more immigrant students. Schools in the Lisbon Metropolitan Area (AML) that enrol more immigrant students than 90% of all other AML schools are 15.1% immigrant. On the other hand, schools that enrol fewer immigrant students than 90% of all other AML schools are only 1.5% immigrant (Figure 3.5). Thus, it is evident that for a small but not marginal proportion of schools, meeting the needs of immigrant students is a central concern.

Figure 3.5. Immigrant student distribution

By NUTS III region



Note: The proportion of immigrant students is the weighted average of the proportion of the immigrant enrolment rate for all schools within a region. The interdecile range is the difference between the immigrant enrolment rate for schools in the 90th percentile for immigrant enrolment within the region and the immigrant enrolment rate for schools in the 10th percentile. For example, in the Metropolitan Area of Lisbon (AML), schools in the 90th percentile for immigrant enrolment have immigrant enrolment rates of 15.1%. Schools in the 10th percentile have immigrant enrolment rates of 1.5%. Thus, the interdecile range for immigrant enrolment in AML is 13.6 percentage points.
Source of administrative boundaries: Direção-Geral do Território (2016), Official Administrative Maps of Portugal - Version 2016 [*Carta Administrativa Oficial de Portugal - Versão 2016*], http://www.dgterritorio.pt/cartografia_e_geodesia/cartografia/carta_administrativa_oficial_de_portugal_caop_/caop__download_/carta_administrativa_oficial_de_portugal___versao_2016/.
Source: DGEEC administrative data, 2015/16.

The levels of between-school segregation evidenced by the school-system wide census data are borne out by PISA samples of 15-year-old students. Within the OECD, Portugal has the 5th highest rate of between-school socio-economic variation, trailing only Turkey, Spain, Chile and Mexico (Table I.6.10 in OECD (2016[13])). An important caveat is that Portugal also has some of the largest overall variations in students' socio-economic status within the OECD which drives a large proportion of the level of between-school segregation (Figure II.5.12 in OECD (2016[14])).

Between-school segregation is also related to *between-school performance variation*. As noted in Chapter 1, student performance in Portugal is strongly correlated with the environment in which children grow up and the composition of the student population of each school is also closely related to average learning outcomes on national assessments. PISA data reveal in more detail how between-school segregation relates to between-school performance variation. There is a moderately strong, positively signed correlation between school systems that have higher rates of social inclusion across schools and school systems that have higher rates of performance inclusion across schools (Figure II.5.12 in OECD (2016[14]).

In addition to evidence suggestive of high degrees of public school segregation, there are also patterns of socio-economic *segregation between public and private schools*. Among schools enrolling 15-year-old students, schools in the top quartile of socio-economic status are 13 percentage points less likely to be public schools than those in the bottom quartile of socio-economic status (Table II.4.10 in OECD (2016[14])). Further, when examining census data of all Portuguese Year 6 students, Brás de Oliveira (2018[15]) found that 1.3% of students at private independent schools receive social support, while 45.4% in government-dependent private ones receive social support and 53.6% in public schools. Thus, there are clear socio-economic differences between students in private and public schools, and this is particularly true for private independent schools (Brás de Oliveira, 2018[15]).

With respect to the level of *within-school segregation*, Table 3.1 shows that in Portugal, tracking at the age of 15 is in line with most OECD countries. Year repetition in Portugal is almost 3 times higher than the OECD average (31.2% compared to 11.3%). Official ability grouping is much lower than the OECD average (4.3% compared to 7.8%) (Table II.5.22 in OECD (2016[14]). However, no system-wide regulations exist governing how class groups are formed that would prohibit class-level sorting on the basis of prior academic achievement. As a result, important concerns exist about these informal mechanisms of within-school sorting (see below).

Table 3.1. Grouping and student selection

	Portugal	OECD average
Tracking (Age of selection into different education types or programmes)	15	14.3
Year repetition (Percentage of students who have repeated a year at least once in primary, lower secondary or upper secondary school)	31.2	11.3
Ability grouping (Percentage of students in schools where students are grouped by ability into different classes for all subjects)	4.3	7.8

Source: OECD (2016), *PISA 2015 Results (Volume II): Policies and Practices for Successful Schools*, http://dx.doi.org/10.1787/9789264267510-en, p. 178.

Contributing to the relatively high levels of segregation, the Portuguese education system offers multiple curricular pathways for students with special profiles, starting in the first cycle of basic education. Besides the general path, attended by most students in basic

education, about 8% of the total number of enrolled students complete the Year 9 under alternative offerings (Ministry of Education, 2018[1]). In particular, the provision of Alternative Curricular Pathways (*percursos curriculares alternativos* – PCA) is targeted to students in the 2nd and 3rd cycles of education who are overage, have learning difficulties and are at-risk of year repetition or dropping out. This type of offer is intended to be temporary in nature and aims to motivate students to re-gain interest in school. There are also programmes that target highly mobile students. A programme for Distance Learning for Itinerant Students (*Ensino a Distância para a Itinerância*) seeks to ensure basic school education to students that, due to their parents' occupation or lifestyle, are forced to change schools frequently, particularly targeting students from Roma communities. Regular education primary and secondary programmes also offer Portuguese as a Second Language (*Português Lingua Não Materna* – PLNM) for students who need Portuguese language instruction. Students are initially orally screened and families complete a home language survey. Students then sit for a placement test if necessary to determine Portuguese proficiency levels. Students in vocational programmes do not have access to PLNM courses in all schools. Finally, home-schooling (*ensino doméstico*) is permitted, as long as it is under the responsibility of a qualified adult and the supervision of a school (Ministry of Education, 2018[1]).

For adults, several second-chance education programmes are available, depending on their needs and previous educational experiences, whose provision is under the umbrella of the recently created Qualifica programme (see Chapter 1, Box 1.2).

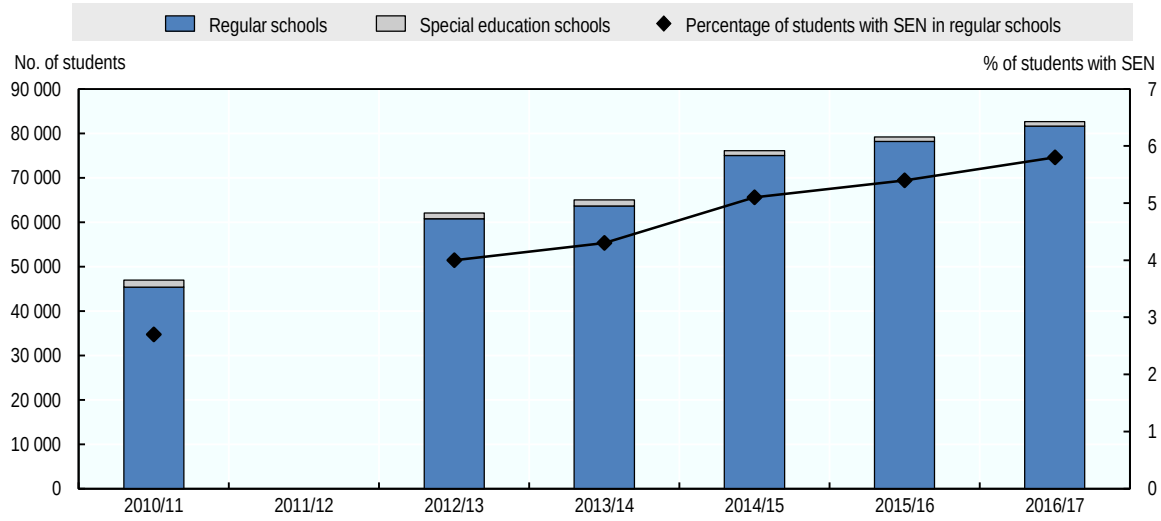
Adapted provision for students with SEN

School education in Portugal recognises the special educational needs (SEN) of some students. The law for inclusion (Decree-Law 3/2008), at the time of writing of this report, does not explicitly define special educational needs nor formally set criteria for identification of SEN, rather leaving to the discretion of specialised personnel operating according to international standards. Differentiated provision for SEN students translates into the adaptation or modification of curricula, and potentially the assignment of a student to a different learning environment. Education of students identified as SEN is almost exclusively provided in mainstream schools – 98.8% of SEN students were integrated into such settings as of 2016 – with special education schools being now almost entirely restricted to fulfil a role of resource centres for inclusion (see Chapter 2 and below). Students may only attend special education institutions, a total of 50 of which exist nationwide, under approval from the Ministry of Education and when learning limitations are sufficiently severe to require education in a separate school (EASNIE, forthcoming, p. 23[16]). The identification and enrolment of students with special education in regular schools have significantly increased in recent years, alongside a continuous decrease of enrolment in special education schools (Figure 3.6). Mainstream-school educated students with SEN grew by 76% between 2010 and 2017. In total, 5.8% of all students are identified as SEN, most of whom attend basic education (7.7% of all students in Years 1-9) (Ministry of Education, 2018, p. 88[1]).

Specialised support to students with SEN within schools is complemented by a network of 93 specialised resources centres for inclusion (*centros de recursos para a inclusão* – CRI) and 25 information and communication technology (ICT) resource centres for special education spread across the country. About 581 school clusters (72% of the public school network) receive support from CRIs. CRIs deploy a total of 2 251 technicians, such as occupational therapists, speech therapists, physiotherapists or psychologists, and 1 141 technicians work directly in schools (DGEEC, 2017[17]). Additional resources have

recently been targeted to the support of students with SEN. In 2016/17, an additional 221 full-time psychologists were allocated to schools, with a commitment to contract an additional 200 psychologists in 2018 in order to improve the student-psychologist ratio to 1 140-to-1. The resource centres are designed to support the inclusion of children with disabilities, build partnerships with local actors and facilitate the access of students with SEN to different activities. The network of support is further complemented by the identification of schools specialised in teaching students with given disabilities. Finally, students with severe needs rely on two types of structured teaching units: one for the education of students with autism spectrum disorders and another for the education of children with multiple disabilities and congenital deaf-blindness (Ministry of Education, 2018[3]) where students are educated in largely separate classrooms, even if in a mainstream school building. Together, these types of specialised teaching units supported 5% of SEN students, as of 2016/17.

Figure 3.6. Change in the number and proportion of students with SEN by type of school, 2010-17



Source: DGEEC (2017), *Necessidades Especiais de Educação [Special Educational Needs]*, http://www.dgeec.mec.pt/np4/224/.

Since 2017, and while this report was being prepared, there has been public discussion of a new law on the inclusion of students with special educational needs. The reform aims to clarify the roles of the different actors involved in the identification of SEN students. In particular, the new law aims to make a medical evaluation an optional, rather than mandatory, procedure to identify a student as having SEN and trigger the development of an Individualised Education Plan (*Planos Educativos Individuais* – PEI). The intent of this reform is to recognise special educational needs as learning obstacles, rather than medical conditions.

Vocational education and training

Vocational Education and Training (VET) plays an important role in upper secondary education in Portugal. When entering upper secondary education, typically at 15 years of age, students choose between different tracks and fields of study (see Chapter 1). Just as

several strands are available in the general track, initial VET is separated into five strands. For the purpose of this report, initial VET courses refer to a vocational offer that is targeted at young students – typically until 24 years of age – and at the upper secondary level of education. Table 3.2 provides the main features for each of these programmes.

Table 3.2. Characteristics of initial VET programmes

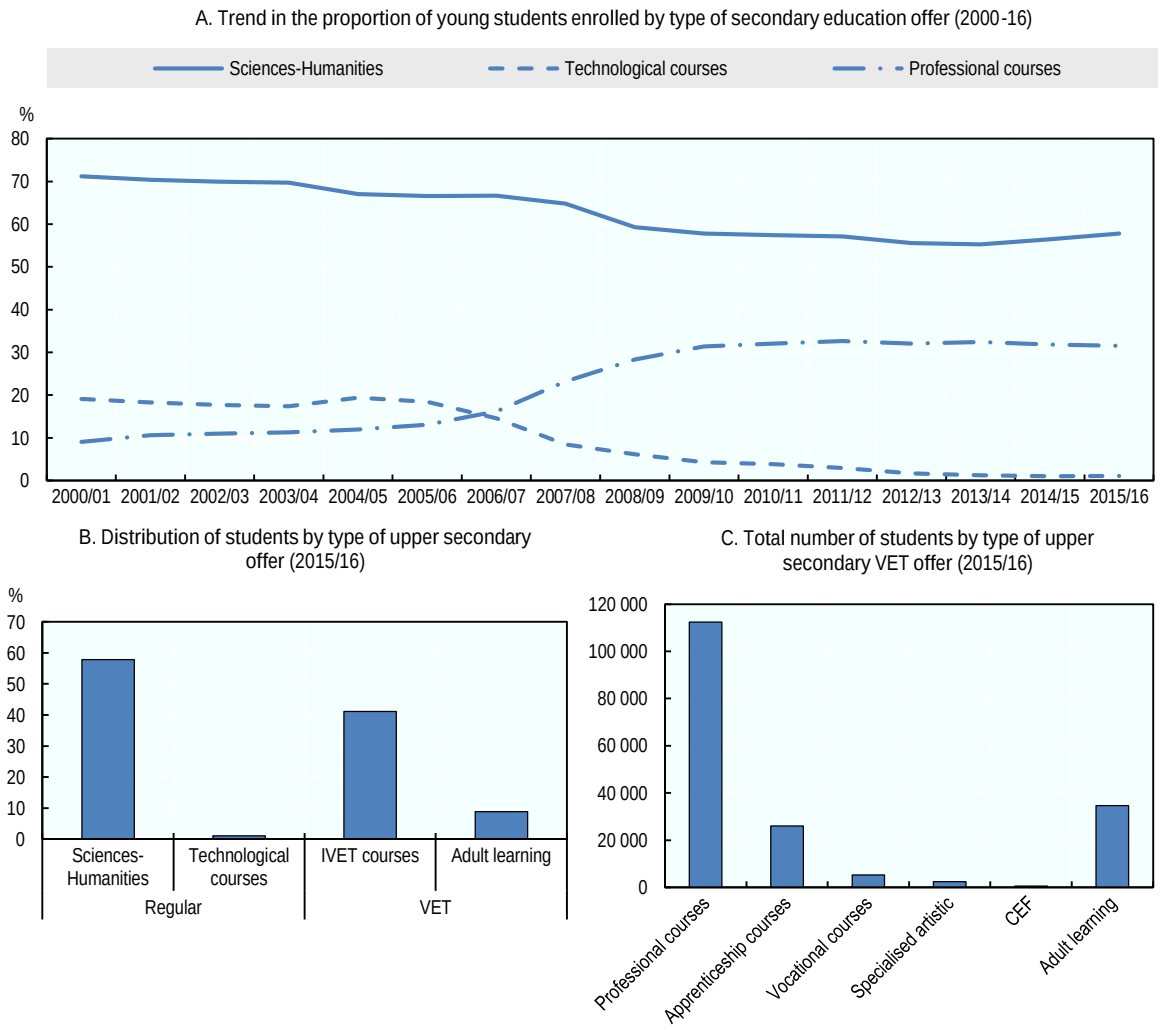
Type of programme	Theoretical duration of studies (in years)	Number of learning hours	Work-based learning (%)	Fields of study	Target age (years-old)
Professional programmes	3	3 200	19-24	40	15-18
Apprenticeship programmes	2.5	2 800-3 700	40	..	15-24
Specialised artistic	3	..	[in the 3rd year]	..	15-18
CEF courses	1-2	1 125-2 276	..	..	15-18
Vocational courses	..	..	..	..	15-18

.. : Information not available.
Source: DGERT (2016), *Vocational Education and Training in Europe - Portugal*, http://libserver.cedefop.europa.eu/vetelib/2016/2016_CR_PT.pdf.

Each type of VET programme combines specific learning components. The development of general skills is built into socio-cultural or scientific components, which correspond to learning that occurs in the classroom context at school. On the other hand, technical, technological or practical components are typically learned on the job or in a simulated working environment. As Table 3.2 displays, each programme has different dosages of work-based learning, often dependent on the field of study. The fields of study vary considerably. Professional courses, the most popular among VET students (Figure 3.7, Panel C), offer as divergent study options as computer sciences, electronics, engineering, tourism, business administration, construction or applied arts, among forty different possibilities. In turn, apprenticeship programmes focus on priority areas of training such as computer sciences, construction and repair of motor vehicles or manufacture of textiles, among others. As in most other OECD countries, completion of any of the VET offerings leads to a double certificate allowing students to pursue further studies in post-secondary education. However, access to tertiary academic education is subject to the same entrance requirements as for upper secondary students from the general track (DGERT, 2016, pp. 17-19[18]).

Upper secondary VET is currently offered through different networks of provision. Building on the strategic orientation to improve the status of VET and the extension of compulsory education, Ministry of Education schools have recently expanded their offering of VET courses. As of the 2015/16 school year, 453 schools offered VET. On the other hand, a network of public, private independent and publicly-funded professional schools (*escolas profissionais*) also provides upper secondary and post-secondary education VET. There were 224 professional schools offering upper secondary VET, only 16 of which were strictly public. Finally, 33 professional training public centres managed by the Institute for Employment and Vocational Training (IEFP), as well as other private providers certified by the institute, offer apprenticeship programmes, in which over 26 000 students are enrolled annually.

Figure 3.7. Trends and distribution of the provision of VET programmes



Note: Panel A depicts the trend in the number of young students in each of the tracks as a proportion of the total enrolment of young students in upper-secondary education. In Panels A and B, the proportion of students in the regular track includes those enrolled in technological courses, a type of vocationally-oriented offer that is included in the regular track and has been progressively discontinued (see Chapter 1). In Panel B, IVET refers to initial vocational education and training, i.e. VET offer targeted at young students. IVET offer includes professional, apprenticeship, specialised artistic, vocational and education and training courses (*cursos de educação e formação* – CEF). In Panel C, enrolment in adult learning courses include individuals in recurrent upper secondary classes (*ensino recorrente*), education and training courses for adults (*Educação e Formação de Adultos* – EFA), certified modular training (*Formações Modulares Certificadas* – FMC) and in the national system of prior learning assessment and recognition (*Sistema Nacional de Reconhecimento, Validação e Certificação de Competências* – RVCC).

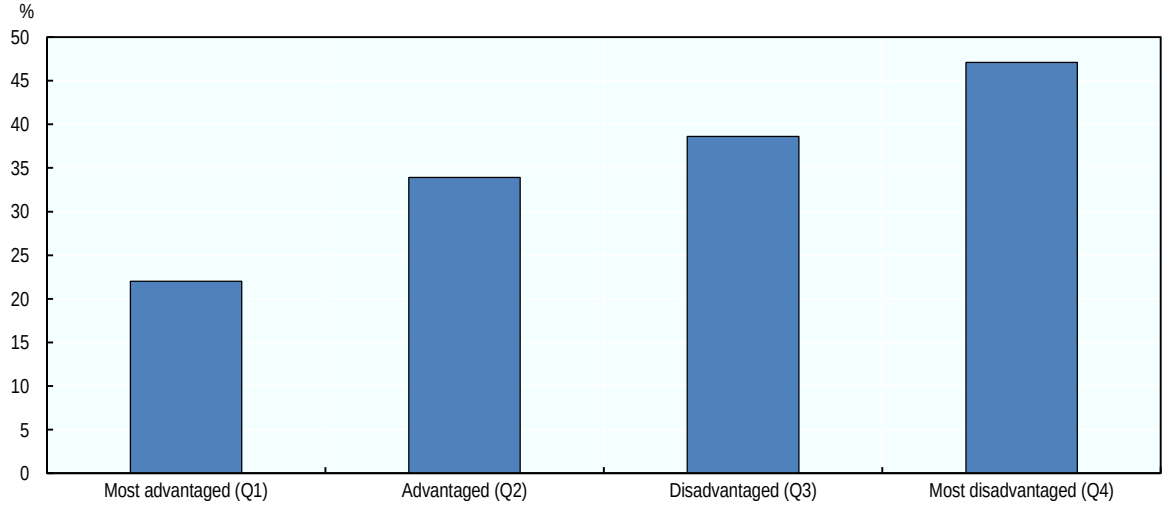
Source: DGEEC (2016), *Estatísticas da Educação 2015/2016 [Education Statistics 2015/16]*, http://www.dgeec.mec.pt/np4/96/%7B$clientServletPath%7D/?newsId=145&fileName=DGEEC_DSEE_2017_EE201520164.pdf.

Current government leaders are eager to improve the status of VET as an alternative track to general education. The current government has stated the goal of reaching a 50-50 distribution of upper secondary students across general and vocational programmes by 2020. But the historical reputation of vocational education in the country is weak. After a backlash against the development of a "technical education" sector following the democratisation process started in 1974, it was not until 1989 when publicly regulated professional schools offering VET were created. The opening of professional schools occurred alongside the emergence of professional courses offered in IEFP training centres, mainly created to address local employment needs. The integration of VET courses in the mainstream education system only occurred in 2006, with the development of an alternative vocational track in upper secondary public schools (Ministry of Education, 2018[1]). Since then, the share of young upper secondary students enrolled in initial VET programmes has been steadily increasing, reaching about 41% in 2015/16 (Figure 3.7, Panel B). The surge has been followed by a decrease in the provision of technological courses, offered alongside sciences-humanities programmes in the general track. Technological courses, despite being vocationally-oriented, do not offer any work-based learning and have been essentially discontinued, enrolling only about 1% of upper secondary youth (Figure 3.7, Panel A).

As in most OECD countries, enrolment in VET programming is tied to students' socio-economic status. Upper secondary schools with higher proportions of socio-economically disadvantaged students concomitantly have higher proportions of students enrolled in VET programmes. In fact, as Figure 3.8 shows, in schools that enrol the most students receiving social support and with the lowest levels of maternal education, an average of 47% of students enrol in VET programmes. On the other hand, in the most advantaged schools, only 22% of students study in VET courses. A key policy consideration is whether the greater concentration of VET students in schools with higher levels of socio-economic need is an attempt to design curriculum that better engages this group of students and helps them progress towards secondary school completion, or whether the differences reflect a lowering of expectations and a circumscription of educational and professional opportunities for students from low socio-economic status backgrounds (OECD, 2018[19]).

The strategic priority to develop the vocational education and training system in Portugal has been extended to lower secondary education. CEF courses are offered to students who have not yet reached upper secondary education, targeting those at risk of early school leaving at the 2nd or 3rd cycles of basic education. In 2013, pre-vocational programmes *(cursos vocacionais no ensino básico*) were introduced for students 13 or older, who have repeated at least twice in the same cycle or three times overall. Classes were organised into modules and teaching was intended to have a strong involvement of private companies from communities surrounding the school. The expansion of this type of offer was limited to schools with technical and pedagogical capacity and did not have full national coverage. However, this type of offer did not gather political support due to concerns with the effectiveness and equity of tracking students earlier and has been discontinued since 2016. Offerings in CEF courses for students 15 or older are still an option available to schools to tackle early school leaving (DGERT, 2016[20]; Ministry of Education, 2018[3]).

Figure 3.8. Proportion of upper-secondary students enrolled in VET programme by level of school disadvantage



Note: The figure shows the distribution of the proportion of VET students by quartile of an index of socio-economic disadvantage. Index of socio-economic disadvantage is measured by rank percentile-ordering the proportion of students within a school receiving School Social Assistance A (ASE A) and average years of maternal education at the school level. The average of the 2 ranks was then demeaned (mean = 0) and assigned a standard deviation of 1. High values of the index indicate high levels of socio-economic challenge.
Source: DGEEC administrative data, 2015/16.

Planning of the VET network is centrally steered and monitored by ANQEP (*Agência Nacional para a Qualificação e o Ensino Profissional)*, an inter-ministerial public agency (see Chapter 1, Annex B). The recently created System for Anticipation of Qualification Needs (*Sistema de Antecipação de Necessidades de Qualificações* – SANQ) is the cornerstone of the process of strategic decision-making with regards to VET. Together with the broader architecture of the National System of Qualifications (SNQ), which extends to adult learning (see Box 3.1), the SANQ plays an important role in closing the gap between VET courses on offer and labour market needs. SANQ aims at increasing both vertical co-ordination of VET and promoting horizontal co-operation among relevant actors at subnational levels (in this case, the 23 inter-municipal communities, CIMs - C*omunidades Intermunicipais*). SANQ has three main strategic priorities: i) a diagnosis of past and forecasted labour market dynamics; ii) a planning module aimed at building a ranking of qualification priorities; and iii) a regional co-ordination module. The planning module includes the characterisation of the VET offer profile, relating the current number of enrolled students by type of offer and qualification priorities. The ranking of priorities is defined by ANQEP based on the assessment of labour market needs, in the first stage. The regional co-ordination module combines the two first priorities at the regional level: inter-municipal communities are asked to adjust centrally-defined priorities according to SANQ's methodology, with priority given to local stakeholders' perspectives. The CIMs that decide to not participate in this phase of the process abide the prioritisation established at the central level. After updating the priorities according to CIM feedback, ANQEP has the legal power to define and regulate the minimum and maximum number of classes to open in each CIM. According to ministry officials, currently the criteria are only being applied to providers under the Ministry of Education supervision.

Box 3.1. National System of Qualifications (SNQ)

Overview of main instruments

- **The National Qualification Framework** (NQF) defines a hierarchical structure of qualification levels aligned with the European Qualifications Framework (EQF).

- **The National Qualifications Catalogue** (*Cátalogo Nacional de Qualificações* – CNQ) is a catalogue of non-tertiary qualifications under the purview of the National Agency for Qualifications and Professional Training (*Agência Nacional para a Qualificação e o Ensino Profissional* – ANQEP). For each qualification, the CNQ identifies relevant skills, which are broken down as "skill units" (*unidades de competência*) as well as relevant training units of short duration (*unidades de formação de curta duração* – UFCD). The catalogue is regularly updated and managed through the collaboration of 16 different Sector Councils for Qualification co-ordinated by ANQEP. Each sector council integrates several stakeholders, such as employers, trade unions, schools and VET providers, technology and innovation centres, sector regulators, professional associations and invited experts. The participants in each sectorial council, as well as other entities registered in SNQ, can at any time propose the integration of new qualifications or the deletion of existing ones, through an online tool – the Open Model of Consultation.

- The **National Credit System for VET** seeks to exploit the modular structure of the CNQ to implement flexible training paths. Every skill unit or UFCD corresponds to certain credits, enabling users to easily capitalise on prior skills acquisition when pursuing new qualifications. It is used only in double-certification training courses.

- The **Integrated System of Information and Management of Education and Training Supply** ('SIGO') is a platform created for registering training activities of individual students with providers in the SNQ, whether their qualifications are part of the CNQ or not. Upon conclusion of any training activity, a certificate is issued by SIGO.

Source: OECD (2018), *Skills Strategy Implementation Guidance for Portugal: Strengthening the Adult-Learning System*, http://dx.doi.org/10.1787/9789264298705-en.

Strengths

Clear governmental priorities and targets with respect to expanding access to schooling

The current and previous Portuguese governments have set very clear education policy priorities and targets which have pinpointed precisely how and for whom school places are needed across the education system. These include:

- Universal expansion of upper secondary access in 2008-09, followed by increases in graduation rates to 90% by 2020.
- Universal access to early childhood education and care (ECEC) for 3-5 year-olds by 2019.
- 90% participation in extended school day (full-time schooling).
- Increase in enrolment in VET programmes to 50% by 2020.
- Involvement of 600 000 adults in education by 2020.

These priorities will provide education access at nearly universal levels. The realisation of these priorities and targets require sufficient solid physical infrastructure, appropriate network planning and recruitment of a new wave of teachers (see below and Chapter 4). Importantly, when these priorities are realised, it will create additional pressure to ensure the quality provision of the expanded educational offer.

Articulated priorities for decentralisation in education

In spite of its highly centralised governance of the educational system, there has been broad political and societal support for decentralisation in Portugal since the democratic revolution of 1974, favouring the development of civil society and participation at the local level. The primary priorities the ministry and government currently articulate for decentralisation in education relate to the construction and maintenance of school buildings, the hiring and employment of non-teaching staff, and peri-educational activities such as full-day enrichment activities, sports, etc.

The inter-administrative contracts between central and local governments (see above) seem flexible enough to explore different approaches to decentralisation and to conduct experiments. The review team observed promising policies and practices at the municipality level, such as the development of local targeted educational projects, the promotion and fostering of education networks across teachers, school leaders, parents and families, educational stakeholders and private partners and the involvement of private entities in training school administrators, ad hoc management consulting, school visits to companies and timely traineeship opportunities for students and engagement in the design of VET and general schooling offerings.

Despite clearly articulated priorities around decentralisation in education, the political leadership of the ministry is clear that the following core three areas are not under consideration for local control: hiring and placement of instructional staff; curriculum; and the organisation of the school network.

There is an ambitious and overarching strategy to respond to declining student populations

The Portuguese education system has witnessed a major process of consolidation in the past decade, leading to a considerable reduction of educational institutions in the public school network. Between 2004 and 2014, Portuguese educational authorities shuttered more than 47% of public education institutions – a total of 5 600 schools (Figure 3.9, Panel A), compared to a decline of about 15% of students enrolled in primary education during the same period (Figure 1.7, Panel A). In 2006, a new policy let municipalities recalibrate the 1st cycle school network and thousands of small schools were closed. Prior

to the reform, the school network was dominated by small primary schools with poor facilities and low performance – particularly in rural areas (Ministry of Education, 2018[1]). As Panel B of Figure 3.9 shows, while the school network in the densely populated Lisbon Metropolitan Area shrunk by only 6%, the consolidation process meant the closure of almost half the schools in the rural North (45%) and Centre (46%) regions.

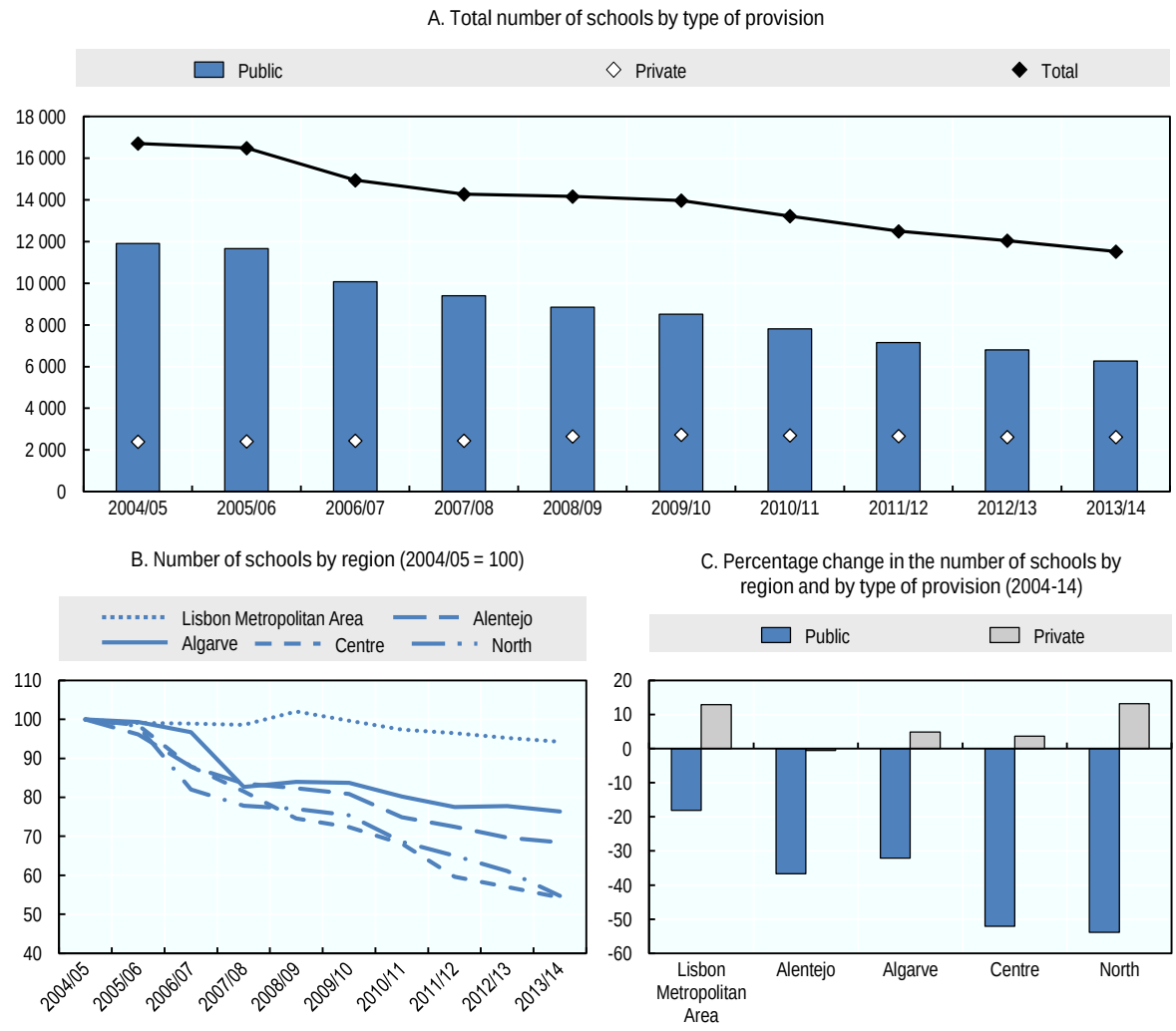
Central authorities have recently been employing additional efforts to also reduce the number of government-dependent private schools. Contrary to the tendency in the public school network, the number of private schools increased in all regions but Alentejo. In the Lisbon Metropolitan Area, for every 10 public schools that were closed, a net average of 7 new private providers entered the school network (Figure 3.9, Panel C). While there are no strict regulations to discourage the growth in independent private provision, such increase in the face of declining student populations can lead to greater misallocations of school resources, double offering and greater pressure to keep consolidating the public network (see Challenges section). In order to curtail double provision of school places, the current government has further tightened the criteria for the public funding of private providers, de-funding classes in areas with available public offer, thus signalling the intention to keep rationalising the overall offer. Availability of centrally collected data allowed the decision to be based on a study of available infrastructure capacity and travelling distances to the closest public schools, effectively reducing duplicate offer (DGEEC, 2016[21]). These approaches align with the OECD recommendations in the *Responsive School Systems: Connecting Facilities, Sectors and Programmes for Student Success* report (OECD, 2018[19]) to tie the licensing of government-dependent private providers to the local need for additional school places as an effective means to enhance the efficiency of school networks, particularly in areas characterised by lack of available places in public schools.

Consolidation can be a disruptive experience for students and families having to relocate to a new school, often further removed from their home. The experience of OECD review countries has demonstrated the importance of public authorities and schools working together to make this transition as smooth as possible. Careful planning can ameliorate negative impacts on students' well-being and learning outcomes, for example by ensuring the provision of school transport services where needed (OECD, 2018[19]). In Portugal, educational authorities implemented complementary policies alongside the reduction of the number of schools to address the challenges of consolidation. These policies improved the quality and capacity in the school network, to potentially cushion the shock caused by school closures.

First, the close co-ordination between central and local authorities, responsible for identifying the underperforming schools in need of consolidation and ensuring the transport of students to their new schools, was instrumental to the success of the process. Municipalities, in partnership with civil parishes, played a prominent role in reducing the disruptive nature of school closures.

Second, at the time of the initial round of school closures, new school centres that offered youth and community programming were built to serve as small town hubs. Further, a new school transport system was developed to ensure students who suddenly had to commute to other localities could do so with no additional costs for families.

Figure 3.9. Change over time in school facilities, 2004-14



Source: DGEEC (2017), *Educação em Números 2016 [Education in Numbers 2016]*, DGEEC.

Third, the Secondary Schools Modernisation Programme, led by the *Parque Escolar* agency, invested in refurbishing and modernising secondary school buildings. The additional capital investment stream permitted the expansion and requalification of school buildings that would otherwise lack the capacity to take new incoming students. All stages, from the planning process to the maintenance of completed buildings, included a thorough community involvement process (Veloso, Marques and Duarte, 2014, p. 410[22]). At the local level, this engagement took the form of information sessions and consultation meetings before and during the construction process, which brought together parents, teachers, students, school boards and non-teaching staff on the one hand, and engineers and architects on the other hand (Blyth et al., 2012, p. 47[23]) (see below for more on *Parque Escolar*). Independently from the *Parque Escolar* interventions, but as part of the overall strategy of consolidation, many small schools have also been replaced by new buildings with a minimum capacity for 150 students (Ares Abalde, 2014[24]).

Fourth, the organisation of school administration into clusters has also facilitated the consolidation process. Clustering allows students to be integrated into larger school communities, increasing access to a greater variety of services, such as extracurriculars or student counselling and career guidance. Relatedly, school clustering eased transitions of students across education levels. In the same cluster, students could more easily progress through the years within the same extended school community, allaying concerns associated with moving to different school environments and facilitating a sense of belonging at school. Furthermore, as resource planning is made at the cluster level, variations in demand for a particular school can be more easily dealt with by shifting human and material resources across commonly managed school buildings.

Finally, the new organisation of the school offer provided greater pedagogical coherence across education levels. Teachers are now more aware of student needs as they progress through different educational levels, provided that additional opportunities for professional collaboration in an extended school community are actually fulfilled (see Chapter 4).

Although consolidation plans across OECD countries are often met with strong opposition from students, parents, teachers and staff (Ares Abalde, 2014[24]), most stakeholder groups the review team spoke with did not express particular concerns with the general direction of the process, recognising it as a necessary step to rationalise provision in face of falling birth rates. However, particularly at the school level, stakeholders with whom the review team spoke voiced concerns related to uneven administrative oversight over the schools in the cluster, greater weight given to administrative tasks distributed to teachers and an unequal utilisation of collaborative potential across clusters (see Chapter 4). In fact, the clustering process has also led to unequal distributions of enrolled students in each cluster and number of schools per cluster (see Challenges section).

The physical infrastructure of schools requalified by Parque Escolar is of high quality

In 2007, the Portuguese Government launched an unprecedented plan to modernise and improve public secondary school infrastructures, implementing a new management and maintenance model and optimising the allocation of resources and the sustainability of school infrastructures (Ministry of Education, 2018[1]). The state-owned company *Parque Escolar* was established to carry out the programme. A total of 173 secondary schools have been involved, which means that the school infrastructure of more than two-thirds of all secondary school students in 2016 has been improved (Ministry of Education, 2018, pp. 67-68[1]).

In only one decade, the central government succeeded in building, renovating, upgrading and pedagogically modernising 173 upper secondary schools throughout the country. A strength of the *Parque Escolar* model is linking the design of the school building to the development of innovative and modern instructional spaces, such as advanced laboratories and flexible classroom layouts. Blyth and colleagues provide an extensive description of the Secondary Schools Modernisation Programme (Blyth et al., 2012[23]).

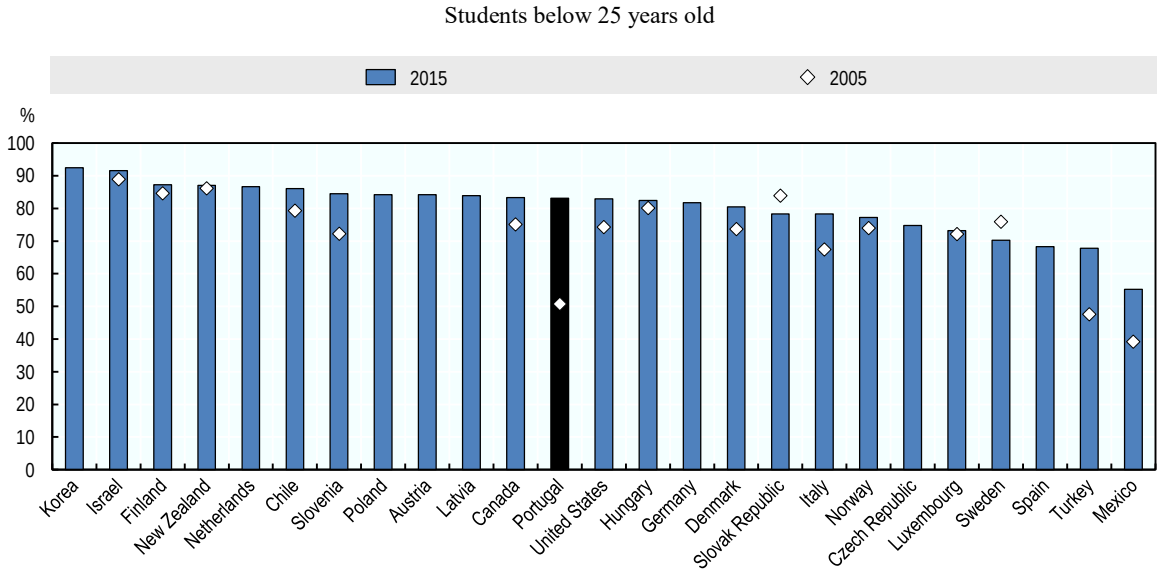
During school visits to sites intervened by *Parque Escolar*, the review team heard from students, parents, teachers and school administrators a high-level satisfaction with their new secondary school infrastructure. They stated that they felt the new buildings met the requirements of teaching and learning, well-being and social safety in school. *Parque Escolar* involved strategic and thorough infrastructural planning and maintenance.

Nevertheless, the successful process and results of *Parque Escolar* highlight the poor physical condition of most other schools (see Challenges section).

There is increased access to, and attainment in, upper secondary education

Graduation rates from upper secondary education have been climbing and are approaching OECD averages. Between 2005 and 2015, the proportion of upper secondary students under 25 years of age that graduate from secondary schooling jumped from 51% to 83% – by far the largest increase among countries for which there is available data (Figure 3.10). Interestingly, the increase in the secondary enrolment and graduation rates preceded the increase in the compulsory age of education to 18 years of age in 2009. In fact, between 2005 and 2015, the proportion of 18-year-olds enrolled in education increased from 66% to 81% (Figure C1.2 in OECD (2017, p. 251[9])). Declining rates of early school leaving and year repetition in basic education are important drivers of this change.

Figure 3.10. Change in graduation rates from upper secondary education, 2005 and 2015



Note: Countries with missing data for both periods or with missing data for 2015 are not presented. The change for OECD average is not presented due to missing data.
Source: OECD (2017), *Education at a Glance 2017: OECD Indicators*, http://dx.doi.org/10.1787/eag-2017-en, Table A2.3.

It should be noted that the surge in graduation rates and expansion of the upper secondary schooling occurred in spite of efficiency-driven measures aimed at consolidating the school network and declining number of teachers (see also Chapter 4). Costs associated with the greater need of provision were also contained through a general increase in average class size, associated with the increased legal maximum number of students per class in 2013. Therefore, it seems that, while holding resources constant in the face of a growing secondary population, Portuguese secondary schools still increased the proportion of students graduating successfully. Additionally, clearly articulated standards – e.g. through a stable policy of national exams at the end of the 3rd cycle and during upper secondary education – have steered the quality and rigour of the curriculum

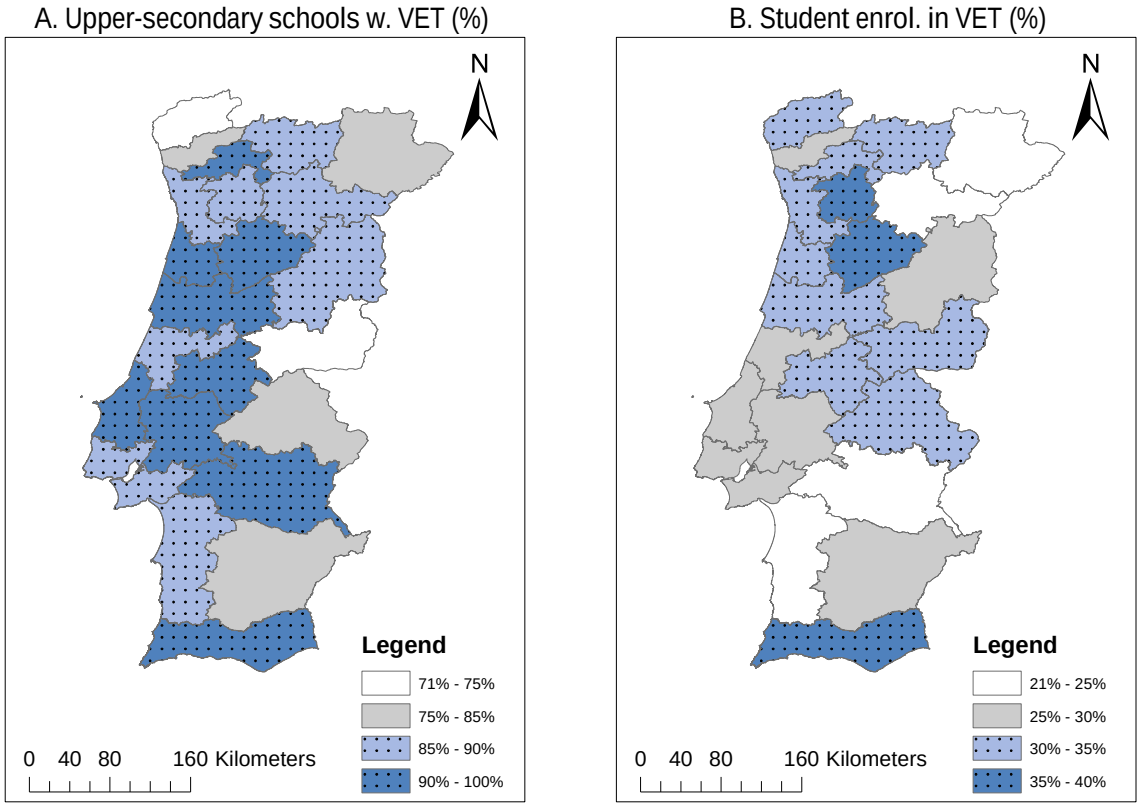
delivered in the classroom. Greater emphasis should now be given to continue decreasing the still high rates of year repetition and early school leaving (see Challenges section).

Efforts have been made to improve the profile of VET pathways

While Portugal has traditionally favoured enrolment in general education programmes in upper secondary education, education officials have gradually improved the profile of VET programmes. In particular, the number of students opting to enrol in professional programmes has grown simultaneously with the expansion of VET courses in mainstream educational institutions. According to administrative data for 2016, the great majority of public upper secondary schools in the country (89%) offers some type of VET programme – a consistent pattern across regions. In fact, the proportion of schools offering VET is above 70% in every NUTS III region (Figure 3.11, Panel A). Mirroring this pattern, there is no region in the country in which the proportion of students enrolled in school-based VET programmes is lower than 20%, with regions such as the Algarve having enrolment rates over 35% (Figure 3.11, Panel B).

Figure 3.11. Geographic variation in provision of vocational education and training (VET)

By NUTS III region



Note: Figures present only school-aged, initial VET programmes and enrolment by school-aged secondary students (under 24 years of age).
Source of administrative boundaries: Direção-Geral do Território (2016), Official Administrative Maps of Portugal - Version 2016 [*Carta Administrativa Oficial de Portugal - Versão 2016*], http://www.dgterritorio.pt/cartografia_e_geodesia/cartografia/carta_administrativa_oficial_de_portugal_caop_/caop__download_/carta_administrativa_oficial_de_portugal___versao_2016/.
Source: DGEEC administrative data, 2015/16.

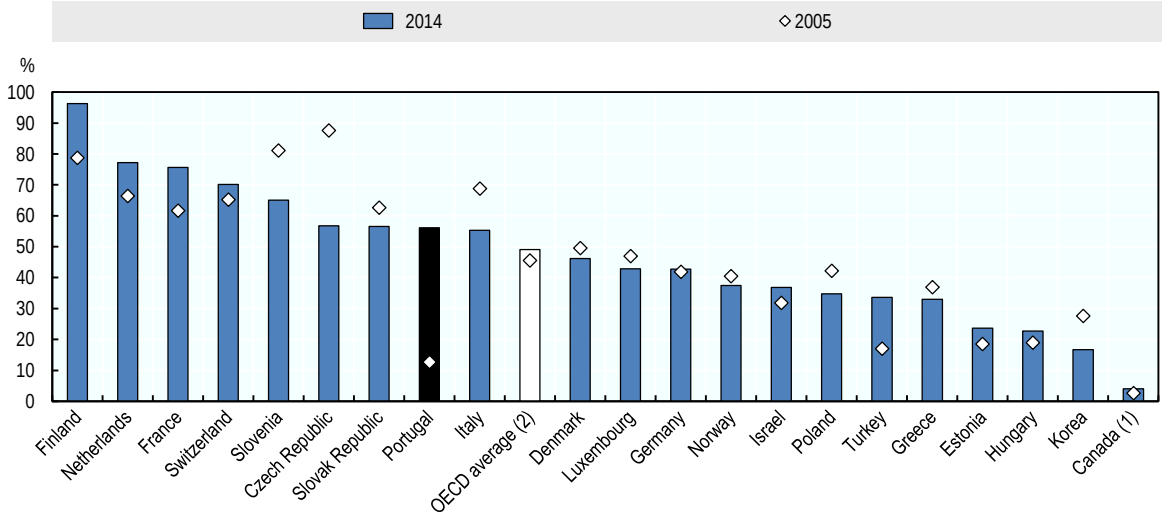
According to recent evidence from Portugal, the choice to enrol in VET depends on such factors as the pathway options available in schools, students' previous achievement, as well as the guidance and supervision of students by psychology and orientation services (*Serviços de Psicologia e Orientação* - SPOs) at school. Importantly, peers, family and teachers also influence the choice of track (Vieira, Pappámikail and Resende, 2013[25]). Similarly to other OECD countries, students that opt to enrol in VET tracks generally come from relatively more disadvantaged socio-economic backgrounds and have lower chances of accessing higher education (Cruz and Mamede, 2015[26]; Henriques et al., forthcoming[27]). However, despite attracting students from lower socio-economic backgrounds, Cruz and Mamede (2015[26]) find that the expansion of VET pathways in Portugal has had significant positive impacts on the progression and outcomes of students in the labour market. In line with evidence from other countries, enrolment in the VET track has also been shown to increase the chances that low-performing students will remain enrolled in school compared to low-performing performing students who opted to enrol in the regular track (Henriques et al., forthcoming[27]). Stakeholders with whom the review team met repeatedly emphasised the expansion of vocational offer in schools as a good opportunity to attend the needs of students in risk of dropping out or willing to experience more school success in an alternative offer to the academic track.

Alongside the expansion of VET offer, graduation and completion rates have increased. The proportion of students graduating from VET programmes in Portugal increased from only 13% in 2005 to 56% in 2014 – the largest growth among OECD countries (Figure 3.12). Likewise, the percentage of students completing professional courses in a given year climbed from 55% in 2002 to 74% in 2016 (Figure 1.4.5 in DGEEC (2017, p. 50[28])). Across all VET programmes, 51% of students conclude their studies during their theoretical duration, above the 49% among those in general programmes in 2015. But despite the progress, the proportion of VET students completing their studies on time is still considerably lower than other education systems with available data (Figure A9.3 in OECD (2017, p. 158[9])).

Portuguese educational authorities have taken specific steps to increase the status of VET programming through a range of initiatives to match the VET offer to labour market needs. First, work-based learning has been gradually built into professional programmes, while VET programmes have preserved academic coursework requirements in a school setting. In 2013, a reformulation of VET upper secondary syllabi introduced changes aimed at providing more training hours in a work context, continued expansion of vocational pathways in lower and upper secondary aimed at students in risk of dropping out and further harmonisation of VET programmes across upper secondary schools and IEFP training centres (Ordinance 276/2013).

Second, Portuguese authorities set, in 2014, the legal framework for Professional Business Reference Schools (*Escolas Profissionais de Referência Empresarial* – EPRE). EPREs are intended to be created by companies or employers' associations willing to develop courses directly related to their activity (Decree-Law 92/2014). According to the government's intentions, 50% of the teaching hours in the EPREs – excluding work-based learning – would be provided by companies' employees with adequate pedagogical qualifications. Nonetheless, since the publication of the legal framework, no Reference Schools have yet started to operate. While the design of these schools appears promising, and despite review team inquiries into this policy development, it is unclear why none have opened.

Figure 3.12. Change in graduation rates of VET students in upper secondary education, 2005 and 2014



1. Year of reference is 2013.
2. OECD average is calculated only for countries with available data for all reference years.

Source: OECD (2016), *Education at a Glance 2016: OECD Indicators*, http://dx.doi.org/10.187/eag-2016-en, Table A2.4.

Third, Portugal has gradually developed a coherent national qualifications framework, which is data-driven and informed by consultation with labour market stakeholders. The procedure for ensuring the VET network has labour-market relevance is facilitated by a tradition of dialogue and stakeholder involvement in the discussions. In particular, vertical and horizontal co-ordination mechanisms have been put in place to steer the VET offer. The system for anticipation of skills, coupled with regulations on the limit of classes per field of study, help centrally steer the VET network of provision according to labour market needs. While vertical steering mechanisms can be effective tools to streamline vocational offer, the involvement of subcentral actors in the process – through the regional module of SANQ – incentivises local commitment and the sharing of common goals (OECD, 2018[19]). In turn, horizontal co-ordination can be leveraged through a network of almost 300 Qualifica Centres that help implement VET programmes at the school-level and guide young and adult students through the National Qualifications Catalogue (see also Chapter 1).

Fourth, Portuguese authorities have set higher quality standards for vocational programming. Alignment with the European Quality Assurance in Vocational Education and Training (EQAVET) system has provided an internationally agreed-upon framework for quality assurance of VET providers. An increasing number of schools are already included in this system, improving their esteem among students, families and companies. In particular, EQAVET certification is used as a criterion in decisions pertaining to opening new programmes or to extend the existing ones (Ministry of Education, 2018[1]).

Finally, all VET tracks lead to a double certification qualification in recognition of students' mastery of both academic and vocational skill sets. Double certification holds the potential to foster transitions to academic pathways in post-secondary levels while remaining relevant for entering the labour market. Professional qualifications are organised into stackable modules that help facilitate the progression of students throughout the duration of their studies and to higher education levels. But challenges still

remain regarding the fulfilment of such potential. A recent follow-up survey on the status of students one year after graduation has found that for those completing upper secondary education through VET tracks, only 34.1% were not employed but studying, 6.7% were both working and studying, while 18.9% were neither studying nor working (DGEEC, 2018[29]). Nevertheless, the number of VET students employed one year after graduation has been improving considerably in comparison to other waves of the survey (Ministry of Education, 2018[1]).

Extremely high rates of inclusion of students with Special Educational Needs (SEN)

Since the Revolution of 1974, inclusion and integration have been leading principles in the public sector and have a broad-based commitment from society, especially in education. This is an important explanation for the long history of prioritising inclusion of students with special educational needs (SEN) resulting in an extremely high level of school-level inclusion by international standards: 98.8% of SEN students were assigned to regular schools in 2016/17.

Despite efforts to identify all students who have special educational needs, specific support is primarily targeted to students with severe SEN – i.e. students with "multiple disabilities" (*multideficiências*), congenital deaf-blindness, deafness, blindness or autism spectrum disorders. Specific support strategies generally imply the deployment of additional resources – either human or specific ICT equipment – but also changes in pedagogical strategies (Decree-Law 3/2008 was in force at the time of writing). For students with severe SEN, a reduced class size maximum of 20 students applies.

Various strategies and supports exist to support teachers in successfully identifying and teaching students with SEN. Initial teacher preparation includes a required course for all teachers on how to support students with SEN. Box 3.2 describes the process for identifying students with SEN.

Box 3.2. Identification and intervention processes for students with SEN

Identification

Identification of SEN students is currently based on the World Health Organization's International Classification of Functioning, Disability and Health (ICF). The ICF works as the framework for the labelling of the specific student need and the basis for delineating specific pedagogical interventions in the case of students with severe SEN. Students can be initially signalled as in need of an evaluation by any member of the school community, such as parents, teachers and non-teaching staff, or a doctor.

The signalled student is evaluated according to the ICF along four main dimensions: i) body functions (e.g. mental and sensorial); ii) body structure (e.g. physical impairments); iii) activities and participation (e.g. learning or socialisation difficulties); and iv) environmental factors (e.g. unsupportive home environment).

The process for evaluating the extent of the need is under the responsibility of the special education team within the school cluster, mainly composed of specialised SEN teachers and, often, other specialised personnel. The SEN team within the school cluster can also access health centres or specialised resource centres for inclusion (CRI).

A new law that would de-emphasise the medical diagnosis component of the identification process in favour of identifying students with SEN based on persistent struggles in school despite tiered interventions was being finalised at the time of the drafting of the report.

Intervention

SEN teachers in the school and CRI staff determine the pedagogical intervention. It contains two main instruments: i) an Individualised Education Plan (IEP); and if relevant ii) an Individual Transition Plan. The IEP applies to all identified SEN students and sets the need of additional services to be offered to the student, the changes in educational goals or evaluation (if any) and the need to learn in a setting different than the regular class (if any). According to the law at the time of writing, the provision of individualised additional support is dependent on a full medical evaluation. The individual transition plan applies only to students with permanent disabilities and is a complementary support plan to facilitate the transition of the student to an independent life outside school.

Source: Decree-Law 3/2008.

Depending on the assessment of SEN teachers in schools, most students with special educational needs are fully integrated into regular classes, for which reductions in class size are allowed according to national regulations. On the other hand, students requiring greater care are educated in separate learning environments within the school, adapted to their functional disabilities and according to different curricular standards. Nonetheless, in mainstream public schools, students with severe SEN are frequently integrated into regular classes with the individual support of a SEN teacher. So too are students with more moderate disabilities, but without either a reduction in class size or much additional support.

Challenges

Shifting demand for school places remains a challenge that needs a system-wide and differentiated strategy

A sophisticated strategy is required in order to meet the contradictory demand for school places in the near future. On the one hand, there is a high demand for school places. This is due to the current ambitious education policy goals of 100% access to ECEC for 3-5 year-olds and 90% participation in the full-time school day. The increasing demand for school places is also caused by intensification and expansion of upper secondary and adult education. Along with recent growing demand for more school places, longstanding shortages of school places in the densely populated suburbs of Lisbon is not resolved yet as 10% of the 1st cycle schools in that area still work in double shifts (CNE, 2017[2]).

On the other hand, there is a much lower demand for school places, stemming from the massive decline of school-age population (see Figure 1.6, Chapter 1). Further complicating the challenge is that this demand will be more scattered throughout the country as rural locations become more isolated and scarcely populated. A system-wide and differentiated strategy of providing school is needed to address this complex and varied demand for school places.

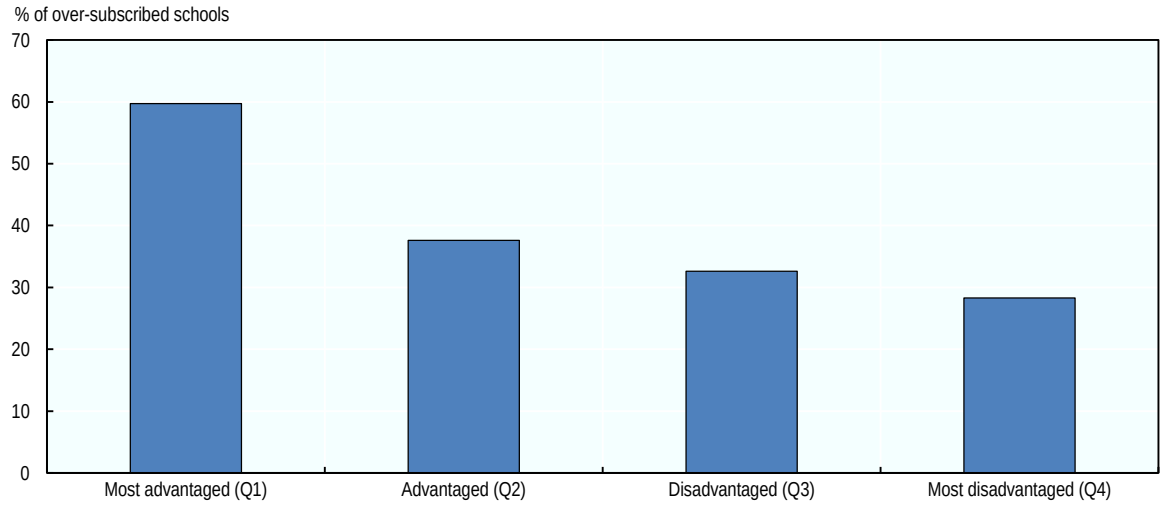
These contradictory developments in the demand for school places pose challenges to central and local authorities. Increasing challenges on planning capacity stem from complex, inter-related pressures including:

- Pressures on schools whose operation and funding are gradually affected by decreasing enrolment levels due to poor performance in the rankings.
- Greater challenges to allocate students across schools that are over- and under-capacity, in a context where enrolment patterns are heavily determined by where families live.
- Physical capacity challenges are particularly concentrated in schools serving few socio-economically disadvantaged students (see Figure 3.13), which interact with family concerns around poor performing schools and produces situations in which some families become increasingly dissatisfied with their inability to access high-performing, advantaged schools and other families become increasingly dissatisfied with the low status of their poor-performing, disadvantaged schools. Figure 3.13 further highlights that the new student assignment criteria developed for the 2018/19 school year that prioritises school choice requests for students receiving social support are unlikely to substantially reduce school segregation. The most socio-economically advantaged schools are already over-subscribed. Since the newly introduced criterion comes last behind other criteria, there are unlikely to be places remaining in high-wealth community schools when non-resident students apply to attend them.
- Pressures to better align incentives pertaining to enrolment in private and public schools. For instance, the regional variation in the proportion of students enrolled in private schools (see Figure 3.3), in parallel with the regional variation in over-capacity schools (especially in the Lisbon Metropolitan Area), will force concerned policy makers to face trade-offs between increasing enrolment capacity of public schools, or to find more mechanisms to direct demand to (potentially government-dependent) private providers.
- The challenge to best balance between the democratic principle of responding to parents' choice preferences for enrolment in particular schools, with a highly centralised governance system in education.

Challenges with the overall quality of school infrastructure

Portugal spends at or near the bottom of all OECD countries on the construction and maintenance of school facilities. As Chapter 2 notes, municipalities have responsibility for building and equipment maintenance for ECEC and the first cycle of basic education, whereas the maintenance and renovation of infrastructure for the remaining cycles of basic education and upper secondary (with the exception of *Parque Escolar* schools) are the responsibility of the Directorate General for Schools (*Direção-Geral dos Estabelecimentos Escolares* – DGEstE). Due in part to tight budgets over the past years, the investment in renovating and improving school buildings and equipment at all levels of education has been low. In 2014, Portugal spent only 3.1% of its total public education expenditure on capital expenditure, ahead of only the United Kingdom in the OECD (OECD average: 8.4%) (Figure B6.1 in OECD (2017[9])). Additionally, Portugal spends the smallest proportion of all current expenditures on items other than staff compensation, which would include facility maintenance. Portugal devotes only 5% of its current expenditures at the primary and 8% at the secondary level to non-compensation areas, compared to OECD averages of 22% and 21% respectively (Figure B6.2 in OECD (2017[9])).

Figure 3.13. Proportion of over-subscribed schools by quartile of disadvantage, 2015/16



Note: The figure shows the distribution of the proportion of over-subscribed schools by quartile of an index of socio-economic disadvantage. Over-subscribed schools are those in which the ratio of defined classes to classrooms is greater than 1.05, implying too many classes for the available physical space. The index of socio-economic disadvantage is measured by rank percentile-ordering the proportion of students within a school receiving School Social Assistance A (ASE A) and average years of maternal education at the school level. The average of the 2 ranks was then demeaned (mean = 0) and assigned a standard deviation of 1. High values of the index indicate high levels of socio-economic challenge.
Source: DGEEC administrative data, 2015/16.

PISA 2015 results reflect that Portuguese school buildings and physical infrastructure are in poor condition. Portuguese principals representing 15% of 15-year-old students report that the schools' capacity to provide a sound learning environment is hindered by a lack of physical infrastructure – e.g. building, grounds, heating/cooling, lighting and acoustic systems (OECD, 2016, p. 388[13]). At the time of the review visit in January, the team observed several schools struggling to maintain facilities warm enough for students and teachers. Students and teachers alike attended classes wearing winter coats and sometimes hats and gloves. School administrators shared with the review team that the school either did not have a heating system or that they could only afford minimal utility costs, and so kept the heat low out of necessity. Efforts exist to record the state of facilities and prioritise intervention needs, including the removal of asbestos, yet these have not yet resulted in consistently high-quality school buildings.

ICT resources and services for the general operation of public schools – computers, internet, networking equipment, cloud services, access control system and video surveillance system – are acquired and managed centrally by the DGEEC. In 2007 a major Technological Plan for Education was launched by the central government, aiming at a ratio of 2 students per computer, the availability of high-speed broadband and 90% of teachers being qualified in ICT in all public schools across the country. However, in 2015 PISA surveys of principals recorded an average of only 0.43 computers per student, 5th worst in the OECD (Table II.6.4 in OECD (2016[14])).

The poor state of educational infrastructure conflicts with the ambitious policy goals to expand and intensify schooling, and to modernise and innovate teaching and learning processes. Offering more students full-time schooling from ECEC to upper secondary education and VET requires sufficient school buildings equipped with appropriate

classrooms and spaces for teaching and learning, and facilities such as school cafeterias, toilets, outdoor space and playgrounds of at least basic quality. Students and staff in remote locales are hindered in their ability to participate in distance learning and staff collaboration due to the limited ICT resources. Opportunities for innovative learning strategies, such as blended learning, are limited by the lack of modern digital learning environments and appropriate hardware and software in all schools.

The articulated goals of decentralisation in Portugal do not align with promoting school autonomy and equity in student outcomes

Portugal is in the midst of a clearly outlined comprehensive effort to decentralise. As a result, municipalities will have more discretionary powers to shift non-teaching staff over different school clusters, to influence the state of school buildings and equipment, and to play a greater role in developing extracurricular activities. These operational responsibilities tend to be the most typical kinds of decentralised responsibilities for which municipalities assume responsibility.

Alongside these decentralisation efforts that allocate powers and responsibilities across governmental levels, Portugal is also undertaking efforts to promote school autonomy. However, the kind of school autonomy being favoured in Portugal in practice is fairly circumscribed with respect to *educational* responsibilities. *S*chool autonomy is largely limited to tailoring a part of the national curriculum to the specific needs and interests of its students but does not include broader curricular and pedagogical autonomy or other types of school autonomy such as local responsibility for financial or human resources. At the same time, the major process of school consolidation has created more *operational* responsibilities for school cluster leaders: sometimes managing up to 30 schools, responding to facility problems, engaging with families and the community, supervising greater numbers of students and so on.

Together, these patterns create a risk that both municipal and school-level actors will understand their key autonomies to be related to the operational and management side of educational endeavours. As local levels of government (municipalities and parishes) receive additional authorities over schools, they may hold these responsibilities closely, inhibiting school-level decision-making. Power plays and conflicts in responsibility in education may arise at the local level, with different local authorities crowding out each other's autonomy.

The decentralisation processes in education may also lead to undesired effects with respect to equity in education. During the site visit, different stakeholders expressed to the review team that, despite the broad political and societal support for decentralisation in Portugal, there is a lack of confidence in the governance and management capacities of municipalities, particularly with respect to safeguarding values such as neutrality, sense of due processes, equity and efficiency. Evidence exists that decentralisation damages coherence and exacerbates inequities (Dafflon, 2015[30]; Bullock and Thomas, 1997[31]). Locally fragmented and scattered education policies and decisions may cause losses of coherence and knowledge, which are needed to improve and innovate education. Equity in education can be undermined due to different capacity across the country (Dafflon, 2015[30]). Particularly in Portugal, where strong regional and school-level variation in student outcomes give rise to substantial equity concerns, and where educational disadvantage also is of geographical character, the risk that decentralisation perpetuates, and even reinforces, existing inequity in education is real. Moreover, the traditional weak investments in education from the private sector, civil society and local communities in

Portugal (Ministry of Education, 2018[1]) present an extra challenge to the risks of decentralisation for equity in education.

Challenges remain with the school clustering process

Despite the impressive accomplishment of reducing the number of schools and clustering schools with little public outcry (see below), the process of school clustering has highlighted the importance and challenges of greater school autonomy *in practice*. The large and complex school clusters require an appropriate level of educational governance and leadership capacities, including stronger and more professional school administration than before. This is challenging for small groups of minimally trained school administrators.

A particular challenge the review team noted during their school visits is the large geographic stretch of some clusters. This results in difficult working conditions for teachers and staff as they have to travel across the cluster during the school day. If the school cluster has remote, isolated and poorly accessible schools, and public transport is also limited, travel is difficult and this becomes a threat to the offer of high-quality education. Mega-clusters with a large number of schools at different education levels impose a challenging governance and leadership task for the teams of school leaders and principals, requiring strong and appropriate governance and educational leadership capacities at the cluster level, which is a condition that is not often met.

Further unification and integration is still a challenge in many newly-established school clusters. There are limited system-wide interventions or measures to promote cross-school collaboration within clusters. The lack of cross-school collaboration in many clusters results in the uneven quality of collaboration, planning and joint practice around student trajectories across schools. To be able to take advantage of school autonomies and leverage capacity across many schools, the large and complex school clusters require an appropriate level of educational governance and leadership capacities. There were some cases during school visits in which the review team observed strong practices of local school autonomy. For instance, one school cluster had developed a combination of psychosocial and curricular interventions intended to fight dropout and school failure. It had also developed a relationship with a local higher education institution to provide strategy and professional development support. However, these examples of innovative practices were not observed uniformly across schools.

The potential for further unification and integration of school clusters is dependent on the nature of decentralisation processes and the promotion of school autonomy in Portugal. The current decentralisation measures in education are primarily of an operational nature, focusing on the administrative management of schools, rather than on core educational improvement efforts. Therefore, the influence of municipalities on the local core processes of education remains indirect and limited, and it seems unlikely that municipalities' policies and decisions will directly touch on the primary teaching and learning processes of schooling. Under the current decentralisation conditions, it is thus not very likely that municipalities can engage in the core educational enterprise of schooling at the local level. Moreover, the role of municipalities in education is strongly counterbalanced by the central government that retains responsibility for core matters such as hiring, placement and pay of teachers, responsibility for the curriculum, examinations, selection and tracking policies, and planning of the school network under its jurisdiction.

The challenge with respect to further unification and empowerment of school clusters is to remove the impediments at the school cluster level to design and implement an integrated educational strategy, directed at the quality of teaching and learning processes and educational improvement and innovation. This will require meaningful school-level autonomies, leadership capacity development and responsive, agile municipality actors with clearly distinct responsibilities from school decision-makers.

High levels of variation by background and region in student outcomes

The strong individual, school-level and regional variation in student outcomes in Portugal is suggestive of substantial equity concerns in school quality and effectiveness. Variations in student performance, rates of year repetition and student dropout rates are persistent challenges. As noted in Chapter 1, Portuguese students' performance on international and national exams is tightly linked to their socio-economic background and the extent to which their repetition rates are associated with socio-economic background and gender are well above the OECD average.

Portuguese 15-year-olds with a higher socio-economic status are only 0.65 times as likely to have repeated a year than students from lower socio-economic backgrounds (OECD, 2016[14]). Importantly, the strong influence of students' backgrounds in their likelihood of repetition is true even when students' academic performance on PISA is taken into account. This implies that even when students have the same level of academic skills, they are much more likely to have repeated a year if they are from a socio-economically disadvantaged background. The influence of background on year repetition is significantly higher in only two other OECD countries.

In addition to the common reasons why poverty and the concentration of poverty in a classroom affect student performance, the extensive use of private tutoring in Portugal exacerbates gaps between haves and have-nots. Significant evidence exists that students from low socio-economic backgrounds are exposed to more limited vocabulary as young children (Hart and Risley, 1995[32]), receive fewer educational resources (OECD, 2017[33]) and experience more frequent trauma (Souers and Hall, 2016[34]) than youngsters from more advantaged backgrounds. Additionally, concentrations of poverty in a community or school deprive students of networks with high social capital (Bayer, Ross and Topa, 2008[35]) and expose students to weak or caustic learning environments (Epple, Newlon and Romano, 2002[36]; Sacerdote, 2011[37]; Duncan and Magnuson, 2011[38]; Carrell and Hoekstra, 2010[39]). In Portugal, around 40% of upper secondary students in the general pathway participate in private tutoring, paying up to EUR 200 per month for this support (Costa, Ventura and Neto-Mendes (2003) and Costa et al. (2007) as cited in Ministry of Education (2018[1])), which further exacerbates socio-economic performance gaps.

In addition to socio-economic gaps, it is also more likely for male students to be retained or drop out from schools than female students at all education levels. Just over a fifth of male students in upper secondary education were retained or dropped out from school during as of 2015/16, while only 15% of females have done so (CNE, 2017, pp. 166-175[2]). PISA 2015 estimates suggest gender influences repetition more heavily than in all but one other OECD country (Table II.5.13 in OECD (2016[14])).

Additionally, some immigrant student groups in Portugal experience consistently worse outcomes than native students, though this pattern varies considerably both within and across immigrant groups. Portugal is a particular case concerning the socio-economic status of students with an immigrant background and their school success, running counter to the general patterns observed in other OECD countries. The OECD report on

the *Resilience of Students with an Immigrant Background* (2018[40]) identifies several unique characteristics of the Portuguese immigrant school population:

> *"First, both second-generation immigrants (i.e. those born in Portugal with two foreign-born parents) and native-born students of mixed heritage (i.e. those born in Portugal with one foreign-born parent and one parent who was born in Portugal) are more advantaged, on average, than native students. Second, differences in socio-economic status between native students and first-generation immigrant students (i.e. foreign-born students whose parents are also foreign-born) are not statistically significant. Third, foreign-born students with at least one parent who was born in Portugal are more disadvantaged than native students" (OECD, 2018, p. 160[40])*.

A number of high-skill, high-maternal-education Eastern European immigrants since the 1990s have contributed to another unique characteristic of Portuguese immigrants: there are no significant differences in the socio-economic status of native students and first-generation immigrant students. Nonetheless, Portuguese immigrant 15-year-olds underperform their native-born peers and the extent to which this is explained by their socio-economic status is below the OECD and EU average (Table 6.2 in OECD (2018[40])). As Figure 4.1 of the *Resilience of Students with an Immigrant Background* report highlights, students' country of origin plays an important role in their likelihood of attaining baseline academic proficiency. Unfortunately, too few immigrant students were sampled to report results for immigrants to Portugal. However, Cape Verdean first-generation immigrants to Luxembourg are 34 percentage points less likely to achieve baseline academic proficiency than French first-generation immigrants. Thus, it would be helpful for Portugal to explore the extent to which students from countries representing some of their largest immigrant groups – Brazil (over 12 000 students), Cape Verde (over 6 000 students) and the remainder of the African Portuguese-Speaking Countries (*Países Africanos de Lingua Oficial Portuguesa* – PALOPs) (around 14 000 students) – are experiencing success in school (CNE, 2017[2]).

In addition to the impacts of immigrant status, Portugal struggles to successfully promote the success of its Roma students. Over 48% of Roma students had repeated a year in 2017, and 28.4% had repeated a year more than once. Further, Roma students have annual dropout rates of 5.9%, leaving school before the end of compulsory education in rates substantially above system-wide averages (DGEEC, 2018[41]). An important caveat to the data presented here is that the questionnaire that produced the preceding data relied on a non-representative set of schools' self-reports (69.6% of all schools), but nevertheless captures some of the challenges facing the Roma community that the Portuguese school system has not yet sufficiently addressed.

In Portugal, educational performance is not only related to socio-economic status, gender, and ethnicity or immigrant background but it is also of geographical character (Abrantes, 2013[42]; Marôco, 2017[43]). Figure 1.13 in Chapter 1 highlights regional and school-level differences in 3rd cycle school repetition rates, a pattern that is similar across levels of education. Poverty and deprivation related to geography appear persistent and hard to fight. Low community expectations, negative attitudes toward school and low trust in public service delivery impact students' motivation and expectations towards school and future professional status, which in turn leads to low academic performance, absenteeism, year repetition and school dropout (Abrantes, 2013[42]). Substantial variations in student achievement across regions and schools also exist. Chapter 1 highlights some of these

regional performance differences on international and national assessments (see Figures 1.14 and 1.15 and Table 1.E.1).

Beyond geographic performance constraints, some students find their opportunities limited because of the classroom and academic track in which they study. As noted above Portugal has no system-wide criteria for class formation. Anecdotally during the review visit, stakeholders expressed concerns that classes in basic education were unofficially levelled with all of the strongest students grouped together in a single class. Some attributed this to the powerful voice that high-social-capital families had in directing choices made at the school. The review team is unaware of any study currently underway examining class-based sorting and the impact of peer effects on students, but the Ministry of Education Information System (MISI) data should permit just this sort of analysis. Additionally, stakeholders in some schools visited during the review reported that students in the vocational track in secondary schools did not have access to Portuguese as a Second Language (PNML) courses, despite the fact that a large proportion of non-native Portuguese speakers enrolled in the VET pathway. Finally, the review team learned during their school visits that the lack of fluidity across tracks in upper secondary education incentivises year repetition. The development of transferable skills is especially hindered by the fact that students who begin one specialisation in the sciences-humanities strand and seek to transfer into a different strand receive credit for only some of the courses they have already taken and must repeat different ones to progress towards their diploma, though the curriculum flexibility project may allow secondary students to substitute subjects from one strand into another.

The administration and provision of VET programmes is still fragmented

The public system of VET is offered by different networks of providers, raising some efficiency concerns. Two almost parallel systems – those of IEFP training centres and upper secondary VET – often fulfil overlapping functions. Such organisation leads to similar qualification profiles, with varying intensity of work-based learning and quality of training. The separate governance of these networks, often operating under different regulatory frameworks and overseen by different ministries, hinders the ability to plan the courses that are offered, to decide which courses are to be offered by each provider and to plan the consolidation of provision that leads to low prospects of employment. The Ministry of Education is responsible for regulating the offer of professional programmes in schools. On the other hand, the Ministry of Labour, Solidarity and Social Security co-ordinates, through IEFP, the delivery of apprenticeship courses in certified training centres. Additionally, a network of professional schools under the direction of the Ministry of the Economy offers upper secondary and post-secondary VET. While the continued integration of the vocational offer in comprehensive schools allows for sharing resources across general and vocational tracks, further opportunities remain for VET students in schools to take advantage of the relatively well-resourced network of IEFP training centres (Araújo, 2017[44]). The type of apprenticeship programmes offered through these centres – by requiring a formal agreement between the student and an employer – are more dual in nature and provide opportunities to further engage the private sector. Stronger apprenticeship schemes enable employers to have access to a pool of skilled and potential future employees, particularly in labour markets with strong barriers to entry, such as Portugal (OECD, 2017[33]).

The rationalisation of VET programmes for greater relevance requires effective monitoring and evaluation mechanisms. Portugal has taken considerable steps to develop an evidence-based methodology to steer the provision of VET programmes, particularly

through the introduction of a system for the anticipation of qualification needs (SANQ and as described above). However, the effectiveness of SANQ is still hindered by limited commitment at the political level and lack of human resources with relevant knowledge and experience (OECD, 2018[45]). Data analysis can be further deepened and nuanced. In particular, the full potential of data is insufficiently explored, given the availability individual-level information in upper-secondary education and labour market outcomes. Although current employment data helps regulate the VET offer through the description of employability prospects by field of study, there is no estimation of levels of student demand or labour market outcome for various VET programmes. Insufficient integration of information on students' profiles – through currently existing student-level datasets – in the qualifications assessment exercise limits the ability to anticipate the demand for VET courses and to tailor outreach to specific student groups.

Furthermore, local level horizontal co-ordination is hampered by unequal and low levels of participation by inter-municipal communities (CIM). In fact, at the time of the review, few CIM (4 out of 23) were actively involved in the regional co-ordination module of SANQ. Such uneven commitment of the subcentral level in the definition of priorities raises both equity concerns with respect to capacity and efficiency concerns about the ability to steer the network and share resources at a regional level. Some stakeholders with whom the review spoke with also reported concerns about the low frequency of meetings aimed at defining strategic guidelines for the sector. Nevertheless, some improvements are already apparent, with an additional nine inter-municipal communities expressing commitment to participate in the regional co-ordination module. Finally, despite the online presence of the national VET agency (ANQEP) and the publication of SANQ's results, there is no concerted effort for their widespread dissemination. Skills' anticipation exercises in Portugal often directly feed into specific training policies or public employment programmes, without transparent communication of its outcomes (OECD, 2018[46]).

Too few resources are invested in support of students with moderate Special Educational Needs (SEN)

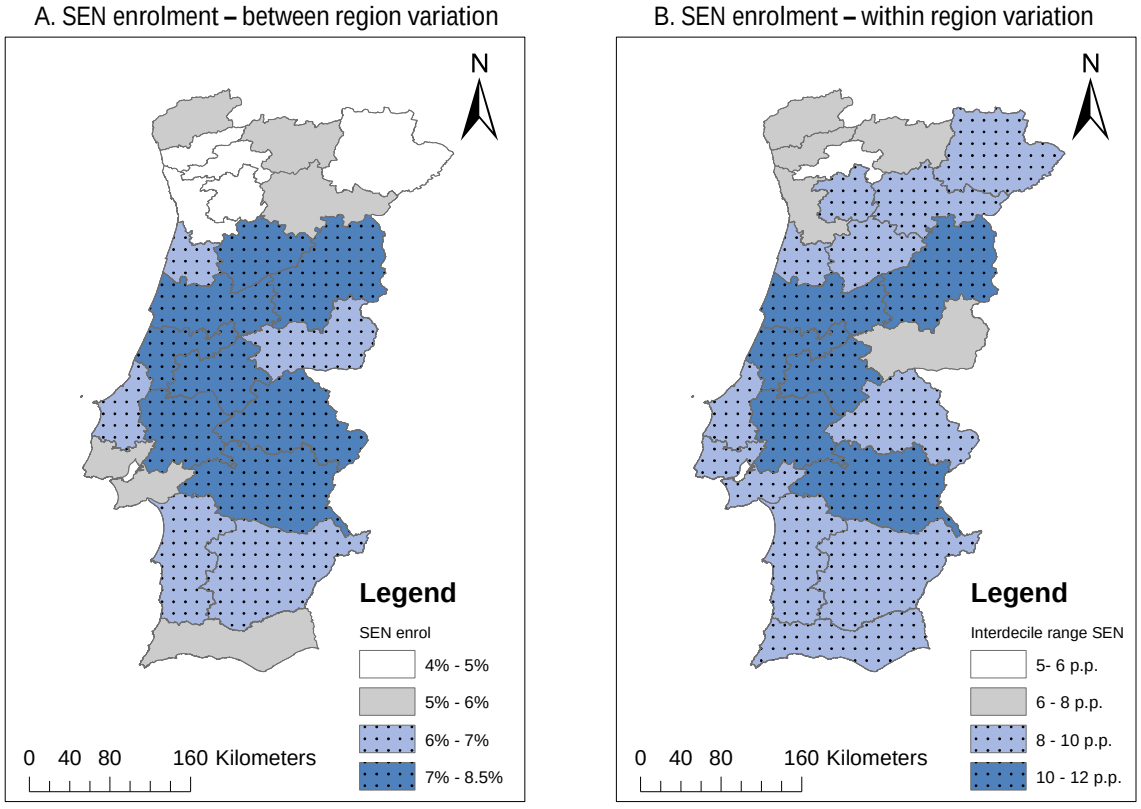
Despite high rates of inclusion, the quality of the education students with SEN receive is hampered by insufficient and inadequate resource investment and teaching skill gaps. Particularly SEN students with moderate disabilities risk being overlooked as there are insufficient resources available to effectively include them. During their initial training, mainstream content teachers are provided with some training and coursework on the academic needs of students with SEN (one course). However, there are no ongoing professional development requirements for teachers to continue to build their skills in teaching students with SEN. Furthermore, during the review team visit, multiple stakeholders reported that minimal supports existed for students with moderate special educational needs, primarily due to the fact that SEN teachers were overburdened with full caseloads and responsibilities for teaching classes of students with severe disabilities. Stakeholders reported frequent failures to implement and monitor the Individual Educational Plans (IEPs) of students with moderate disabilities. Furthermore, class size maximums are lower if a single student with severe SEN is present in a class, but they are not any lower if there are multiple students with severe SEN or only students with mild- or moderate-SEN needs.

Figure 3.6 highlights the increasing rates of SEN identification in Portugal; however, identification rates continue to exhibit cross-regional and school variation. Figure 3.14 presents regional and school-level variation in the rates of identified students with SEN.

While between-region variation in average rates of SEN students only differ by about 4 percentage points, within a region some schools have substantially more students with SEN than others. In 17 of 23 continental NUTS III regions, schools that enrol *more* students with SEN than 90% of other schools in their region have at least 8 percentage points more students with SEN than schools that enrol *fewer* students with SEN than 90% of other schools in their region. These widely varying rates of SEN identification bear further study to understand whether they result from programmatic placement, regional variation in rates of incidence or inconsistent application of evaluation standards. If some students are identified as having SEN because schools have simply not successfully taught them, this robs resources from other students who truly need them (OECD, 2018[19]).

Figure 3.14. Between- and within-region variation in rates of special education identification

By NUTS III region



Note: The interdecile range is the difference between the Special Educational Needs (SEN) enrolment rate for schools in the 90th percentile for SEN enrolment within the region and the SEN enrolment rate for schools in the 10th percentile. For example, in the Metropolitan Area of Lisbon (AML), schools in the 90th percentile for SEN enrolment, have SEN enrolment rates of 10.7%. Schools in the 10th percentile have SEN enrolment rates of 1.9%. Thus, the interdecile range for SEN enrolment in AML is 8.8 percentage points.
Source of administrative boundaries: Direção-Geral do Território (2016), Official Administrative Maps of Portugal - Version 2016 [*Carta Administrativa Oficial de Portugal - Versão 2016*], http://www.dgterritorio.pt/cartografia_e_geodesia/cartografia/carta_administrativa_oficial_de_portugal_caop_/caop__download_/carta_administrativa_oficial_de_portugal___versao_2016/.
Source: DGEEC administrative data, 2015/16.

Furthermore, while the rapid increase in identification of students with special educational needs has been supplemented by an upsurge in the number of certified SEN teachers working in schools, the numbers of special education teachers have been growing at lower rates than the number of identified students. In the 2010/11 school year, there were roughly nine students with special educational needs for each SEN teacher. In the 2016/17 school year, there were roughly 11.4 students with special educational needs for every SEN teacher or an increase of over 2 students per teacher. Crucially, most of the newly hired special education teachers were temporary and part-time, rather than permanent, SEN teachers (DGEEC, 2017[47]).

Policy recommendations

Integrate decentralisation in education and promotion of school autonomy into a comprehensive strategy for effective governance of the education system

The currently proposed decentralisation and school autonomy strategies in Portugal are relatively narrow in scope. The decentralisation measures are primarily of an operational and administrative nature, focusing on more efficient subcentral administration of buildings, equipment, and hiring and allocating non-teaching staff, rather than on core educational improvement efforts. Portugal must review its priorities around decentralisation and school autonomy and determine whether these established priorities are likely to accelerate school improvement outcomes.

The central argument in favour of decentralisation is that it can make government more accountable and responsive to the governed (Faguet, 2014[48]; Bullock and Thomas, 1997[31]). Following this argument, decentralisation in the Portuguese educational system has the potential to improve government service delivery and to reduce inefficiency and bureaucracy as municipalities have better insight in and are more closely linked to schools and local communities. Municipalities and parishes may reduce waiting time, allocate concerned resources more efficiently and effectively, improve selection and hiring processes of non-teaching staff, and maintain and renovate school infrastructure more appropriately. Decentralisation in education may also address specific geographical educational issues and needs, implemented collaboratively by municipalities, schools and community stakeholders.

However, this general assumption that by placing government closer to people, decentralisation fosters greater responsiveness of policy makers to the tastes of individual jurisdictions must be nuanced (Dafflon, 2015[30]). The smaller the local authority, the greater the risk that unrepresentative groups dominate and control local policy- and decision-making to their own benefit. Moreover, issues of coherence, equity and governmental capacities problematise the decentralisation processes.

Decentralisation in education involves much more than delegating responsibilities to municipalities and parishes by regulating legal powers properly and providing appropriate contractual frameworks. Portugal should rather perceive decentralisation in education as shared governance including a balancing act of promoting autonomy in education at the local level and fostering responsiveness to local diversity, and at the same time guaranteeing system-wide education quality, accessibility and equity. Like in many OECD systems, this is a delicate equilibrium that is difficult to achieve given the complexity of the Portuguese education system (Burns, 2016[49]). Portugal should consider integrating its current decentralisation processes in education into a comprehensive strategy for effective governance and embrace the challenge to shift its

current legalistic approach with a focus on governance structures to a more systemic approach focusing on processes and governance culture.

Portugal could explore various alternative governance structures. For instance, the education system could take advantage of its strong central decision-making powers, retain control of educational issues at the central level and work to promote system-wide steering strategies with a particular emphasis on promoting equity. The substantial equity concerns in Portugal represent a strong argument to keep the responsibility for the curriculum, examinations, selection and tracking policies, and planning of the school network under the jurisdiction of the central government. In order to mitigate the risks of inequality of opportunity in education and fight school failure, Portugal could improve its central steering policies by integrating and aligning them better and improve policy making by means of a robust knowledge infrastructure and sound policy evaluations (see recommendations in Chapter 2). The possibility to allocate higher skilled and/or more experienced teachers, specialised to serve struggling students, to under-resourced communities (see recommendations in Chapter 4) could justify keeping the responsibility of selection, hiring and pay of teachers under the jurisdiction of central government. In addition, Portugal might consider *re*-centralising and bringing the selection, hiring and pay of non-teaching staff with instructional and socio-emotional responsibilities (teaching assistants, psychologists, laboratory assistants, etc.) back under the jurisdiction of central government, because instructional and student support staff matter for good quality education and improvement and innovation, especially if they collaborate and jointly focus on core educational goals in practice. In parallel, Portugal could prioritise school cluster autonomy over budget, pedagogical innovation and strategic planning. The nature and degree of school cluster autonomy could be aligned with, but not overlapping, with the powers of central government in education.

On the other hand, Portugal could devolve most operational and instructional responsibilities to the municipal and school levels. It would need to articulate a clear division of responsibilities between actors such that municipalities and/or parishes were not tempted to infringe on the educational autonomies of schools. One sensible division would be to assign municipalities responsibility for all operational matters, including non-teaching staff responsible for operational management (security, cleaning, food services, etc.). Schools would then be granted further control over all resources (financial and human) which contribute directly towards student learning and development. The central government role would be to support municipalities and schools with capacity building efforts, with a particular eye towards assisting schools and communities in which weak governance and leadership skills had been identified. Other blends of such approaches could potentially be successful.

Key to the success of decentralisation will be that all governance structures are aligned. So far, this kind of alignment is at odds with the current decentralisation and autonomy approaches which appear muddled and conflictual.

A strategy in line with such a systemic approach should include four elements (Burns, 2016, p. 229[49]), described below and applied to the case of Portugal:

1. Stakeholder involvement and ownership of agreed goals and principles.

   As Portugal is in the midst of a double process of delegation of responsibility to subcentral authorities and the enhancement of school-level autonomy, this first element of involving different stakeholders seems particularly relevant (see Box 3.3). The traditional weak investment in education from the private sector,

civil society and the local communities (described above) requires special efforts to involve external local stakeholders. At the same time, involving internal stakeholders such as school principals and deputies is critical.

2. A whole-of-system vision that keeps the focus on processes and is flexible enough to adapt to change and unexpected events.

   This second element is of importance for Portugal due to the challenges associated with the shifting demand for school places and its contradictory trends (see above).

3. Alignment of roles and responsibilities across the system as well as a way to address any potential conflict or overlap.

   This is critical given the discussion in the preceding paragraphs.

4. The ability to identify needs and develop capacity in a realistic and timely manner, based on a system vision and informed by research evidence.

   This last element is also highly relevant to Portugal, as adequate and sufficient levels of educational governance and leadership capacities are still lacking at both the municipal level and the school cluster level. Moreover, a firm knowledge infrastructure including data and policy-evaluation, accessible to support administrators and professionals at the local levels and school clusters is lacking. Knowledge plays an important role in capacity building: directly, as input, instruments or resources as well as indirectly, the "knowledge capital" of actors in and around (Burns, 2016, p. 34[49]) (see also Chapter 2).

Leverage school autonomy to improve the educational capacity of school clusters

Whether decentralisation and school autonomy are meaningfully realised and how they become linked to educational strategies for school improvement and lifting student achievement largely depend on the educational governance and leadership capacities in school clusters.

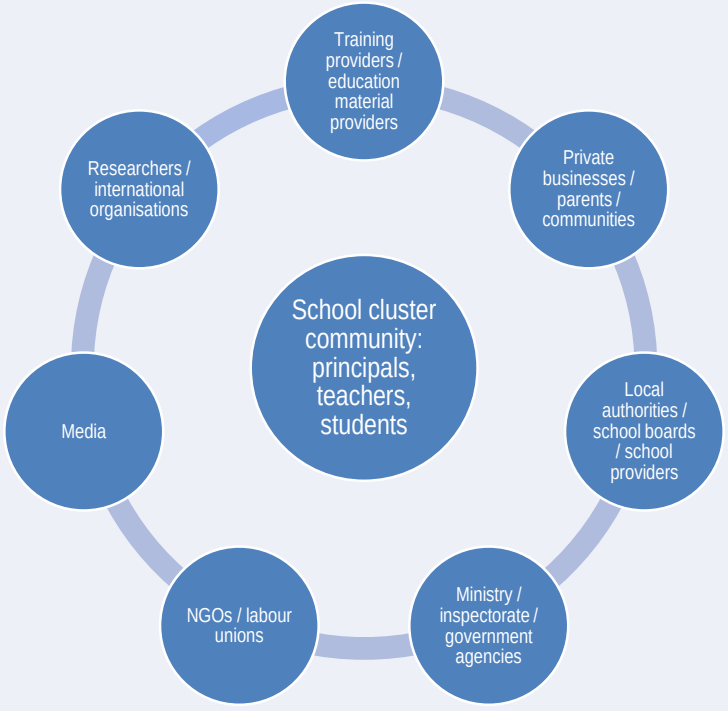
The review team observed great variation in leadership capacities within school clusters. At some school clusters, the principal, school leaders, co-ordinators and others involved in school governance develop a clear vision on teaching and learning and an overarching strategy for achieving quality education and school success in collaboration and consultation with teaching and non-teaching staff, students and parents. Importantly, they appear to be able to implement this vision. At these school clusters, the review team noticed maximal deployment of granted autonomy and decision-making powers and an attitude of social entrepreneurship. In contrast, other school clusters demonstrated a rather bureaucratic and legalistic attitude towards school governance and leadership. Here, principals, school leaders, co-ordinators and others involved in school governance operated merely according to the legal framework but did not use the available autonomies effectively. At these school clusters, legislation is often interpreted in terms of limitations instead of opportunities, capacity to make use of curricular and pedagogical autonomy is lacking and governance and leadership do not constitute a lever for quality education. Chapter 4 expands on these observations with system-wide data and a focus on the development of individual professional capacity. In addition to the need to invest in generalised leadership competencies outlined in Chapter 4, this section highlights the

structures necessary to promote school autonomy, which requires particular leadership traits and supports.

Box 3.3. Stakeholder involvement in education

Like in many other OECD countries, government actors in Portugal are not necessarily at the centre in educational policy- and decision-making anymore. Processes of decentralisation and promoting school autonomy make different internal and external stakeholders of schools more important, turning education from a "state-government enterprise" into multi-actor governance processes. Many actors such as the local communities, media, parents, researchers, school boards, NGOs, training providers, etc. all are potentially relevant stakeholders to school clusters.

Figure 3.15. Potential stakeholders in education



Source: Burns, T. (2016), *Education Governance in Action: Lessons from Case Studies*, OECD Publishing, Paris.

Box 3.4 displays characteristics of high-performing school districts in Ontario. Comparing school districts with school clusters, the example of Canadian school districts provides valuable insights for building educational governance and leadership capacity in Portuguese school clusters.

Box 3.4. Taking advantage of autonomy in Ontario, Canada

Syntheses of evidence about school system conditions contributing to improved student learning in the Canadian state of Ontario have led to the identification of actions that maximise the benefits of local control to generate system-level improvements.

The 9 practices of successful local autonomy

1. Establish broadly shared mission, vision and goals.
2. Provide coherent instructional guidance.
3. Build capacities and skill to seek out and use multiple sources of evidence to inform decisions.
4. Create learning-oriented organisational improvement processes.
5. Provide job-embedded professional development.
6. Align budgets, personnel policies/procedures and uses of time with mission, vision and goals.
7. Use a comprehensive performance management system for leadership development.
8. Advocate for and support a policy-governance approach to local governing boards (equivalent to Portuguese General Councils).
9. Nurture productive working relationships with staff and stakeholders.

Source: Leithwood, K. and C. McCullough (2016), *Leading High-Performing School Districts*, Education Canada.

Continue efforts to rationalise the school network, while preserving support for unique schools meeting the needs of under-served populations

Portugal must address the heterogeneous needs for school places in the near future and formulate a sophisticated strategy, meeting the strong demand for new school places in some locations and anticipating a much lower and more scattered demand for school places in others. A system-wide and differentiated strategy to provide schooling places is needed to address this complex and varied demand. While rationalising the school network, Portugal should consider additional investment in schools providing high-quality schooling for unique populations, particularly because many under-served populations in Portugal live in poor, remote areas. For instance, the process for de-funding government-dependent private schools takes into account the location and capacity of public schools in the region, the school infrastructure and transportation services but, crucially, does not consider specialised need or school performance. Therefore, Portugal must shift away from a unified, one-size-fits-all approach and take a diversified, tailor-made and situational approach in the provision of schooling options. In particular, the consolidation process, which disproportionately affects remote, poor and under-served areas, should consider multiple criteria for the decision of closing down or de-funding schools that meet particular needs.

Relatedly, Portugal should consider setting the class size minima for opening a class higher than the class size minima for closing a class. The current regulations set these at the same level, which creates inherent instability if students transfer during the year. Once a class has been opened, it should remain so unless the enrolment drops so low as to make it educationally unsustainable.

Tackle between-school segregation through complementary policies

Between-school segregation in Portugal is persistent and substantial. Worldwide, structural factors such as neighbourhood segregation and long-standing and/or informal school admission policies appear to be main drivers of segregation of students between schools. Between-school segregation mirrors persistent and ingrained social phenomena, which require innovative policies and measures to tackle them. As discussed, new from 2018/19, the official residence (rather than the declared one), and receipt of income support, will be taken into account to assign students to schools in Portugal.

Multiple strategies are employed internationally to promote integration and inclusion in education systems, with varying degrees of success and sustainability. Examples include: re-drawing of school catchment areas to include more diversity in the neighbourhoods they encompass, revising school assignment policies to deprioritise proximity of residence to school as the dominant factor in placement decisions, offering increased choice to families between public schools with complementary educational and informational campaigns to empower all families to make best choices, establishing controlled choice systems that offer expanded choice only when selecting a school other than students "home school" will contribute to increasing between-school diversity, or the siting of schools with unique profiles (e.g. "magnet schools" offering unique curriculum, arts focus, or other specialised offer) in low-income neighbourhoods (OECD, 2018[19]). Box 3.5 contrasts the first two approaches, one of which attempts to ensure integrated settings, while the other attempts to preserve choice while promoting integration. While considering whether Portugal can learn from these policies and measures and potentially adopt them, it should always be kept in mind that "good policies travel badly" (Harris, 2012[50]). Careful and accurate translation to the Portuguese context is essential.

Box 3.5. Student assignment policies to reduce segregation

Many school systems struggle with problems of segregation, both between- and within-schools, along various dimensions: socio-economic, language, immigrant status, race, ethnicity and more. Most OECD school systems use place of residence as the primary mechanism by which to assign the majority of students to schools. Given high rates of residential segregation, systems interested in breaking patterns of school segregation must explore strategies that deprioritise place of residence. Two primary models in existence are: i) to mandatorily assign students to a location remote from their residence; or ii) to allow families to choose schools other than the closest one, but to constrain that choice in a manner that promotes integration. Each approach has strengths and weaknesses.

Mandated, non-residential assignment

Mandatory assignment to schools other than ones closest to students' home first came to prominence in the United States as a response to government-sanctioned segregation of black students (*Swann v. Charlotte Mecklenburg Bd. of Ed.* (1971) 401 U.S. 1.). Court

orders required students to be bussed to schools outside their neighbourhoods. In some cases, predominantly black and white schools were paired and students attended the first years of an educational level at one school and then transitioned together to the paired school, ensuring both communities would bear portions of the commuting burden. These desegregation efforts resulted in improved academic and life outcomes for black students (Guryan, 2004[51]; Johnson, 2015[52]), but were met with intense political resistance and faded out in the 1990s and 2000s, resulting in increased segregation (Reardon et al., 2012[53]) and declining academic outcomes (Liebowitz, 2018[54]).

Controlled choice

In other contexts, particularly where a rich tradition of private schooling and family choice exist, policy makers who recognise that segregation can be exacerbated in the context of school choice, have instituted strategies to preserve elements of choice while promoting integration. They have constrained school choice such that families whose school choice decisions improve integration are prioritised over others' choices. In the Flemish Community of Belgium, officials cognizant of the segregating effects of choice instituted new student assignment rules in 2013 that gave priority to certain places in oversubscribed schools to both disadvantaged and non-disadvantaged schools, in proportion to the socio-economic composition of each school's neighbourhood (Nusche et al., 2015[55]). Preliminary evidence indicates this approach reduced segregation (OECD, 2015[56]), but not as much as mandatory assignment policies.

Sources: *Swann v. Charlotte Mecklenburg Board of Education.* (1971). 401 U.S. 1.; Guryan, J. (2004), "Desegregation and black dropout rates", *American Economic Review*, Vol. 94/4, http://dx.doi.org/10.1257/0002828042002679, pp. 919-943; Johnson, R. (2015), "Long-run impacts of school desegregation and school quality on adult attainments", *NBER Working Paper*, No. 16664, http://www.nber.org/papers/w16664; Reardon, S. et al. (2012), "Brown Fades: The End of Court-Ordered School Desegregation and the Resegregation of American Public Schools", *Journal of Policy Analysis and Management*, Vol. 31/4, pp. 876-904, http://dx.doi.org/10.1002/pam.21649; Liebowitz, D. (2018), "Ending to what end? The impact of the termination of court-desegregation orders on residential segregation and school dropout rates", *Educational Evaluation and Policy Analysis*, Vol. 40/1, pp. 103-128, http://dx.doi.org/10.3102/0162373717725804; Nusche, D. et al. (2015), *OECD Reviews of School Resources: Flemish Community of Belgium 2015*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264247598-en.

Focus on improving the quality of learning for struggling students, rather than simply adding more teaching time

The longstanding tradition, and relatively high degree, of year repetition in Portugal reflects culturally-ingrained and strong societal beliefs about the benefits of simply adding more teaching time. The ways current strategies and programmes for addressing students' struggles in school such as Priority Educational Intervention Areas (*Territórios Educativos de Intervenção Prioritária* – TEIP) and National Programme to Promote School Success (*Programa Nacional de Promoção do Sucesso Escolar* – PNPSE) are translated into practice frequently mirror this tradition of, and belief in, the benefits of augmenting teaching time. As part of school success strategies and programmes, schools frequently provide students with extra instruction, tutorials and support in small groups inside or outside the classroom. But these approaches do not address the relevance and effectiveness of the extra instructional time. They beg the question: "If it did not work the first time, would more of the same result in different outcomes?". This is particularly true if the additional instruction or personalised tutoring does not present the information in different ways (Chapter 4 presents evidence on the kind of personalised learning/tutoring

shown to generate significant learning gains). Furthermore, the overwhelming evidence on the negative effects of year repetition, not only on academic achievement but also on students' attitudes and behaviour towards school (OECD, 2018[19]), challenges the Portuguese education system to move away from simply adding more teacher instruction time.

Portugal should consider promoting the implementation of schoolwide projects and interventions that are evidence-informed and tailor-made to the specific local situation of the school. The OECD report on *Responsive School Systems: Connecting Facilities, Sectors and Programmes for Student Success* (2018[19]) reviews the evidence on strategies to support students struggling to progress. Portugal should reflect on whether strategies such as smaller classes, more instructional assistants, dividing classes into levelled groups, extra Portuguese and mathematics classes and others that involve more time or fewer students per teacher are the most effective. The following approaches have the best evidence on their positive impacts with struggling learners:

- Investigate and evaluate the reasons why, and with what, students struggle and design deliberate educational strategies aligned with the needs, motivation and talents of students (McAdams, 2006[57]; Marzano, 2004[58]; Bruckere, Kirschner and Hulshof, 2015[59]; Wojcicki, 2015[60]).
- Provide appropriate teacher training and support to improve the quality and not just the quantity of instruction (see Chapter 4).
- Invest in student counselling, including behavioural insights, to orient students to second-chance education, accelerated education, post-secondary education and the labour market (OECD, 2018[19]).
- Prepare clear, external criteria, involving cognitive and non-cognitive factors to determine the appropriateness of a student for year repetition; limiting repetition to a module, subject area or failed course in secondary schooling (OECD, 2018[19]).
- Continue improving early-warning data systems to identify students at risk of failure and assign trained staff to intervene with support early (OECD, 2018[19]).

Some Portuguese schools have effectively translated policy priorities around innovative instructional practices, teacher collaboration and ongoing professional practice learning to effectively utilise the additional TEIP resources, European-funded professional development or curricular autonomies to innovate their interventions for struggling students. National authorities should identify examples of schools of best practice and use networks of learning to spread these success stories.

Reduce fragmentation of governance and operation of the VET network

Portugal should consider rationalising the double offer across vocational programmes provided in comprehensive or professional schools and apprenticeship programmes provided in IEFP training centres. Reducing fragmentation of VET provision requires a thorough evaluation of available resources and the potential for sharing agreements across providers. For instance, economies may be obtained by systematically organising specialised training in IEFP training centres close to schools. Increased efficiencies could be also leveraged through closing less successful VET programmes. Freed resources could be allocated to reinforce the quality of human and physical resources of the remaining providers.

While SANQ has gradually permitted data-informed steering of the existing offer, greater efforts should be made to make provision more efficient. Given the fragmented governance of VET, Portugal should reflect on giving the National Agency for Qualification and VET (ANQEP) greater legitimacy to develop inter-ministerial policy. In particular, it can capitalise on the agency's capacity to co-ordinate across education and labour market stakeholders to develop a strategic vision for the sector. Developing the technical capacity to estimate the costs and benefits of offering each strand of VET courses across different networks of providers is a key first step. Whereas responsibility is granted to regulate the offer, no oversight is granted for resource allocation. In order to attain efficiency gains, Portugal should further align the authorities of network planning with those of resource distribution. The misalignment is particularly evident for the case of the offer dependent on European funds. Current legislation does not facilitate an effective co-ordination between agencies such as PO CH – responsible for distributing European monies – and ANQEP. For example, the co-ordinating council of PO CH is required to have only 1 representative from ANQEP, among more than 30 different stakeholders (Dispatch 2906-A/2015). Increasing the participation of the agency in decision-making processes would allow a distribution of school resources further grounded on evidence of current and future network needs.

Another major challenge in the organisation of the VET network relates to the insufficient participation of regional actors. While current legislation envisages the involvement of inter-municipal communities (CIMs) in ranking priorities and planning the network at the regional-level, only 13 of 23 CIMs are currently engaged or planning to engage in the process. In order to increase participation and improve vertical co-ordination, Portugal should build more binding and effective contracts to signal the costs of not participating in the regional co-ordination module of SANQ. Moreover, it can leverage agreements across different upper-secondary VET providers by relying on the potential of Qualifica centres to foster horizontal co-ordination. While the focus of the Qualifica Programme is on adult education, the territorial outreach of its centres can be further used to engage schools with nationally defined strategies for VET and sharing learning resources. Qualifica centres could thus be used to optimise the use of specialised equipment and facilities across comprehensive schools, professional schools and IEFP training centres.

Finally, sector leaders can continue improving the capacity of SANQ to guide policy and better inform students. Alongside the legitimacy of ANQEP to steer the network, the relevance of SANQ can be further developed. Consider endowing ANQEP with additional capacity to produce more sophisticated anticipation exercises. Incentives to involve universities and research centres in the continuous improvement of the methods and the incorporation of international best practices would be helpful for this purpose. The improvement of SANQ's methodology will generate more robust evidence to assess the value of each VET programme. As part of the strategy to promote system learning, links across datasets administered by different ministries can be developed and made available to researchers, according to best practices of data protection. More efforts can be made to rigorously estimate the economic impact of shifts in the demand for and supply of skills, better informing policy making and public debate. Such evidence could effectively feed a communication strategy on the value of VET, tailored to the profiles of different students. SANQ already has sufficient capacity to combine local labour market data and skills needs to better inform school-level services of psychology and counselling (SPOs) on available fields of study and local employment trends. Finally, given its national outreach, SANQ could be expanded to help regulate the offer of adult learning courses in schools, defining a long-term strategy for the sector (OECD, 2018[19]).

Develop a differentiated profile of VET, while pursuing the strategy of integration within secondary schools

The expansion of provision of VET in upper secondary schools has helped to increase enrolment in the sector. However, the rapid growth in non-specialist schools merits greater attention with regards to its effectiveness. While convergence with European monitoring mechanisms (EQAVET) has gradually allayed concerns about the quality of such provision, stakeholders in the VET sector have insisted on a more thorough evaluation of this type of offer. The effectiveness of VET depends on the consideration of what are the benefits of offering VET in comprehensive schools vis-à-vis offering it in dedicated professional schools. Transparent assessments of graduation rates, employability prospects and participation in the further education of VET students across comprehensive and professional schools should be regularly performed and made available so that strategic priorities regarding the organisation of the vocational offer are based on rigorous cost-benefit analyses (OECD, 2018[19]). Importantly, stakeholders in Portugal continue to stress the low status of VET as a pathway to success. Improving the status of VET may crucially depend on a combination of different strategies.

First, Portugal should consider facilitating transitions across programmes. Portugal has been taking steps in this direction. Indeed, integrating VET in comprehensive schools can increase the fluidity in transitions across and within general and vocational tracks. Increased opportunities for transition would serve to reduce perceptions of the VET pathway as a dead-end track. However, the current organisation of the upper secondary offer hinders such transitions. Students who wish to change tracks during their upper secondary studies often have to halt progression and re-sit previous school years. Allowing students to move easily across tracks can help reduce repetition. Information and guidance for students not only in the transition from 3rd cycle to upper secondary education but also throughout the duration of upper secondary studies, can help students more easily achieve their potential (OECD, 2018[19]). As detailed above, through the curriculum flexibility project, students in upper secondary will, starting in 2018/19, be allowed to receive credit for some courses even when they transition across general education pathways. These efforts should be sustained and expanded.

Second, the organisation of the school offer should also facilitate transitions of VET students to post-secondary education, in particular, tertiary education. While the simultaneous recognition of academic and vocational skills known as double certification is a step towards an improved status, more opportunities should be provided for VET students to progress into higher levels of education. The current tertiary education access regime is traditionally oriented towards students from the sciences and humanities track. A recent study shows that only 6% of graduates from professional courses in 2013/14 were enrolled in higher education 1 year after graduation, including tertiary education courses in polytechnic universities, typically geared towards vocational studies. Likewise, only 10% of graduates from professional programmes access short-cycle tertiary education (ISCED level 5) courses (*Cursos Técnicos Superiors Profissionais* – CTeSP), even though these courses have different admission standards than university or polytechnic offerings (DGEEC, 2016[61]).

A possible way to increase participation in higher education could be by creating specific access pathways – based on alternative criteria – for students coming from vocational programmes in upper secondary education (OECD, 2018[19]). Such pathways could, at least in the short term, help VET build a differentiated profile and increase enrolment of highly motivated students. Alternatively, the OECD *Review of the Higher Education,*

Research and Innovation System in Portugal (Forthcoming[62]) – in line with assessments from national entities – notes that the existing regime of entrance examinations could be modified, by re-structuring the contents of access examinations in two parts: a general component and a component of modules specific to each type of upper secondary education offer. In particular, entrance examinations should be designed to include modules aligned with VET curricula. As the *Review of Higher Education* notes, simultaneously improving secondary VET students' skills and the quality of higher education support will be critical to increase access and success (OECD, Forthcoming[62]). Higher education institutions and VET sector leaders can collaborate to identify VET graduates' skill and knowledge gaps and take steps to improve the transition by improving VET programmatic curriculum and providing supports and transitional courses in higher education.

Third, strong VET sectors crucially depend on the engagement of employers and the provision of work-based learning. A stronger work-based learning component should not preclude solid general skills to be built into the programmes (OECD, 2018[19]). Effective work-based learning depends on the effective balance between the skills attained in the context of work and those in the classroom (Kis, 2016[63]; Araújo, 2017[44]). While professional programmes in Portugal offer some type of pre-graduation work experience, the amount of hours spent in the work context is still below international practice. In order to foster connections with the labour market, VET sector leaders should reflect on the best way to incentivise companies to participate in apprenticeship schemes that go beyond the programmes offered in IEFP training centres. Apprenticeship programmes that incentivise companies to offer relevant training opportunities for students in upper secondary schools, by also allowing them to benefit from the investment in human capital, would be helpful. Potential strategies may include developing more formal agreements between employers and apprentices through the payment of an apprenticeship wage while maintaining non-binding conditions between the parties. However, financial incentives should be also tailored to different occupations and sectors, and according to firms' size. Defining different apprentice minimum wages and subsidies across sectors could be an option. Alongside financial stimuli, non-financial incentives should not be underestimated. In particular, the duration of the training programme and the timing of the school-based and work-based components still affect the ability of firms to offer additional and better training opportunities, independently of public financial support (Mühlemann, 2016[64]). In order to do this, effective evaluation mechanisms to determine the appropriate duration of each of these components based on evidence rather than on administrative discretion are key.

Finally, system actors must act to ensure that students are not funnelled into VET programming simply because they are struggling in school or because they come from a disadvantaged background. The incentives are poorly aligned for secondary schools that offer both regular and vocational pathways. Students in VET pathways do not typically take the national examinations in Year 12. If a student is struggling in school and is likely to score poorly on the national assessment, there is a strong incentive to encourage him or her into the VET pathway so as to avoid that student's mark contributing negatively to the schoolwide average. This concern was voiced by several stakeholders during the review visit and is a common phenomenon in other OECD countries, known as "waterfalling" due to students dropping down to an easier track when they struggle in a more rigorous one (OECD, 2018[19]). Clear screening processes, strong counselling services and most importantly supportive interventions to prevent school failure are key strategies to counteract this (OECD, 2018[19]). Additionally, Portugal should investigate whether the

over-representation of socio-economically disadvantaged students in the vocational pathway results in constrained life opportunities for these students. In addition to labour market outcome analyses, Portugal could consider exploring Dutch models of guaranteeing access to higher education for students who have successfully completed secondary education, whether in the VET or general pathway (OECD, 2018[19]).

Build capacity and increase staff support for the mainstreaming of moderate-needs special education students

Portugal must support its teachers to better meet the needs of moderate-needs special education students through increased training and staffing. Currently, while special educational needs teachers receive extensive training in supporting the needs of SEN students, subject-area teachers have no requirements beyond their initial training to pursue expertise in this area. Subject-area teachers, as well as special needs teachers, can grow their skills in differentiating classroom content for all students. Mandating ongoing, job-embedded training with staff from resource centres for inclusion (CRIs) providing technical capacity building could be an effective strategy. See Chapter 4 for more strategies to support widespread, ongoing professional development efforts. In addition to training teachers on classroom instruction, Portugal should evaluate the reasons behind wide regional and school variation in special education identification rates. Should this prove to be due to different knowledge bases and assumptions made at the local level, instituting common standards, personnel and quality training for the evaluation process could prove effective at standardising the evaluation process (OECD, 2018[19]).

Finally, Portugal must invest additional resources in the form of special education teachers to support students in mainstream classrooms. A key premise in the inclusion of students with SEN in the mainstream classroom, in addition to its ethical justification, is that they will benefit from positive learning models. However, as TALIS data indicates, inclusion has proved to be a challenge in many contexts (OECD, 2018[19]). It requires thoughtful planning and intensive supports. Portugal comes to this challenge from a place of advantage as it spends almost no resources on segregated education settings. However, to realise the promise of inclusion, the Portuguese education system needs to ensure that all students who have Individualised Education Plans (IEPs) that call for additional support within reading or mathematics classrooms, in fact, receive these supports.

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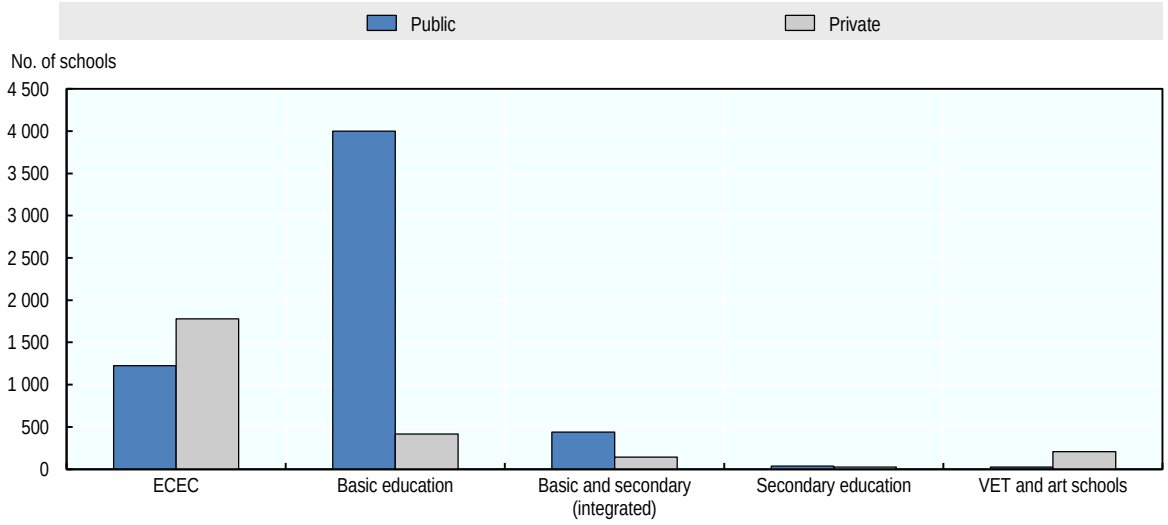
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Annex 3.A. Private and public schools

Annex Figure 3.A.1. Number of pre-schools and schools by type of provision, 2015/16



Source: CNE (2017), *Estado da Educação 2016 [State of Education 2016]*, http://www.cnedu.pt/content/edicoes/estado_da_educacao/CNE-EE2016_web_final.pdf, pp. 45-49.

Chapter 4. The distribution and development of human resources in Portugal

This chapter reviews staffing levels, teacher and school leader initial training, the distribution of teachers, their working conditions and opportunities for educator growth and development over the course of their careers in the Portuguese school system. Portuguese teachers are experienced, have solid instructional practices and benefit from formal opportunities to exert leadership in their schools. However, despite relatively generous compensation packages, Portuguese teachers do not feel valued in society. Their pre-service training is of insufficient quality in practical classroom skills and they have few formalised opportunities to develop their skills once in their positions. Furthermore, the process for assignment of teachers to schools creates significant instability in the system and hinders early career teachers' ability to systematically develop their skills to be suited to the specific contexts in which they work. The instability created by the teacher assignment process and the weak match between schools' needs and teachers' interests and skills affect schools serving under-resourced communities most, raising significant equity concerns. The chapter concludes with a number of policy recommendations to address these challenges.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Context and features

School staffing levels and demographics

The vast majority of the Portuguese primary and secondary education budget is devoted to teaching salaries. With 95% and 92% of the annual operating budget at the primary and secondary educational levels respectively devoted to staff compensation, Portugal dedicates a larger proportion of its current expenditure on human resources than any other OECD country (OECD average: 78%) (see 0, Figure 4.A.1). The investment is distributed between teachers (82% and 79% at primary and secondary levels) and non-teaching staff (13% at both levels).

This intensive investment in teaching resources results in a student-teacher ratio of 10 students per teacher in 2015 in public upper secondary schools, the second lowest student-teacher ratio in the OECD (see 0, Figure 4.B.1). In fact, Portuguese administrative data indicates that the system-wide student-teacher ratio in public schools at all levels is just over 10-to-1. Though the average student-teacher ratio is quite low, due to significant non-teaching time in teachers' schedules the average class size in both primary and lower secondary education are nearly identical to OECD averages at 21 and 23 respectively (Figure D2.1 in OECD (2017[1])).

Teaching in Portugal, like most other OECD countries, is a predominantly female profession. 80% of primary and 70% of secondary teachers were women in 2015 (OECD average: 83% primary and 64% secondary) (Figure D5.2 in OECD (2017[1])). However, younger cohorts of teachers reflect a greater degree of gender balance. In 2015, 74% of teachers over the age of 49 were female, whereas only 66% of teachers under the age of 30 were female (Figure D5.3 in OECD (2017[1])). Despite shifting gender profiles in younger cohorts, the profession remains predominantly female as the vast majority of Portuguese teachers are from older age cohorts.

The typical Portuguese teacher is in her upper-forties. The median public school teacher is 46 years old in the 1st cycle, 49 in the 2nd cycle and 48 in the 3rd cycle and upper secondary schools (DGEEC, 2017[2]). While these figures represent substantial ageing in the Portuguese teaching population over the past 15 years, Portuguese teachers' older profile is similar to the pattern across Europe and only marginally higher than the OECD average (Figure D5.1 in OECD (2017[1])). Most concerning for future planning, however, is that in 2015/16 only around 1% of all Portuguese primary and secondary teachers were under 30 years of age (Ministry of Education, 2018[3]).

Teachers have multiple opportunities to assume leadership opportunities in schools, while continuing to teach some classes; thus, there are many teaching staff in schools teaching a reduced course load while serving as 1st cycle department heads, department head teachers (2nd, 3rd and secondary cycles), school co-ordinators, assistant principals and vice principals. Demographic details on these positions are not systematically reported; thus, it is difficult to describe the profile of these mid-level school leaders.

The school cluster principal (*Diretor*) is elected to a term of four years. Portugal counted 811 of them employed in 2015/16 for each of its non-clustered public schools and school clusters. In 2015/16, 43% of Portuguese school principals were female, well below their prevalence in the teaching ranks, and their average age was 53 years old, with 73% over 50 years old (Ministry of Education, 2018[3]).

All school clusters have a psychology and student counselling office (*serviços de psicologia e orientação* – SPO), with a defined staffing level. Psychology staff are active

in three domains: i) psychological and pedagogical support to students and teachers; ii) support for the development of the pedagogical-educational community in the school cluster and iii) career counselling. However, at the time of writing, in all regions the student to psychologist ratio remains extremely high, ranging from 1 000 to 1 500 students per psychologist (CNE, 2017, p. 100[4]).

Additionally, there are substantial numbers of auxiliary support staff employed by schools, known collectively as operational assistants (*assistente operacional*) and technical assistants (*assistente técnico*). These employees have responsibilities ranging from performing office administrative tasks to supervising students during non-instructional periods in the cafeteria, recess and hallways, to serving as student engagement staff by de-escalating and re-integrating disruptive students into class, to assisting with laboratory experiments. Five technical assistants are assigned when enrolled pupils total less than 300, with an additional assistant added for every 200 additional students up to 1 100, and then an additional assistant added for every 300 additional students. Operational assistants are assigned using a formula weighting need and complexity of the facility and services. The baseline assignment is 6 operational assistants, with an additional assistant assigned for every 120 students for enrolments between 600 and 1 000 and an extra assistant for every 150 students above 1 000. Additional assistants are assigned for a wide range of other reasons (sports and play facilities, building type, vocational courses, specialised support units, multi-shift or evening schedules, special education students and more) (Ordinance No. 272-A (2017[5])). In the most recent academic year (2017/18), there were 50 712 non-teaching staff employed, an increase of almost 5 000 compared to the previous year (this is partly explained by a change in legislation).

System for pre-service education

Portuguese schools require high levels of qualification to enter the teaching profession. As of 2014, all Portuguese teachers, from pre-school to secondary education must hold a master's (ISCED level 7) degree. Teachers must first earn a bachelor's (ISCED level 6) degree either in education (to teach in pre-school, 1st or 2nd cycle primary education) or in a specific subject (to teach in the 3rd cycle and upper secondary education), followed by a master's degree in education. The purpose of this second degree is to extend academic training in the knowledge areas of the particular subject for which the candidate is preparing. It also purports to provide pedagogical content knowledge, training in cultural, social and ethical areas and culminates in a supervised practicum (Ministry of Education, 2018[3]).

Supervised student teaching occurs in "host schools" under the supervision of a practising teacher and a supervising professor. The particular higher education institution (inclusive of both universities and polytechnic institutes) is responsible for developing a partnership with a local school to host intern teachers. Teacher education programmes, like all higher education institutions, are accredited by the Agency for Assessment and Accreditation of Higher Education (A3ES).

One recently introduced component of pre-service training includes a required course for all prospective teachers in pedagogies to support the learning needs of students with SEN, though these courses have not yet been fully implemented in all training programmes as of the drafting of this report (Ministry of Education, 2018[3]).

More than 95% of Portuguese teachers report on the 2013 Teaching and Learning International Survey (TALIS) feeling well prepared to begin teaching across multiple

domains including subject content matter, pedagogy and practice (Table 2.4 in OECD (2014[6])).

Assignment and distribution of teaching and non-teaching staff

As with other European systems, Portugal employs teachers on a two-track system, with permanent teachers who, barring misconduct, have permanent rights to a position within a school cluster and temporary contract teachers who are employed on an annual basis, most re-entering the national hiring competition each year.

At the conclusion of their professional studies, teacher candidates apply to a national recruitment contest for both new and experienced teachers, disseminated in the official state journal (*Diário da República*) and on the Ministry of Education website. Teacher candidates list a set of schools in which they would like to teach. Applicants are then assessed based on factors such as the marks they received in higher education programmes, their years of teaching experience and the ratings they received as part of their student-teaching or temporary-contract teaching roles. The Directorate-General for School Administration (*Direção-Geral da Administração Escolar* – DGAE) rates all candidates and then places the highest-rated candidates in their schools of choice, assigns lower-rated candidates to schools other than the ones requested and notes which applicants were not selected.

Similar to temporary teachers, permanent teachers wishing to change schools may apply to a national transfer pool. Similarly, they receive ranks based on their university marks and ratings on their student-teaching training. Furthermore, teachers receive bonus points in their application based on their number of years of teaching experience (full credit for a year of permanent teaching, half credit for a year of temporary contract teaching).

In addition to the permanent and temporary contract categories, an intermediary status exists in which teachers are permanent civil servants allocated to a particular geographic area. Teachers in this category must re-apply for employment each year and they may be reallocated between any school cluster within one of ten defined zones. While this system has resulted in less disruption in teachers' living and commuting status, this category of teachers continues to frequently change schools.

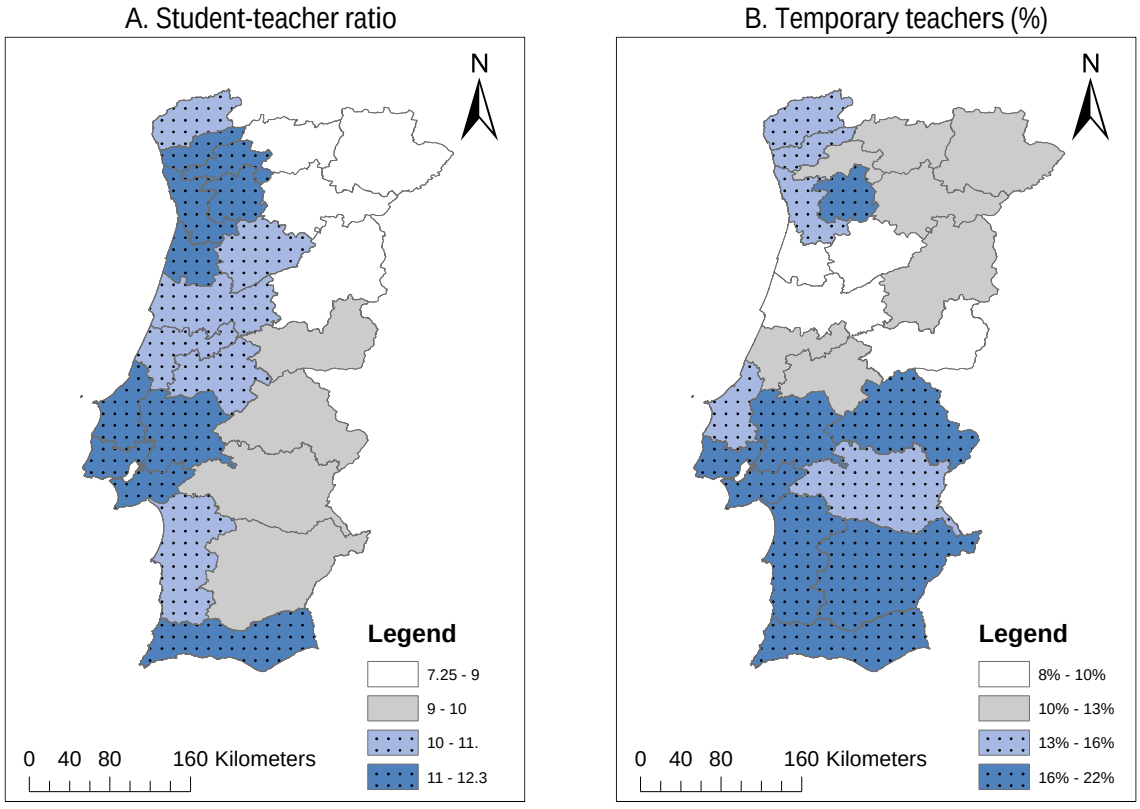
Despite this centralised assignment process described above, disparities in the distribution of teachers across the country persist. As Panel A of Figure 4.1 illustrates, wide variations exist in the average student-teacher ratios, ranging from 7:1 in the rural northeast to 12:1 in large metropolitan areas.

There is substantial use of teachers on temporary contracts, though these too vary by geographic location. About 15% of Portuguese lower secondary teachers worked on one-year temporary contracts in 2013 (TALIS average: 11.9%), 75% were permanently employed and the remaining 10% had a fixed-term contract of more than one year (Table 2.8 in OECD (2014[6])).[1] In some areas of the North and Centre regions, temporary contract teachers represent a trivial proportion of the workforce (5%), whereas, in the south and Lisbon Metropolitan areas, they can represent up to 20% of all teachers (see Figure 4.1, Panel B) (in these regions the number of students did not suffer the decline experienced in the other areas). One hundred school clusters (12% of all clusters and non-clustered schools) have teaching faculties that are more than one-third temporary contract teachers and 34 clusters (4%) employ more than half of their faculty on temporary contracts. Within the past 2 years, many temporary teachers were converted to a

permanent status, resulting in an increase in the percentage of permanently employed teachers to 84% in 2017/18, a 3 percentage point improvement over 2016/17.

Figure 4.1. Distribution of teachers to students and proportion of temporary teachers, 2015/16

By NUTS III region



Note: The student-teacher ratio is derived from the total number of basic and secondary students in a school or school cluster, divided by the number of permanent and the full-time equivalent (FTE) hours of temporary contract teachers in a school or school cluster. Regional averages based on weighted averages of all schools and school clusters in that region. Temporary contract teachers do not include permanent contract teachers assigned to a geographical area.
Source of administrative boundaries: Direção-Geral do Território (2016), Official Administrative Maps of Portugal – Version 2016 [*Carta Administrativa Oficial de Portugal – Versão 2016*], http://www.dgterritorio.pt/cartografia_e_geodesia/cartografia/carta_administrativa_oficial_de_portugal_caop_/caop__download_/carta_administrativa_oficial_de_portugal___versao_2016/.
Source: DGEEC administrative data, 2015/16.

Contracted private schools can select and appoint their own staff but must follow the same standards in relation to academic qualifications and teaching experience. Private school teachers must hold the same qualifications as public school teachers.

Levels of operational and technical assistants are allocated to schools based on formulas articulated above. Municipalities have responsibility for establishing desired skills and hiring operational assistants at the primary (1st cycle) levels. In cases where municipalities have secured inter-administrative contracts, municipalities also have responsibility for hiring non-teaching staff at the 2nd and 3rd cycles. Ministry officials

indicate there is interest in expanding these responsibilities to all municipalities. Several stakeholders indicated that some operational assistants share responsibilities with other municipal sectors. This can result in operational assistants having professional responsibilities beyond the school, so that they may spend portions of their day performing landscaping in local parks or completing administrative work in the municipal building.

Teacher working conditions

The vast majority (94.5%) of Portuguese lower secondary teachers work full time (Table 2.7 in OECD (2014[6])). A complete teaching workload for teachers at the start of their careers involves 25 instructional hours per week for the pre-primary and 1st cycle of basic education teachers or 22 hours per week (1 100 minutes) for teachers at the 2nd and 3rd cycle and secondary levels. As reported in the OECD report *Education at a Glance 2017*, Portuguese lower secondary teachers have 605 statutory teaching hours per year, a figure that has remained stable over the past decade. This is among the lowest statutory teaching hours in the OECD (see 0, Figure 4.B.2). School principals may define the content of up to 2.5 hours of non-teaching tasks per week.

As teachers progress through their career, they receive reductions in teaching – but not working – hours based on either age or additional responsibilities. These include benefits such as a reduction of 5 teaching hours at the age of 60 years in 1st cycle education, or in the 2nd and 3rd cycle a reduction of 2 hours at 50 years, another 2 at 55 years, and 4 hours at 60 years. Additionally, teachers who have formal leadership roles such as school co-ordinator or department head see their loads reduced as well. The minimal teaching time a teacher may have in a week is eight hours, with the exception of the school cluster principal who typically does not teach at all (Ministry of Education, 2018[3]). Box 4.1 contextualises the specificity of Portuguese expectations on teachers' time use within that of other European countries. The specificity with which Portugal regulates teachers' working hours is on the stricter end of the European spectrum.

It is anticipated that teachers will devote an additional 10 hours of work per week outside of their mandated hours at school (teaching and non-teaching time) in the form of grading assignments, contacting families, planning lessons and so on to total a standard work week of 35 hours. However, Portuguese lower secondary teachers report an average of 44.7 weekly working hours, substantially above the TALIS average of 38.3 weekly hours. The bulk of these additional self-reported working hours come in the form of time spent correcting student work and administrative work including paperwork (Table 6.12 in OECD (2014[6])).

Portuguese teachers report generally positive perspectives on their professional work climates. Among other indicators, 86% of Portuguese teachers reported in 2013 that there "is a high level of co-operation between the school and the local community", 90% agreed that the school staff "share a common set of beliefs about schooling/learning" and 92% of teachers indicate that there "is a mutual respect for colleagues' ideas" (Table 2.22 in OECD (2014[6])).

Lower-secondary Portuguese teachers also report high levels of self-efficacy, with 95% or more of teachers who say they feel that they can "get students to believe they can do well in school work", "help students value learning", craft good questions", "control disruptive behaviour", "help students think critically", "use a variety of assessment strategies", "provide an alternative explanation for an example" and "implement alternative instructional strategies" (Table 7.1 in OECD (2014[6])).

Box 4.1. Organisation of European teachers' working time, 2013/14

A 2015 Eurydice report provided an overview of the organisation of teachers' working time in Europe and teachers' contractual obligations in terms of their teaching time, availability at school and their total working time.

In most countries, teachers' employment contracts specify the number of hours they are required to teach. In 35 systems, teaching time is contractually specified. Only five education systems – Estonia, Sweden and the United Kingdom (England, Northern Ireland and Wales) – do not contractually specify a number of teaching hours, while two (Belgium and Italy) regulate only teaching time. The weekly total varies considerably among countries, ranging from a minimum of 14 hours in Croatia, Finland, Poland and Turkey, to a maximum of 28 hours in Germany.

There were three types of regulations governing teachers' total working time and time of availability at school. The regulations either specified: i) requirements pertaining to both total working time and school-based time (10 education systems); ii) requirements applicable to one or the other time (23 systems); or iii) no requirements for either working time or school-based time (Belgium and Italy).

In 18 education systems, teachers' required time to be available at school is contractually specified, either in addition to or instead of teachers' teaching time or working time. Nine education systems refer specifically to working time, teaching time and time available at school, while the remainder cites them in different combinations. Among those countries that regulate both total working time and obligatory availability at school, the gap between the two in hours varies greatly.

Source: EC/EACEA/Eurydice (2015), *The Teaching Profession in Europe: Practices, Perceptions and Policies*, http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/184EN.pdf.

Teacher development and career structures

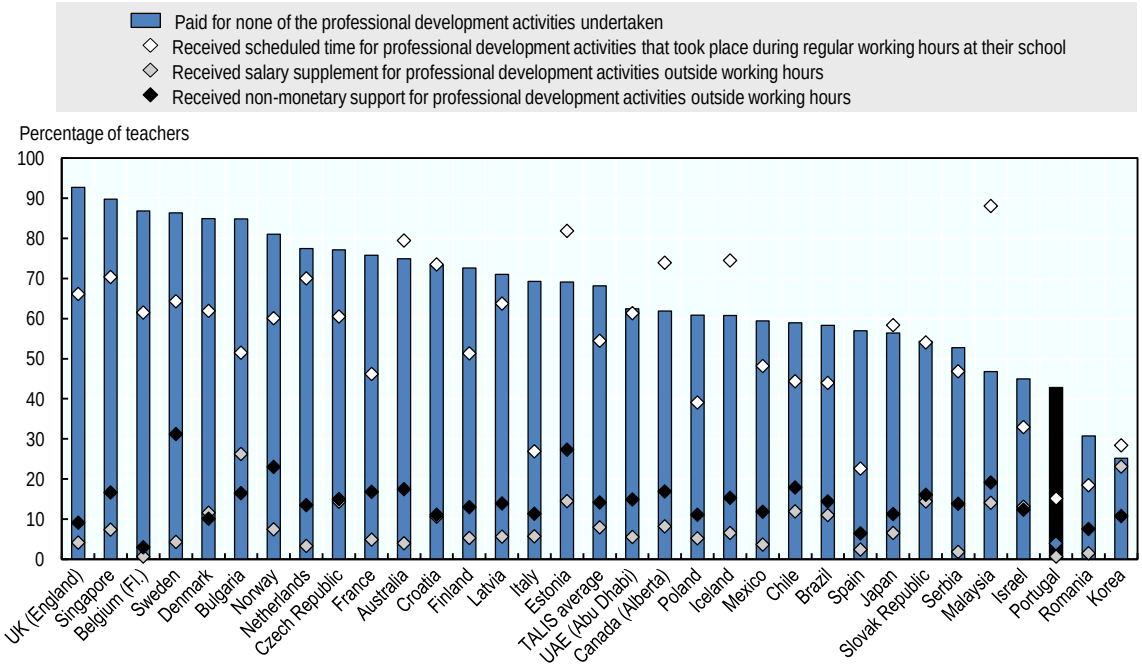
Portugal does not have a formal induction programme for new teachers in schools (Santiago et al., 2012[7]), and this is evident in that Portuguese principals report the lowest proportion of formal induction activities available to their teachers of any TALIS country (see 0, Figure 4.B.3). However, in 2007, the Teaching Career Statute (*Estatuto da Carreira Docente* – ECD) defined a probationary period lasting at least one school year. The teacher on probation is paired with another teacher to assist with content and pedagogy. When possible, this mentor teacher is from the same subject area, is an experienced teacher and has a positive rating on their last performance review. The supporting teacher is chosen by the department co-ordinator, by the content-area department or by the principal of the school (Ministry of Education, 2018[8]).

Teachers are statutorily required to participate in professional development as proof of participation represents 20% of the overall score in their annual evaluation. In order for teachers to progress to a higher step on the professional ladder, they are required to pursue professional development. However, as a consequence of the economic crisis, Portugal froze teachers' salaries and progression through steps up the career ladder (from 2005 to 2007 and again from 2011 to 2017). Simultaneously, public financial support for pursuing professional development decreased. This has resulted in minimal external incentives to participate in professional development activities as it has generated no

returns in career progression, and teachers must increasingly pay for it out of their own pockets. In fact, in 2013, 33% of lower secondary teachers reported that they had to pay for all of the costs of their professional development. Furthermore, Portuguese teachers were least likely among any TALIS country to receive release time during regular working hours to participate in professional development activities (see Figure 4.2). These challenges are evident in the reasons Portuguese teachers indicate are barriers to participating in professional development. Expense, lack of employer support, conflict with work schedule, no relevant offerings and lack of incentives for participation all register highly as major barriers, and substantially above the TALIS average (Table 4.14 in OECD (2014[6])). These indicators complement qualitative impressions during the review visit during which many teachers stated the difficulty posed by having to attend professional development sessions in the evening or weekends, without additional compensation.

Figure 4.2. Professional development participation by level of personal cost and support

Percentage of teachers who reported paying for none of the professional development activities undertaken and level of support received for the three following elements in lower secondary education:



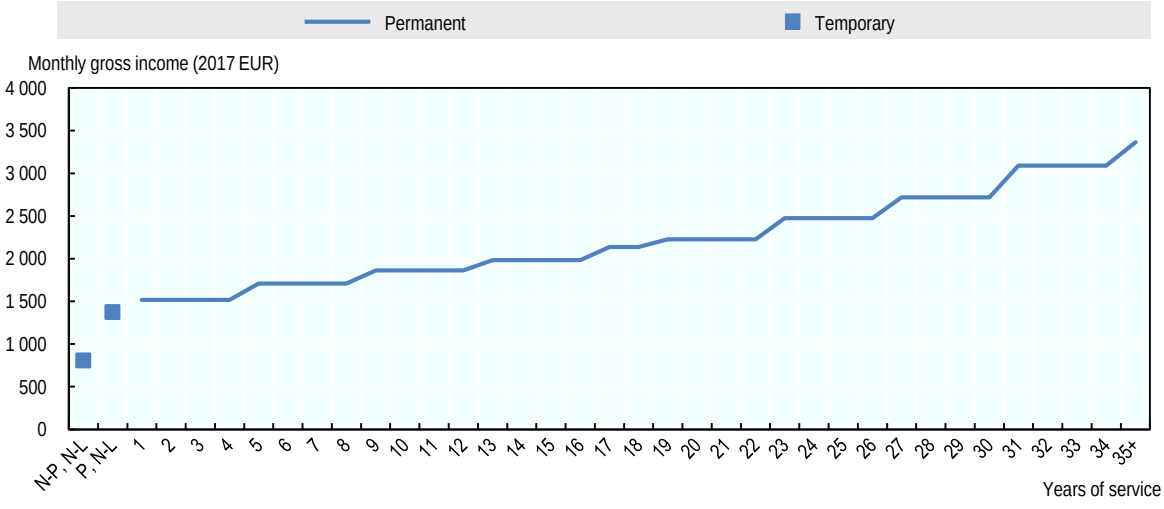
Notes: Countries are ranked in descending order, based on the percentage of teachers who report paying for "none" of the professional development activities undertaken.
Received non-monetary support for professional development activities outside working hours includes reduced teaching time, days off, study leave, etc.
Source: OECD (2014), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, http://dx.doi.org/10.1787/9789264196261-en, Tables 4.6 and 4.11.

Despite these barriers, large proportions of Portuguese teachers nevertheless pursue professional development. However, the participating proportion declined by one percentage point between 2008 and 2013, whereas the TALIS average remained constant (Table 4.6c in OECD (2014[6])). Portuguese teachers express the highest levels of interest in receiving more professional development in areas such as teaching students with

special needs (26.5%), teaching in a multicultural or multilingual setting (16.8%) and school management and administration (14.1%) (Table 4.12 in OECD (2014[6])).

Portuguese teachers progress from contracted professionals through ten steps (*escalão*) of the professional (permanent) teaching career. To progress from one step to the next, teachers must teach for a minimum period at their current level (4 years except at Step 5 which is 2 years), receive a rating of at least "Good" in their latest evaluation, complete 50 hours of ongoing training and, from 2010 on, all teachers were required to be observed by an external evaluator to move into the 3rd, 5th and 7th steps. Each step increase is associated with a salary increase that is fairly smooth and consistent over time but there are evident increasing financial returns to experience at the end of the career (see Figure 4.3). However, with the exception of 2010/11, teachers' career progression and, therefore, salaries have been frozen since 2011 due to the economic crisis. As a result of improving economic conditions, in 2017/18 teachers were again eligible to move up steps. Several stakeholders expressed satisfaction with this development, but important concerns remain. This will be the first time that observations will be high stakes for teachers hoping to move up steps. Most contentiously, teachers' unions have advocated for providing teachers with credit for past years of work and advancing them seven or eight years on the salary schedule, which central government officials argue is a budgetary impossibility.

Figure 4.3. Monthly salary by temporary contract- or permanent-employment status and step in the teaching career



N-P, N-L: non-professional, non-licensed.
P, NL: professional, non-licensed.
Source: Sindicato dos Professores da Grande Lisboa (2017), *Tabelas de Remunerações - Liquidas dos Docentes da Educação Pré-Escolar e dos Ensinos Basicos e Secundárias [Remuneration Table – Net Earnings of Teachers of Pre-School and Basic and Secondary Education]*, http://www.spgl.pt/Media/Default/Info/24000/200/70/6/Vencimentos%202017l.pdf.

Many opportunities exist for teachers to pursue instructional leadership opportunities while remaining in the classroom. Teachers may become class head (*director de turma*) with responsibility for leading other year-level teachers or department heads with responsibility for leading other teachers of the same subject (or related subjects). They may also be elected by their colleagues to roles on the Pedagogical Council, responsible

for curricular and pedagogical improvements for all teachers in the school cluster. Depending on the school, opportunities also exist outside departments for leadership roles such as library-, ICT (information and communication technology) network- or TEIP-co-ordinator. School co-ordinators serve as leaders at the sub-cluster level responsible for operational and instructional leadership within the school. Finally, teachers may be selected by the cluster principal to serve as assistant or deputy principals (one to three per cluster, depending on size). In almost all instances, teachers in these positions receive a reduction in their overall teaching hours but continue to teach in the classroom.[2] Appointment as department head requires a postgraduate degree in school management, teacher evaluation or pedagogical supervision. No other school leadership roles require any formal training (Ministry of Education, 2018[3]).

School leadership is understood as an extension of the professional responsibility of a teacher, rather than a separate professional pathway. Cluster principals remain on the teacher salary schedule, with a monthly supplement for the number of students in the cluster. No formal sequence of responsibilities or career steps exists within the school leader role. Principals may serve two terms (eight years) within a cluster, after which they either return to the classroom or must seek another principal role in a different cluster.

Selection of and responsibilities of school leaders

The General Council elects a school principal to a four-year term through a democratic voting procedure. The candidate must be a professional (permanent contract) teacher (in public or private education), with at least five years of service. In the case where there is at least one candidate with specialised training in school leadership, his or her candidacy must be prioritised. If multiple (or no) applicants have specialised training, the Council must make an evaluation of each principal's planned four-year work plan and capacity to execute on it (Ministry of Education, 2018[3]).

The school principal is responsible for the pedagogical, cultural, administrative and financial management of the school/school cluster. Cluster principals propose a "Letter of Mission (*carta de missão*)" that articulates five to seven commitments to be accomplished by the end of the principal's four-year term. No specific policies exist to attract principals to schools with high-needs populations, geographically remote areas or other targeted recruitment efforts (Ministry of Education, 2018[3]).

The particulars of principals' roles in Portugal are widely variable, subject to the size of the cluster (or independent school). Principals are responsible for between 1 and 28 schools, between 23 and 312 teachers and between 114 and 4 075 students (even these ranges exclude some smaller, specialised professional schools). In particular, principals of clusters comprising large numbers of schools, students and teachers are more similar in their responsibilities to network managers in other systems. Based on school leader reports during the OECD review visit, the days of principals managing large clusters involve managing teams of leaders, co-ordinating with community entities (municipal offices, private industry sites for student apprenticeships, etc.), and engaging in external-facing activities. Cluster principals in these settings rarely reported having direct knowledge of teaching practice within the schools. This contrasts with principals of small clusters or single schools whose responsibilities were more similar to the traditional concept of the principal as operational and instructional manager of the school.

School cluster principals have wide discretion to allocate staff within roles and across the schools in the cluster. Cluster principals have full discretion in the formation of their Board of Directors (both deputy and assistant principals). The only limiting criteria are

that deputy and assistant principals must be professional (permanent) teachers, with at least five years of service and be already working within the cluster or non-grouped school. Cluster principals, with input from their board, may divide responsibilities across the deputy and assistant principals as they see fit. Furthermore, the school administration has the leeway to assign teachers to any role within their recruitment group (a defined subject area and grade band) across years or schools in the cluster (Ministry of Education, 2018[3]).

During the review visit, some cluster principals described utilising these authorities to divide responsibilities across the administrative team by strategic area (e.g. school culture, pedagogy, community relationships, etc.) or educational level among deputy principals, while others reported that the school cluster leaders all did a little of everything. Similarly, variation existed in the extent to which school administrators described taking advantage of staff assignment responsibilities. Some described placing teachers they perceived to be weaker in less demanding contexts or re-allocating teachers to different schools to improve school culture or spread instructional capacity, while others did not report engaging in such practices.

Teacher and leader assessment and appraisal

Teacher appraisal

The history and underlying rationale of the teacher evaluation model in Portugal are well documented in the OECD *Review of Evaluation and Assessment in Education: Portugal* (Santiago et al., 2012[9]). Prior to the 1990s, no formal procedure for teacher evaluation existed. In the 1990s, a formal appraisal system which required the submission of various forms but had limited standards or consequences was introduced. However, in 2007 (with modifications in 2009, 2010 and again in 2011), the government introduced a contentious model for teacher appraisal that included clear assessments of performance, with progress on the salary scale depending on merit in the form of observed practice and student learning outcomes (Santiago et al., 2012[7]; Santiago et al., 2009[10]). In addition to the controversy around the introduction of new teacher evaluation policies, Portugal experienced intensive resistance in 2014 to a new policy requiring prospective teachers to sit for a common examination on mastery of their subject matter (see Box 4.2).

The current model of performance evaluation for permanent teachers, in place since 2012, attempts to balance assessments of teachers' content and pedagogical skills, their contributions to the school community and their ongoing commitment to professional improvement. The 2012 reform requires teachers to receive a positive evaluation at the end of each step of the teaching schedule (i.e. every four years, except the fifth step which takes two years) in order to progress to the next professional stage. Teachers receive ratings at one of five levels: insufficient, regular, good, very good or excellent. At the end of Steps 2, 4 and 6, teachers are expected to be observed at least twice by an external evaluator. At other steps, an external class observation is required to obtain the grade of "excellent" or when a teacher has received a rating of "insufficient". Internal and external evaluators must be at or above the career step of the teacher being evaluated, be teachers of the same subject and hold a training certificate or have professional experience in teacher evaluation (Ministry of Education, 2018[11]).

Box 4.2. Portugal and the state of New York's efforts to reform entry into the profession

New York State

In the 2013/14 school year, the state of New York introduced four new assessments intended to increase the skill of entrants into the teaching profession. The Academic Literacy Skills Test (ALST) measured candidates' basic literacy skills, the edTPA assessed candidates' subject-specific teaching skills through a multi-measure portfolio review, the Educating All Students (EAS) exam measured future teachers' abilities to teach special learner groups, and subject-specific exams tested candidates' knowledge of their content area. The combination of the multiple assessments and high cut-scores on the examination made this battery of tests some of the most rigorous in the country. Data from the first year showed that only three-quarters of test-takers passed the edTPA and EAS exams, and two-thirds of teaching candidates passed the ALST examination. In total, 20% fewer teaching candidates were licensed in that year compared to the previous. Nearly immediately, widespread condemnation of the new testing regime arose, particularly from teachers' unions, and several lawsuits challenged the legality of the new tests. Of particular concern were racial disparities in the results on the tests: in one analysis, 64% of white candidates passed the tests on the first try, 46% of Latino candidates, and 41% of black candidates.

Ultimately, while the tests were upheld in court, public outcries resulted in the elimination of the ALST requirement, the reduction of the score required to pass the edTPA exam and the provision of alternate assessment options (a panel review or an alternate, easier test) for those who were unable to pass the edTPA.

Portugal

In the fall of 2013, Portugal implemented the Teachers Knowledge and Skills Exam (*Prova de Avaliação de Conhecimentos e Capacidades* – PACC). It aimed at evaluating the general and content-specific knowledge of all temporary teachers with less than five years of teaching experience. The exam was administered in 2014 in the midst of fierce criticism from different stakeholder groups. A total of 10 220 teachers took the exam in 2014, with a pass rate of 85.6%, but rates varied by subject. More than half of teachers of physics and chemistry, Portuguese, biology and geology failed the subject-specific component of the exam. In 2014, the Constitutional Court ruled that the exam was unconstitutional as it had not been debated and agreed on in parliament, so it was discontinued.

Sources: Harris, E. (2014), "Passing rate declines by 20% as state uses new certification exams for teachers", *New York Times*, https://www.nytimes.com/2014/11/20/nyregion/teacher-certifications-decline-as-new-york-state-uses-tougher-exams.html; Sawchuk, S. (2014), "N.Y. data on new teacher-licensing exams show higher failure rates", *Education Week*, https://www.edweek.org/ew/articles/2014/11/20/13licensing.h34.html; Loweus, L. (2017), "New York lowers required score on teacher certification exam", *Education Week*, http://blogs.edweek.org/edweek/teacherbeat/2017/09/new_york_to_ease_edtpa_certification_requirements_.html?qs=teacher+examination; New York State Education Department (2017), *Board Of Regents Revises Teacher Certification Requirements*, New York State Education Department Press Release, http://www.nysed.gov/news/2017/board-regents-revises-teacher-certification-requirements; IAVE (2014), *Divulgação de resultados da prova de avaliação de conhecimentos a capacidades*, http://pacc.iave.pt/np4/%7b%24clientServletPath%7d/indexf55f.html?newsId=61&fileName=lista_aprovados_ce_pacc_maio_2015_v2.pdf.

Teachers' final evaluation scores are based on three distinct components: i) subject-matter and pedagogical knowledge and skills (weights 60% of the final evaluation score); ii) participation in school and relationship with the community (20% of evaluation score); and iii) participation in ongoing training and professional development (20% of evaluation score). The two highest classifications are limited by a quota system, which is typically capped at 5% for "excellent" and 20% for "very good" (Santiago et al., 2012[7]).

Temporary contract teachers receive an informal internal evaluation as long as they complete 180 days of work during a school year. The head of the department (or appointee) conducts an evaluation but this explicitly does not include a class observation (Ministry of Education, 2018[3]). Many more details on the rationale and procedures for this evaluation system are available in the OECD *Review of Evaluation and Assessment in Education: Portugal* (Santiago et al., 2012[7]).

However, despite these detailed procedures for the teacher appraisal system, the implementation over the past five years has been for the most part non-existent. As a consequence of the freezing of teachers' career trajectories, there existed no incentive to seek positive evaluation scores. As a result, stakeholders shared that there are neither internal nor external observations connected to the evaluation process. In fact in 2015, only 41% of students attended schools in which their principals indicated that teachers' practice is monitored by the observation of internal school leaders, and only 31% attended schools in which their principals indicated that teachers' practice is monitored by external observers (Table II.4.39 in OECD (2016[12])). Thus, observations have to date played little role in teachers' appraisal and ratings below the "Good" level are very rare according to stakeholders.

Cluster principal appraisal

The evaluation of school principals includes both an internal and external component. As school leaders remain on the teacher career progression schedule, they are evaluated in the last year prior to moving to the next step, as well as at the end of their four-year term as principal.

The internal assessment by the General Council is based on the principal's successful accomplishment of the goals outlined in his or her proposed educational project (70% of score) as well as a qualitative assessment of their leadership, strategy and external communication skills (30%). They are also required to attend a defined total of professional development activities. The Inspectorate-General of Education and Science (*Inspeção-Geral da Educação e Ciência* – IGEC) carries out the external component of school leaders' evaluation. It assesses quantitative measures of academic results and social outcomes as well as qualitative measures of community feedback, leadership skills and the successful operation of the school. The final classification is a weighted average of the internal (60%) and external (40%) evaluations. School principals receiving ratings of "very good" or "excellent" may progress through the next career step more rapidly, whereas ratings of "regular" or "insufficient" mean that the previous years of service since the last evaluation will not count towards advancing to the next career step. Additionally, principals with these ratings may be assigned a mandatory professional development training plan to complete.

Strengths

Portugal benefits from an experienced, dedicated and well-compensated teaching staff

Portuguese school children benefit from an experienced, teaching staff. In addition to median teaching ages at all levels of schooling that imply over 20 years of experience in education, Portuguese teachers are formally qualified for their positions. Over 91% of Portuguese teachers are fully certified (OECD average: 84.3%), with no disparities in the levels of certified teachers by schools' average socio-economic status, urbanicity or governance type (public or private). Despite the equitable distribution of licensed teachers across school types, this pattern does not appear to be associated with performance equity as there is no relationship in Portugal between whether a student has a fully qualified teacher and his or her performance in science as assessed by PISA (Figure II.6.9 in OECD (2016[12])).

In recognition of the importance that Portuguese society places on education, Portugal invests substantial resources in its teachers. As noted above, Portugal invests a larger proportion of its annual operating budget on staff salaries than any other OECD country. This results in a significant comparative and absolute investment in teachers' salaries. As Figure 4.4 indicates, Portuguese teachers earn more relative to other tertiary-educated workers than any other OECD country. A Portuguese teacher can expect to earn 1.3 times as much as another Portuguese tertiary-educated worker.

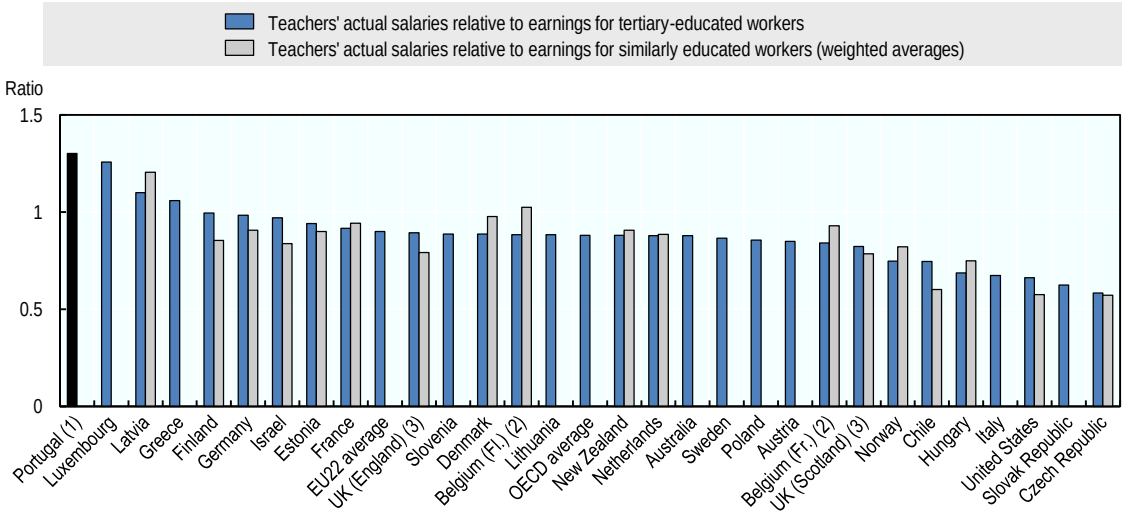
While relative earnings are clearly important, one might be concerned that in countries with weak overall labour markets for tertiary-educated workers the absolute salary levels may nevertheless not be high enough to induce high-capacity individuals into the teaching profession. However, even the nominal levels of teaching salaries in Portugal (adjusted for international differences in prices and incomes, known as the Purchasing Power Parity) are quite high. As 0, Figure 4.B.4 indicates, teachers' minimal starting and maximal salaries are higher than the OECD and EU22 averages, and they can expect to earn between EUR 32 644 per year at the start of their career and EUR 61 748 at the end. While the high level of investment in teachers' salaries rewards teachers for their work and may raise the prestige of the profession, this type of investment is not correlated at the cross-system level by higher student outcomes (Figure II.6.7 in OECD (2016[12])).

In some school systems, high teaching salaries are offset by large class sizes or a large number of total teaching hours; however, this is not the case in Portugal. Portuguese schools have one of the lowest levels of student-teacher ratios among OECD systems and Portuguese teachers have some of the lowest total number of instructional hours (see 0, Figures 4.B.1 and 4.B.2).

These quantitative measures accord with qualitative impressions reported by school-based stakeholders during the review visit. School staff in all seven schools visited during the review indicated that they felt there were satisfactory total overall numbers of teachers at their school. However, parents, teachers and school leaders frequently commented on the lack of sufficient numbers of special education teachers and non-teaching staff. In addition to high quantities of teaching staff, families and students frequently commented on the quality of the teaching staff, noting the care the majority of teachers brought to their students and their dedication to their work.

Figure 4.4. Lower secondary teachers' average salaries relative to earnings for tertiary-educated workers, 2015

Actual salaries for lower secondary teachers teaching in general education programmes in public institutions



1. Current minimal standards for teachers in Portugal require ISCED Level 7 (masters' degree). Tertiary-educated workers include ISCED Level 5-8; thus, comparisons with other tertiary-educated workers may overstate the wage premium on teaching.
2. Data on earnings for full-time, full-year workers with tertiary education refer to Belgium.
3. Data on earnings for full-time, full-year workers with tertiary education refer to the United Kingdom.

Note: Countries and economies are ranked in descending order of the ratio of teachers' salaries to earnings for full-time, full-year tertiary-educated workers aged 25-64.

Source: ECD (2017), *Education at a Glance 2017: OECD Indicators*, http://dx.doi.org/10.1787/eag-2017-en, Table D3.2a. See EAG 2017 Source section for more information and Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

Thus, the Portuguese system benefits from an experienced and dedicated teaching staff and provides them with corresponding recognition in the form of high relative and absolute levels of compensation. Both objective indicators and subjective impressions in the course of the review visit speak of the value Portuguese society seems to ascribe to teachers and the education system. However, the review team corroborated impressions derived from TALIS 2013 during its visit that teachers do not feel appreciated (see below). The quantitative measures of fiscal investment, therefore, provide a strong foundation for growing the esteem and external validation of educators but important cultural factors must be addressed to improve the morale and attractiveness of the profession.

Opportunities exist for the development of instructional and leadership skills within schools.

Strong instructional practices

As befits a country with a highly experienced and qualified teaching staff, there exist examples of strong teaching practices in Portugal that can serve as models to improve other teachers' abilities. Portuguese science teachers of 15-year-olds employed some of the highest rates of direct instruction (practices in which teachers explain and model

scientific concepts to students, encourage classroom debate and respond to students' questions) as reported by 15-year-old students. As the *PISA 2015 Results (Volume II): Policies and Practices for Successful Schools* report (2016[12]) highlights, this modality of instruction alone does not guarantee improved learning and much depends on the effectiveness of execution, but direct instruction in science is the pedagogical approach mostly highly correlated with higher levels of student performance on the OECD Programme for International Student Assessment (PISA) science assessment.

As reported by 15-year-old students, Portuguese teachers employed direct instruction at a rate higher than all but 4 other PISA countries (see Panel A, Figure 4.5).[3] Further, these strategies were distributed evenly across high- and low-economic, social and cultural status (ESCS) schools, urban and rural settings and public and private schools in Portugal. This type of instructional strategy was practised more frequently by Portuguese science teachers whose students scored higher on the PISA science assessment. Teachers using this practice also had students who had a stronger understanding of the nature and origin of scientific knowledge (epistemic beliefs) and their students were more likely to be planning a future career that requires scientific knowledge and skill. This accords with convincing evidence from a recent meta-analysis of the direct instruction approach in 328 studies across 50 years that found consistently positive effects on student academic outcomes (Stockard et al., 2018[13]).

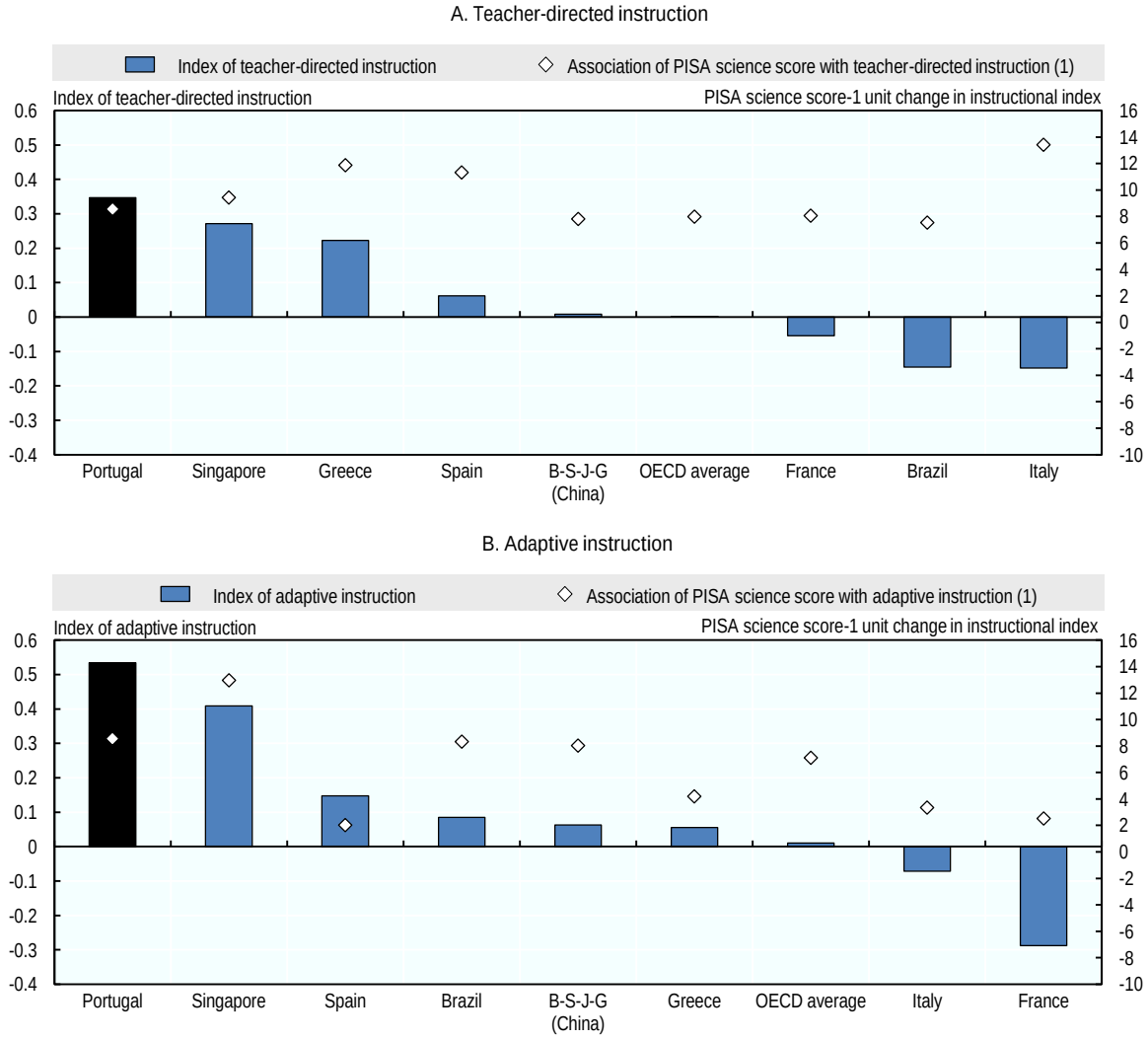
Interestingly, Portuguese teachers appear uniquely skilled in their ability to combine both teacher-directed instruction with adaptive classroom strategies. Adaptive instruction refers to teachers' ability to adjust their lessons to the particular skills and abilities of students in their classes, including to individual students who are struggling with a topic or a task.[4] As Panel B of Figure 4.5 reveals, 15-year-old students reported that Portuguese teachers used adaptive instructional techniques more frequently than teachers in any other country. These adaptive instructional practices were no more common in advantaged than disadvantaged schools or in rural than in urban areas. However, they were more commonly exhibited in private Portuguese schools. When teachers used adaptive instructional strategies more, students were also more likely to score higher on the PISA, demonstrate stronger epistemic beliefs about science and be more likely to be planning a science-dependent career (OECD, 2016[12]).

One might conjecture that the Portuguese investment in small student-teacher ratios (and the resultant OECD-average class sizes) is critical to teachers' ability to offer this effective form of adaptive instruction. However, adaptive instruction does not appear to require small class sizes in Portugal. In fact, there is no relationship between the size of a school's average class and teachers' frequency of instructional adaptation in response to student needs (Figure II.6.17 in OECD (2016[12])). Nor does average class size relate to the schools' student performance on the 2015 PISA (Figure II.6.15 in OECD (2016[12])).

Thus, there exist strong models of instructional practice in Portugal. While these pedagogical strategies are associated with stronger student outcomes, two critical caveats exist. First, between-country comparisons in students' reports of the frequency of these instructional practices should be made cautiously (see Endnote 1). Second, and most critically, these relationships do not imply that because some teachers in Portugal are more likely to use direct and adaptive instruction, this causes their students to have higher test scores. Other factors may contribute to both increased use of this instructional approaches and higher performance. In fact, it is possible that the reverse relationship is true; in other words, classrooms where students perform better create environments where it is more conducive for teachers to use these instructional approaches. Caution should be

used in drawing conclusions regarding the use of these strategies; however, the frequent presence of these sound strategies in Portugal does imply that there is a solid foundation of knowledge and ability among Portuguese teachers.

Figure 4.5. Instructional practices and student outcomes



1. After accounting for the PISA index of economic, social and cultural status of students and schools.

Note: Select countries presented in the figure represent a mix of Southern European peers, Portuguese-language diaspora (Brazil) and high-performing Asian systems. OECD average represents the average for all 35 OECD systems. Countries and economies are ranked in descending order of the index of teacher-directed or adaptive instruction.

Source: OECD (2016), *PISA 2015 Results (Volume II): Policies and Practices for Successful Schools*, http://dx.doi.org/10.1787/9789264267510-en, Table II.2.17 and II.2.23.

Collaborative, collegial environments

In addition to foundational instructional skills associated with experienced teachers, Portuguese teachers also report having positive relationships with their colleagues, perhaps because of their ability to form long-term relationships with them. In nearly all school focus groups that were part of the OECD review visit, stakeholders reported that teachers within their school community demonstrated professional respect and had positive peer relationships. In particular, teachers noted that they frequently turned to peers to ask questions or seek support. These anecdotal reports are supported in the representative lower secondary teachers' reports in TALIS 2013. As noted above, teachers share a great deal of mutual respect for each other and report being able to work well with one another. And while formal induction programmes are scarce, principals report that 84% of teachers have access to informal supports at the start of their careers or when they first join a new school. Though positive relationships are commonplace and teachers report opportunities for informal support, the Challenges section of this chapter highlights barriers to effectively capitalise on these relationships and informal networks.

Opportunities for teacher leadership and development

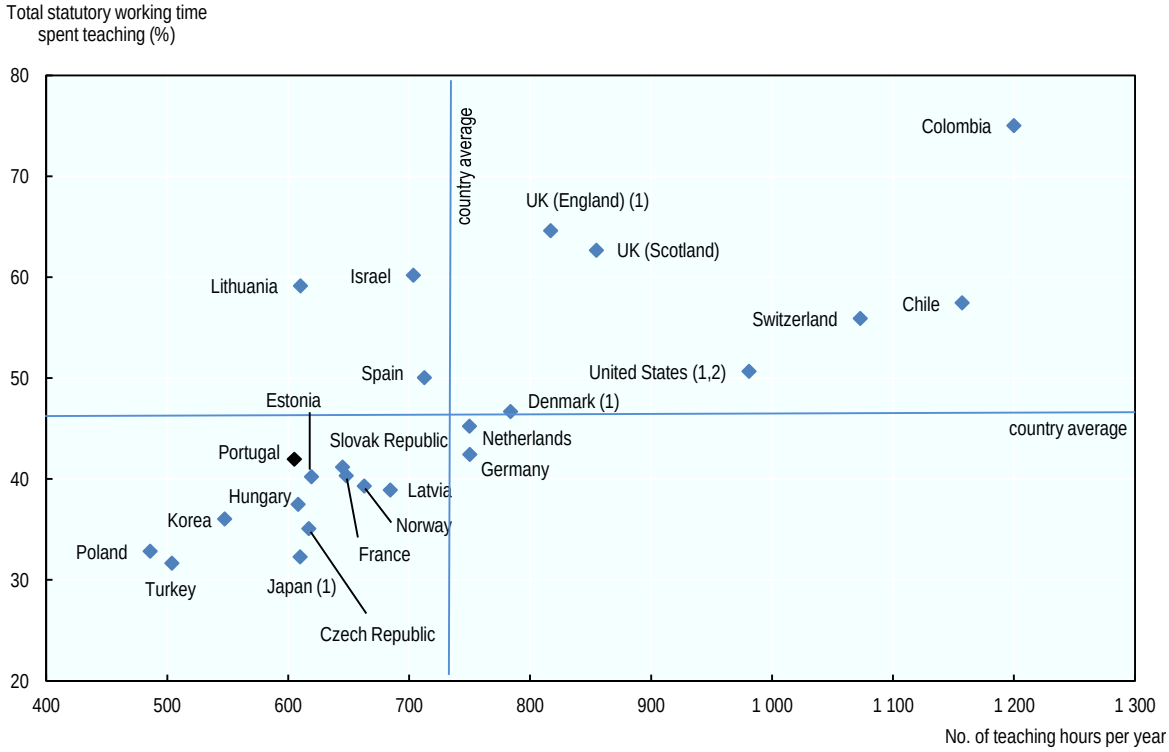
Portuguese teachers benefit from significant time in their schedules devoted to improving their teaching practices, access to regional training centres to support embedded professional development and multiple opportunities to participate in formal leadership roles.

There is an explicit recognition in the development of teachers' working schedules of the need to free up time in their day for whole-school improvement tasks; thus, teachers have many non-teaching hours built into their contracts. As visible in Figure 4.6, teachers in Portugal have among the lowest total statutory teaching hours (605 hours) across the OECD. Additionally, these teaching hours represent a relatively small percentage of their overall statutory working time (42%), compared to other OECD systems. The number of non-teaching hours grows as a function of both their age and the extent to which they take on additional responsibilities within the school. However, as discussed above, all teachers benefit from a certain number of non-teaching hours as part of their contractual working time. This intensive resource allocation of teachers' paid time away from students reflects an understanding of the work that goes into successfully organising and planning a class, as well as an investment in teachers' work as class, department, school or other co-ordinators that engenders positive benefits across the school.

In addition to opportunities teachers have to work collaboratively during their regularly scheduled non-instructional hours, there exist formal institutions to support their ongoing professional development. The Ministry of Education funds a small staff (including a director, several administrative staff and a small teaching hour reduction for one practising teacher) to operate 91 Regional Training Centres. These training centres are charged with conducting outreach to school clusters within their region, to learn about the schools' pedagogical and curricular projects, to assess the current professional development needs within the cluster in relation to those projects and to deliver a series of locally-provided professional development courses responding to school and teacher needs.

Figure 4.6. Percentage of lower secondary teachers' working time spent teaching, 2015

Net teaching time (typical annual number of hours) as a percentage of total statutory working time



1. Actual teaching time.
2. Year of reference for net teaching time is 2013. Year of reference for working time is 2012.

Source: OECD (2017), *Education at a Glance 2017: OECD Indicators*, http://dx.doi.org/10.1787/eag-2017-en, Table D4.1. See Source section for more information and Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

Beyond the skeleton staff outlined above, the regional centres receive no additional funds. This means that they are not able to pay for professional trainers or pay teachers to attend the courses. Instead, the centres rely on the expertise of teachers within the region to run the courses themselves. In prior decades, the centres received more state support, but they have now been forced to become more entrepreneurial. They identify strong teachers, support them to develop the curricula for the training course and then solicit voluntary participation in the planned course. In some instances, they will solicit voluntary participation from professors in local polytechnics or universities to teach classes. In other cases, they have applied for private or European grant funding to subsidise the participation of external experts or the acquisition of curricular materials. One compelling incentive for teacher participation the centres are able to offer is free tuition. In the Portuguese context where professional development is required to move through the teacher career progression – but is rarely funded by the school or ministry – this no-cost approach is potentially appealing. However, despite the potential for the regional training centres to create professional development that is informed by needs identified at the school level, can be delivered locally in schools and is offered in the format of semester-long ongoing courses (rather than one-off seminars), the potential of the training centres is not being sufficiently realised. Too few teachers take advantage of these provisions, the offerings are not sufficiently aligned to the priorities of schools and teachers and they rely

on the good-will of teachers' participation outside of school hours in the evenings or on weekends. These challenges are explored in more detail below.

In addition to formal opportunities for teachers to develop their instructional skills, extensive leadership opportunities exist for teachers within schools. As noted, teachers may become class heads, departmental co-ordinators, school co-ordinators, project co-ordinators, assistant and deputy principals, all while retaining classroom roles but with reduced teaching loads. These sorts of leadership opportunities create compelling ways for teachers to develop professionally so that the nature of their work evolves over the course of their career. Additionally, they offer meaningful ways to distribute the wide array of responsibilities the cluster principal holds across multiple individuals, easing the overwhelming burden of the cluster principal's duties.

School leader autonomy in the selection of a leadership team and within-cluster distribution of human resources

School leaders have the ability to recruit any teacher within their cluster to join their leadership team and they may deploy cluster and school responsibilities amongst these leaders as they see fit, within certain parameters. Additionally, although they have no responsibilities for the selection of teachers to their cluster, they can distribute teaching resources and teaching hours across schools, years and student groups, again subject to teachers' subject areas and levels of instruction. The selection of the school cluster leader happens every four years at the General Council level, rather than through a centrally determined process. This creates the potential for schools to select leaders based on their local knowledge of the skills required to succeed in the particular context. Additionally, cluster leaders are not constrained in their development of a common vision amongst their leadership team as they may select the Board of Directors they choose rather than being required to work with deputy or assistant principals who do not match their vision or desired skill profile.

In addition to the choice of who serves in leadership roles, responsibilities may be divided among the administrative team subject to the needs of the cluster and the skills of the principals. While department heads must have formal training or professional experience in the evaluation of teachers or instructional improvement work, no such requirements apply to class heads, project or school co-ordinators or deputy/assistant principals. For instance, some School Boards reported assigning operational and school culture duties to one deputy principal and instructional tasks to another. In other schools, responsibilities were divided between members of the board of directors according to the cycle of schooling. This flexibility permits closer matches between skills and needs.

In a similar way, once teachers have been allocated to a particular cluster, cluster principals are free to assign them in whichever way they feel suits the school's needs and teachers' abilities. In practice, some schools reported assigning teachers who they perceived as less competent to either smaller classes, classes with fewer disciplinary challenges or schools with less overall challenges. In other situations, school leaders shared instances in which they reorganised some of the teachers across schools to balance skill profiles, experience levels or personality matches. However, school leaders articulated taking advantage of these opportunities to varying degrees. Their use of this autonomy seemed idiosyncratic and reliant on the entrepreneurial spirit of a particular leader, rather than a systematic understanding of this as an important tool in the distribution of human resources. In some schools, members of the board of directors all

said they did a little bit of everything and stakeholders did not report any strategic sorting of teachers to different schools.

Steps have been initiated to create greater curricular autonomy for teachers, including opportunities to adapt curriculum to students' individualised needs.

In 2017, Portugal embarked on two ambitious reforms to how students would learn in schools. First, a broad group of stakeholders drafted the Profile of Students at the End of Compulsory Education (*Perfil dos Alunos à Saída da Escolaridade Obrigatória*) which articulated a broad set of skills and knowledge students should have acquired upon reaching the age of 18. This triggered reforms to the curriculum in 2018 that followed these goals, including offering some flexibility to schools as to how they would impart these skills to students. At the same time, Portugal launched a pilot project of curricular autonomy and flexibility in 235 schools for 2017/18. These schools, as part of plans developed by their Pedagogic Councils, may diverge from the national curriculum for up to 25% of the weekly compulsory teaching hours. While students are still held to the same standards, schools may create new subjects by combining existing ones. This would permit, for instance, the combination of a history and Portuguese class into a humanities class that would cover similar content in an integrated fashion. In other cases, the autonomy might take the form of small numbers of additional teaching hours to be allocated to the school to be used at their discretion. Recipients of the autonomy contracts may also organise the school calendar in innovative ways. For instance, they may offer some subjects more intensively, but only for part of the year, or they may divide the school year in two semesters, rather than the traditional trimester format. The intent of the Portuguese authorities is to extend this pilot to all public schools in 2018/19 (OECD, 2018[14]).

Stakeholders reported mixed opinions on the degree to which these autonomies provided meaningful flexibility to the national curriculum. Some teachers suggested these changes provided opportunities to dive more deeply into a set of skills and content, allowing them to address student misconceptions more thoroughly and employ innovative pedagogical techniques. Others reported that despite the autonomies provided, students still were expected to master the same total material (see more on this in the Challenges section below).

Nevertheless, as noted earlier, at a system level, Portuguese 15-year-olds reported a high rate of adaptive instruction in 2015. These practices were well correlated with positive learning and attitudinal outcomes, suggesting that there is substantial capacity within the Portuguese teaching force to utilise additional curricular autonomy to provide instruction targeted more closely at students' learning edge.

Challenges

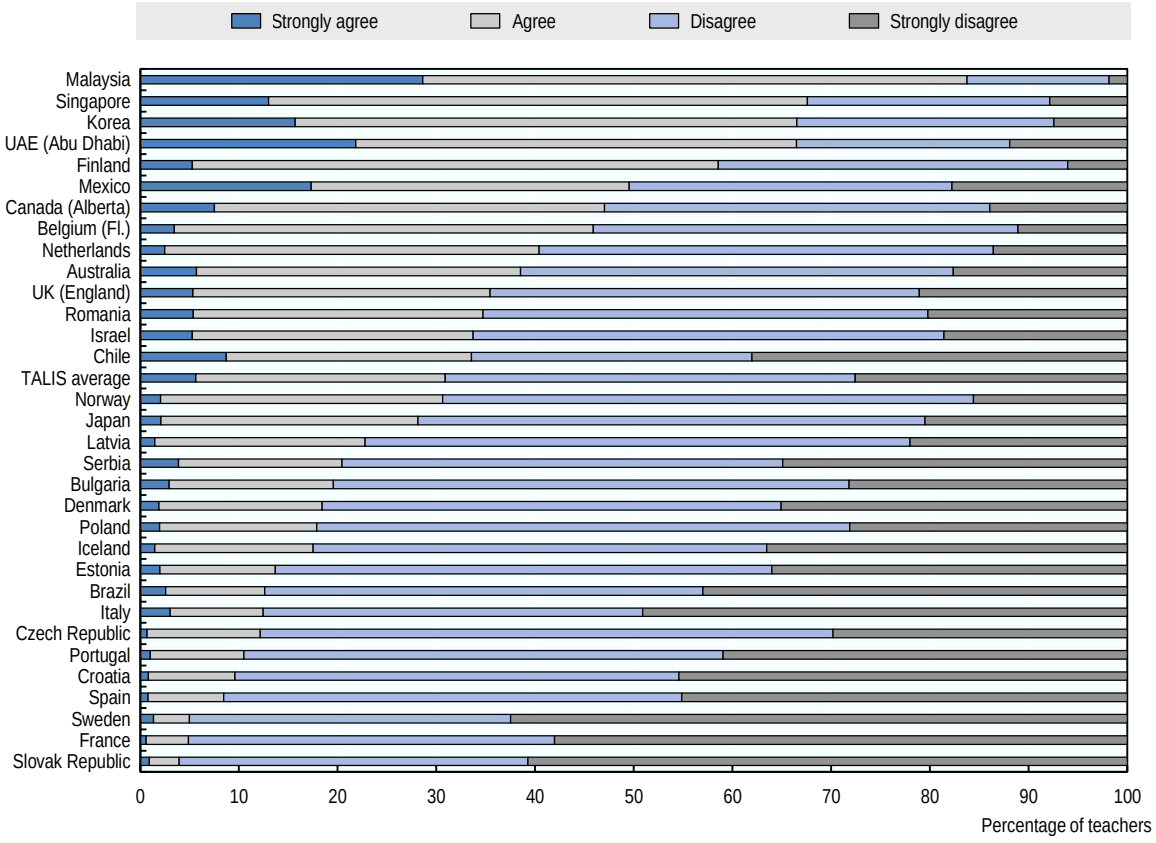
Despite strong capacity, structural supports and a system on paper that could permit for a rigorous professionalisation of the teaching career, the Portuguese system is not yet maximising the potential of its teachers and leaders in schools. The following section explores existing and emerging challenges.

Portuguese teachers do not feel valued by society

Despite stated national commitments to education and significant investment in both the salary and working conditions of teachers, Portuguese teachers do not perceive a high

degree of societal esteem for the teaching profession. Only 10.5% of Portuguese lower secondary teachers consider teaching a valued profession in society (Figure 4.7), among the lowest in TALIS 2013. Though strict comparisons between countries should be made cautiously, even in the absence of between-country comparisons, it is concerning that only one in ten teachers would feel valued in their critical work.

Figure 4.7. Teachers' view of the way society values the teaching profession



Note: Countries are ranked in descending order, based on the percentage of teachers who "strongly agree" or "agree" that they think that the teaching profession is valued in society.
Source: OECD (2014), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, http://dx.doi.org/10.1787/9789264196261-en, Tables 7.2 and 7.2 web.

This perceived low-level of esteem may translate into low levels of interest in joining the teaching profession by young people. The PISA student questionnaire asks 15-year-old students what occupation they expect to be working in when they are 30 years old. In 2015, only 1.3% of Portuguese students indicated they planned to enter the teaching profession, among the lowest across all PISA-participating systems (see 0, Figure 4.C.1). Additionally, in line with most other PISA school systems, those students who did anticipate entering the teaching profession scored over 20 scale points lower on both the reading and mathematics PISA assessments than peers who anticipated entering other professional careers (OECD, 2018[15]).

These reported low-levels of perceived societal esteem for the teaching profession were validated over the course of the review visit. In multiple focus group meetings with teachers, stakeholders reported feeling undervalued. Among some of the most commonly

reported reasons for these feelings included: poor compensation, heavy workloads, lack of parental support, few opportunities for professional development, the condition of school buildings and a repeated concern around being blamed for the shortcomings of the education system. Several teachers cited the debate around the proposed new evaluation system at the end of the last decade as a source of some of these impressions.

It is important to contextualise these subjective perceptions of teachers' status in the cuts made to the educational (and governmental) budgets in response to the recent economic crisis. Cuts in pre-school, basic and secondary educational spending post-2010 led to a 12% reduction of teachers' real wages. It might well be that these real wage losses have affected teachers' perception of societal value more than their salary situation in relation to other tertiary education graduates.

In addition, in many discussions teachers reported that a significant challenge of their work involved engaging students in their learning and addressing disruptive classroom behaviour. Teachers frequently reported on the challenges of managing classroom behaviour, for new and experienced teachers alike. Teachers and parents spoke about frequent disruptions in classrooms and even physical confrontations in common school areas. School leaders spoke also about the struggle with getting some students to attend class at all. A frequent concern expressed by school leaders, teachers and parents was a perceived shortage of operational assistants designated for the purpose of monitoring student behaviour.

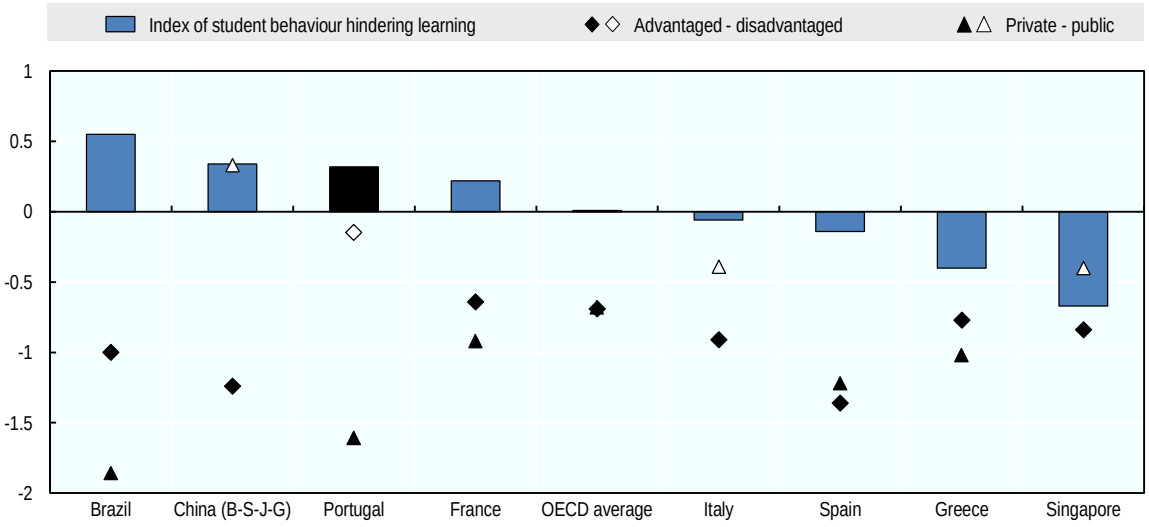
Across the system, representative surveys of Portuguese schools echo these qualitative concerns about the challenges of student behaviour for teachers. In 2015, Portuguese principals of 15-year-olds reported high levels of student behaviour hindering the science classroom learning environment (Figure 4.8). While some of the equity concerns present in other school systems where these disruptive behaviours were more heavily concentrated in disadvantaged or urban schools were not present in Portugal, disruptive behaviour was more common in public schools. Schools where students were more likely to experience disruptive behaviour also had students who performed worse on the PISA science exam. After accounting for the socio-economic profile of students, the relationship between poor classroom behaviour in schools and science performance was still negative, though smaller in magnitude and not estimated at precise enough levels to rule out that there was no relationship between the two.

There are a wide variety of causes of student misbehaviour; successful systems respond by avoiding blame and remaining solution-oriented, but when these conditions persist it impedes students' ability to achieve their goals and hampers teachers' success in the profession. Reasons for poor behaviour in schools include: childhood trauma and associated negative peer affects (Carrell and Hoekstra, 2010[16]; Ozer, 2005[17]); weak or provocative instructional practices (Hyman and Perone, 1998[18]); failure of the curriculum to engage students in culturally relevant ways; mismatches between students' cultural backgrounds or norms and those of the adults in the school (Tyler, Wade Boykin and Walton, 2006[19]; Ware, 2006[20]; Holt and Gershenson, 2017[21]); poor school- and system-level practices to define and instruct students on appropriate behaviour (Thapa et al., 2013[22]); or schools' failure to help students see value in educational success. The issue of mismatch between teachers' training and the cultural backgrounds of their students may be of particular importance in some Portuguese schools with clustered populations of students from non-dominant cultural or linguistic groups (see Chapter 3 for the prevalence of these clustered populations). Less than 20% of 15-year-old students in Portugal had teachers who reported receiving training on teaching in a multicultural or

multilingual setting, the second lowest out of 17 education systems whose teachers responded to the teacher questionnaire on PISA 2015 [17 country average: 32.5%] (Radinger et al., 2018[23]). In addition to the long-run impacts of challenging behaviour on students' future opportunities (Arcia, 2006[24]), negative student behaviour results in teacher burnout and exit from the profession (Aloe et al., 2014[25]).

Figure 4.8. Index of student behaviour hindering learning, by school characteristics

Results based on school principals' reports



Notes: Higher values on the index indicate that student behaviour hinders learning to a greater extent.
Hollow shapes indicate difference not statistically significant.
Select countries presented in the figure represent a mix of Southern European peers, Portuguese-language diaspora (Brazil) and high-performing Asian systems. OECD average represents the average for all 35 OECD systems. Countries and economies are ranked in descending order of index of student behaviour hindering learning.
Source: OECD (2016), *PISA 2015 Results (Volume II): Policies and Practices for Successful Schools*, http://dx.doi.org/10.1787/9789264267510-en, Table II.3.15.

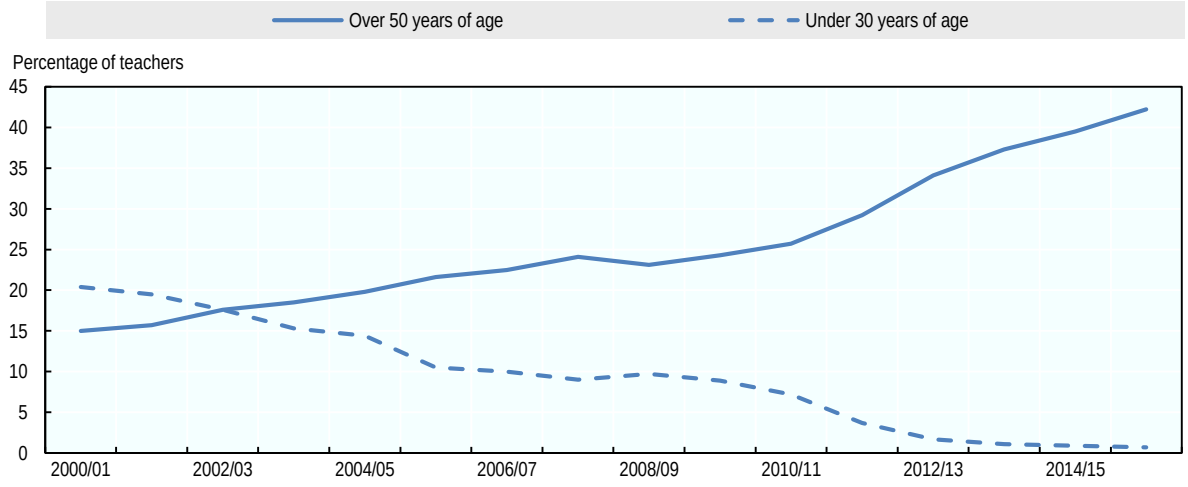
Thus, as a result of various contributing factors including high task demands, the freezing of teacher career progression, political discussions around teacher appraisal and challenges associated with student engagement, a perception exists that among teachers that they are under-appreciated in society. Given the substantial financial investments the Portuguese system already makes in salary, student-teacher ratios and non-teaching time, this challenge appears to be one that will be solved not through additional resource investments but through cultural changes.

The shifting age profile of Portuguese teachers and the structure of the teaching profession pose substantial staffing challenges and some opportunities in the coming years

As a result of various historical and current-day demographic and policy changes, the Portuguese teaching workforce is ageing. When Portugal universalised basic schooling in the 1980s, school populations ballooned, producing massive teacher shortages. Many new higher education institutions opened offering education degrees, and large numbers of new teachers were certified. However, the declining school-age population over the past

two decades has now led to an excess of teachers, primarily those initially trained in the 1980s and 1990s, with few vacancies opening yearly. Current factors contributing to the older teaching workforce include the overall ageing of the population, increases to the retirement age in response to the economic crisis, low interest in entering the teaching profession, selection and assignment structures that heavily favour existing teachers and various other reasons. A challenging facet of the ageing teacher profile is not only that the average or median teacher has become older due to shifts throughout the distribution of teaching ages. Instead, as Figure 4.9 illustrates, the proportion of young teachers (under 30 years old) has declined to less than 1% of all teachers and these young teachers have been substituted by teachers over 50 years of age (this pattern at the secondary levels is essentially identical for 1st and 2nd cycle teachers). Even more concerning, only 18.1% of teachers were under the age of 40 in 2015/16 (DGEEC, 2017[2]). This stark shift in the age profile of Portuguese teachers creates a set of interlinked challenges.

Figure 4.9. Age composition of Portuguese teachers, lower secondary (3rd cycle) and upper secondary, 2000/01 to 2015/16



Source: Ministry of Education (2018), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Portugal*, http://www.oecd.org/education/schoolresourcesreview.htm.

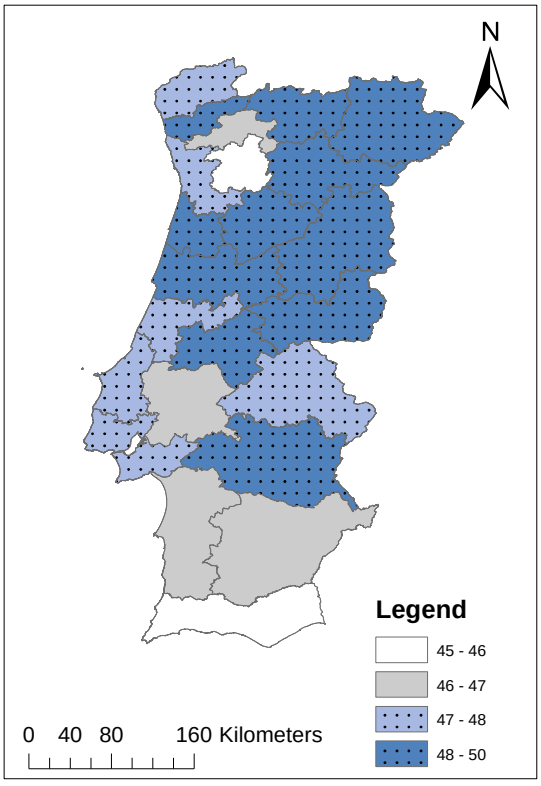
First, the shrinking number of new entrants into the profession and the coming wave of retirements will create both expertise voids and absolute supply problems if there are insufficient numbers of qualified candidates who enter the teaching profession to replace retirees. In other words, even if the system is able to accommodate the wave of future retirements through the recruitment of a fresh cohort of teachers, there will be a missing generation of teachers with 10-15 years of experience who can preserve the skills currently present among Portuguese teachers. There will be limited institutional knowledge available to transmit these skillsets to the next generation of teachers.

Second, in addition to the system-wide challenges presented by the ageing profile of Portuguese teachers, there may arise some subject- or region-specific challenges. Across the Portuguese system, the median age of all teachers was 47. Again, there existed some geographic variation, with schools in the Centre and eastern Norte regions employing, on average, older teachers than the areas around Porto and in Alentejo and Algarve (see Figure 4.10). Nevertheless, these geographical differences were relatively modest with

the range of the cross-regional variation only totalling four years difference in average age.

Figure 4.10. Average age of teachers (permanent and temporary contract)

By NUTS III region, 2015/16



Source of administrative boundaries: Direção-Geral do Território (2016), Official Administrative Maps of Portugal - Version 2016 [*Carta Administrativa Oficial de Portugal - Versão 2016*], http://www.dgterritorio.pt/cartografia_e_geodesia/cartografia/carta_administrativa_oficial_de_portugal_caop_/caop__download_/carta_administrativa_oficial_de_portugal___versao_2016/.
Source: DGEEC administrative data, 2015/16.

More challenging will be the cross-subject area and cross-region, within-subject, variations in age profiles. For instance, while 22% of all mathematics teachers and 30% of physical education teachers are under the age of 40 at the secondary levels, only 7.1% of teachers of Portuguese language and literacy are under 40. In the Centro region, only 4.4% of Portuguese language teachers are under the age of 40, in the Metropolitan area of Lisbon, 55.7% of Portuguese teachers are over 50 and in the Alentejo region less than 14% of chemistry and physics teachers are under 40 (DGEEC, 2017[2]).

Third, the ageing teaching force may result in frequent absences due to illness and medical leave. Multiple stakeholders reported on the financial, logistical and educational impacts associated with high levels of substitute teachers replacing teachers on medical leave. Portuguese administrative data shows increasing rates of absenteeism among teachers since April 2014. At a minimum there is a superficial correlation between age and absences; Portuguese teachers who are older also take more days of sick leave per

year (European Commission, 2017[26]). This appears to be a recent phenomenon as TALIS 2013 suggests that principals representing only 4.3% of lower secondary teachers consider teacher absenteeism to be an issue on a weekly basis (Table 2.21 in OECD (2014[6])). It is not clear from the TALIS data whether principals would interpret excused absences or medical leave as part of absenteeism. Thus, though it may be politically sensitive, it would be valuable for the ministry to continue to examine systematically the rate, patterns and reasons for teacher absences.

While demographic patterns and retirement age policies clearly contribute to this ageing teacher profile, the structure of the teaching profession prioritises early entrance and seniority benefits. Entry into the professional teaching career requires many years of service as a temporary contract teacher which involves low salaries and frequent position changes. Permanent teaching candidates receive bonus points in the national ranking system for the number of years of temporary contract teaching they have completed. No credit is given for years of work in the private sector. Further, once teachers have attained professional status, they progress from one salary step to the next based almost exclusively on years of service, with increasing salary returns at the end of teachers' careers. This pattern runs counter to evidence that schools can improve teacher recruitment and retention rates as well as student learning outcomes by restructuring salary schedules to reward additional years of experience at higher rates earlier, rather than later, in the career trajectory (Hendricks, 2015[27]). Combined, Portuguese provisions make it difficult to recruit mid-career changers or to attract early-career candidates interested in exploring the profession. Unfortunately, there exists little appetite among the current teaching corps to change the model of the career as permanent teachers benefit from the closed nature of the profession and temporary contract teachers who have put in several years of service do not want their years of investment to count for nothing.

While the ageing profile of the teaching force clearly presents challenges, it may also present an opportunity to revitalise the profession with new ideas, higher skill levels and professional expertise from career changers. Much depends on how Portugal conceptualises and brands the teaching profession and opportunities for development within it.

Initial Teacher Preparation (ITP) and induction programmes do not sufficiently prepare new teachers with the skills needed to enter the classroom

The applied requirements of Initial Teacher Preparation (ITP) programmes are minimal and insufficiently rigorous to adequately prepare prospective teachers for the challenges of classroom teaching. As is common across most OECD school systems (OECD, 2018[15]), the average skill profile (as measured by national university entrance examinations) of entrants into ITP programmes rank 21st out of 22 areas of tertiary study (Direçao Geral Ensino Superior, 2017[28]). Stakeholder groups expressed concerns about the prestige and rigour of these ITP programmes.

Further, Portugal does not set minimum requirements for the number of credit hours prospective teachers must accumulate as student teachers in in-school placements. While the total number of required credit hours in the category of pre-service professional training falls somewhere in the middle of the European average, these hours include coursework in psychology, teaching methods and methodology. Unlike 16 European countries that establish minimal European Credit Acquisition and Transfer System (ECTS) credit hours for student teaching in schools ranging from 5 to 60 credits (125-1 800 hours of work), Portugal grants higher education institutions autonomy in

deciding how many hours are required (EC/EACEA/Eurydice, 2015[29]). On the other hand, Portugal does require the co-operating/supervising teacher in the school to have at least five years of experience and to be selected by the institution of higher education (IHE). It is the IHE's responsibility to screen for the quality of co-operating teachers and to provide training in mentoring student teachers. These are critical conditions to create an effective student teaching experience (Greenberg, Pomerance and Walsh, 2011[30]) and are to be commended in Portugal.

Once through the formal stage of initial teacher education, early-career Portuguese teachers receive minimal formal support. Portuguese teachers have access to the lowest levels of formal induction programmes of any TALIS 2013 system (see 0, Figure 4.B.3). Furthermore, stakeholders reported during the review visit that since almost no teachers (temporary contract or permanent) receive ratings of "insufficient" or "regular", progression from temporary to permanent status is primarily a function of years of service. Thus, there exists limited opportunity to provide targeted support to teachers during the temporary-contract induction phase based on appraisal results.

An inefficient system of teacher distribution through national assignment creates instability and inequities

While transparent standards exist for ranking teachers in priority order in the initial assignment process, schools and teachers have limited ability to express their preferences for a specific candidate or school profile. This results in a mismatch between the needs of schools and teachers' interests and skills. While temporary contract teachers with high polytechnic or university marks, high student-teacher ratings and several years of teaching experience have a high likelihood of receiving their first choice in school, other teachers may receive schools that rank lower on their preference list or that they have no interest in at all. In interviews with school staff, several schools reported large proportions of teachers who did not enjoy teaching in their school. When asked in 2013 on the TALIS survey, nearly one-quarter (24.0%) of Portuguese lower secondary teachers "strongly agreed" or "agreed" that they would like to change to another school if it were possible. While several teachers in schools serving many low-income students or with weak student results indicated they were happy to work in these schools, on the whole teachers' job satisfaction was lower when they had students in their classroom who were low academic achievers (Table 7.7-7.9 in OECD (2014[6])). This constrained-choice teacher assignment policy creates conditions in which some teachers may be dissatisfied with the school in which they work, and this appears to disproportionately affect low-income and low-achieving students.

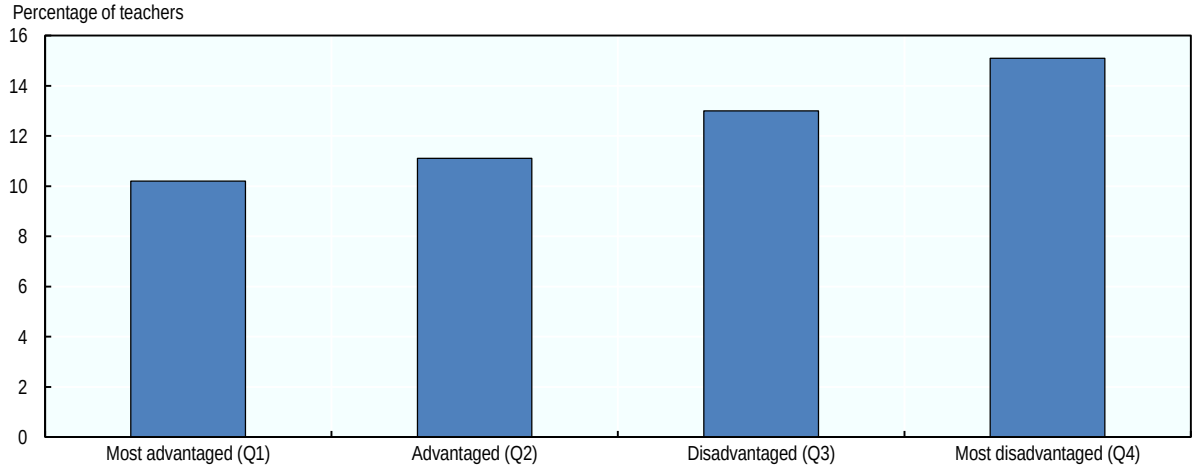
In addition to the general mismatches between school needs and teacher interest, the temporary-contract teacher placement process results in frequent movement of teachers across schools and the delayed placement of teachers in schools. This leads to instability in the teaching force in schools especially in high-needs areas and creates an insider-outsider staffing structure. While stakeholders report that beginning-of-year teacher placement processes have improved somewhat in the past two years, there continue to be significant delays in placing a teacher in each classroom at the start of the year. Some schools indicate that it could take a month at the beginning of the year for all classes to have an assigned teacher. Despite estimates made of the needed teaching positions in the spring of each year, there are invariably cases in which too few teachers have been assigned to a school for the required number of students. Since schools may not hire teachers directly when they become aware of these gaps but must wait for the centralised process to assign teachers, delays inevitable occur. In other cases, class numbers are

accurately estimated but teachers are still not assigned on time. In contexts outside of Portugal, there is strong empirical evidence that assigning teachers to a classroom once the year has already started creates negative impacts on student learning (Papay and Kraft, 2016[31]). Teachers in these positions are seen as temporary members of the school community, sometimes piecing together positions across multiple schools and struggling to feel fully integrated into the faculty.

The disruptive effects of temporary, contract teachers are felt more intensively by some schools and profiles of students than others. In 2015/16, as noted above, some school clusters had teaching faculties that are one-third to one-half temporary teachers. This uneven distribution of temporary and less experienced teachers results in resource inequities for high-needs schools. The proportion of temporary teachers in 2015/16 was higher in schools with greater socio-economic needs (Figure 4.11), with an average of less than 10% of temporary teachers in schools with the least disadvantages (1st quarter) and over 14% of temporary teachers in schools that are most disadvantaged (4th quarter).

In addition to disparities between low- and high-socio-economic status schools, geographic inequities exist as well. There are no regional corrections in the planning of class size which is mechanically related to the number of teachers in a school. Rural schools tend to have lower enrolment, including situations in which a school may have only a single class per year. This disparity results in the differential allocation of resources between rural and urban schools, reflected in lower student-teacher ratios in rural schools. Administrative data indicates that schools physically located in the bottom quarter of municipal population density have a student-teacher ratio of 11.5:1, whereas schools in the top quarter of most densely populated municipalities have student-teacher ratios of 14.5:1.

Figure 4.11. Proportion of temporary teachers in a school by school-level index of socio-economic challenge



Note: Index of socio-economic disadvantage is measured by rank percentile-ordering the proportion of students within a school receiving social support type A (ASE A) and average years of maternal education at the school level. The average of the 2 ranks was then demeaned (mean = 0) and assigned a standard deviation of 1. High values of the index indicate high levels of socio-economic challenge.
Source: DGEEC administrative data, 2015/16.

Finally, standards for initial teacher selection do not match internationally established evidence on best predictors of teacher effectiveness, nor do they prioritise placement of strongest teachers into schools with the greatest levels of need. Teachers are assigned in order of preference based on their tertiary academic performance and years of teaching experience. However, research in the United States context consistently finds no relationship between advanced tertiary degrees and performance in university with student outcomes (e.g. Rockoff et al. (2011[32])). Furthermore, after the first few years in the profession it is not evident that additional experience improves teaching skill (e.g. Rockoff (2004[33]) and Boyd et al. (2008[34])). One potential advantage of the temporary, contract teaching policy is that it might provide an opportunity to closely evaluate a teacher's skill and ability to grow before deciding to offer a permanent contract but the teacher appraisal policies explicitly preclude the use of observation in evaluating temporary teachers. Furthermore, even with the existing mechanism to define the ranking of prospective teacher, no priority is provided to schools educating greater proportions of high-needs students to advantage their recruitment of the highest-rated teachers. Finally, the weight given to higher education marks creates an incentive to matriculate in the institution where the likelihood of high grades is the highest. Some stakeholders expressed concern that this created a perverse incentive in which teaching candidates would either begin in or transfer into a less rigorous higher education provider where they would be guaranteed good marks but not necessarily a strong education.

Repeated and ongoing concerns exist about the correct level of school staffing, particularly as it relates to non-teaching staff

Over the course of the review visit, stakeholders consistently reported insufficient numbers of student and learning support staff such as teaching aides, operational assistants, psychologists, guidance counsellors, etc. This is in line with TALIS 2013 results where principals representing 66.8% of teachers in Portugal reported insufficient support personnel in their schools.

However, the OECD average of the number of aides/assistants per 1 000 students in 2010 for 12 OECD countries who kept statistics on this was 7.3 assistants/1 000 students (Masdeu Navarro, 2015[35]). This is well below the proposed ratio of operational assistants to students from the ministry, which calls for 11 assistants for 1 000 students as a baseline number, with more added based on school need. Several hypotheses may explain this discrepancy. It may be that all 12 of these countries were even more severely understaffed than Portugal. It may be that the level of student need is higher in Portugal than in other countries. Or, it may be that Portuguese educators feel the need for support staff more acutely than educators in other school systems. As in other areas, the significant challenge in assessing the appropriate level of resource allocation in Portugal is that this topic has not been evaluated. No studies were identified by the review team estimating what are appropriate levels of student support staff or what the comparative levels of need are for schools with different demographics. By comparison, in the United States, evidence exists both on the optimal guidance counsellor to student ratio (250:1 on average for all schools) (NACAC, 2018[36]) as well as on the causal impacts of guidance counsellors on student outcomes (Hurwitz and Howell, 2013[37]).

In addition, in the particular case of operational assistants, review interviews revealed several bureaucratic obstacles to the smooth staffing of these positions. In some municipalities, stakeholders stated that operational assistants are responsible for multiple tasks in and outside of the education sector, resulting in tasks which are delegated to them going incomplete. Additionally, when new positions are opened or vacancies are

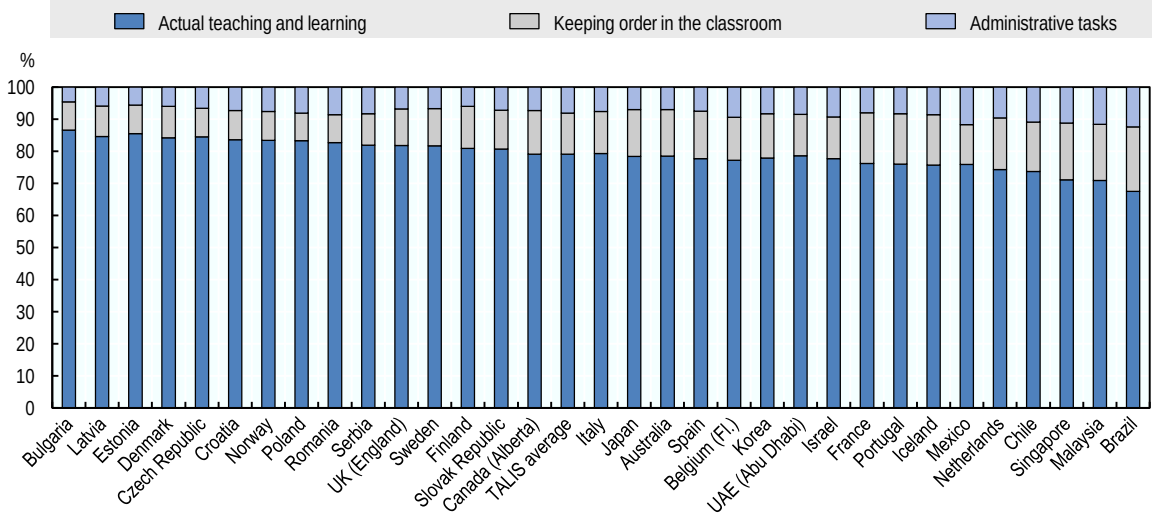
identified, stakeholders report long delays in hiring operational assistants. Finally, stakeholders reported that when operational assistants go on extended medical leave (i.e. absent for more than 30 days), they are not replaced. It was not clear to stakeholders what the rationale behind the practice was (financial savings, hiring processes or other), but school staff reported this creates a burden within the school community as others need to assume these responsibilities.

Pervasive ineffective use of teachers' time during the school day

There is a failure to maximise the potential of teachers' teaching and non-teaching time in Portugal. First, Portuguese teachers spend considerable time on administrative and student management tasks during their classes. As reported in the TALIS survey, Portuguese teachers' actual teaching time in the classroom is one of the lowest across TALIS 2013 countries: 76% of the lesson time on actual teaching, 8% on administrative tasks and 16% on keeping order in the classroom (Figure 4.12). Though cross-system comparisons should again be made cautiously, it is self-evident that if time is not spent on teaching and learning, students have limited opportunity to learn in class.

Figure 4.12. Distribution of class time during an average lesson

Average proportion of time lower secondary teachers report spending on each of these activities in an average lesson:



Notes: These data are reported by teachers and refer to a randomly chosen class they currently teach from their weekly timetable.
Countries are ranked in descending order, based on the average proportion of time teachers in lower secondary education report spending on actual teaching and learning.
Source: OECD (2014), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, http://dx.doi.org/10.1787/9789264196261-en, Table 6.20.

Additionally, Portuguese schools fail to systematically take advantage of non-instructional time to promote improved collaboration, instruction and learning. As noted, Portuguese teachers have some of the most generous allocations of instructional hours in the OECD. Many of the countries that require similarly few total instructional hours and have low proportions of statutory working hours devoted to instruction are among the highest PISA-performing nations. Countries such as Japan, Korea and Latvia and Norway

have long-documented traditions of using teachers' non-instructional time to engage in intensive, job-embedded professional development to improve teachers' skills. However, during the review visit, the most commonly reported use for non-instructional time was on individual or small-group student tutorials. These tutorials have the aim of supporting students who have struggled in class. Some teachers have formally assigned teaching hours devoted to tutorial instruction and this has increased from between 3% and 4% of total teaching hours in the years 2009-12 to between 5.5% and 6.6% in the years 2013-17 (see 0, Table 4.B.1). However, in an unusual accounting of working time, tutorials may also be assigned activities for non-teaching hours as well.

Thus, while sizeable proportions of the school day are spent in tutorials, no formal evaluation of their impact on student learning outcomes has been conducted. If these tutorials result in improved learning, they could be considered valuable investments of staff time (strong evidence does exist in other contexts on the benefits of tutoring, e.g. Kraft (2015[38]), Ander, Guryan and Ludwig (2016[39]) and VanLehn (2011[40]). However, teaching staff time is the most significant financial investment in the education system; thus, inefficient use of teachers' time results in significant waste. In the absence of evidence on the benefits of these tutorials, the tutorials may be simply more of the same instruction with fewer students at a time.

There are a lack of effective structures and strategies to improve the teaching practice

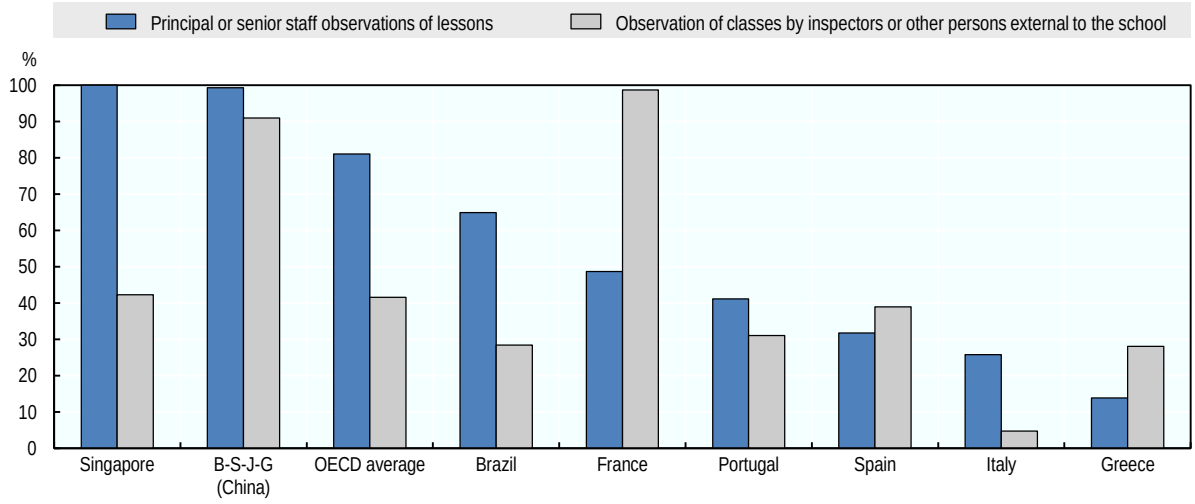
There is an insufficient focus on the improvement of the teaching practice over the course of the career in Portugal. While teachers report a degree of goodwill towards each other, there exists a failure to maximise the potential of mentoring, induction and ongoing professional learning opportunities to promote system-wide priorities. Teachers report in large surveys such as TALIS 2013 that they work well together, and this was corroborated by generally positive anecdotal accounts of teachers describing relying on each other for help. However, when asked about specific practices demonstrated to improve instructional practice such as observing a colleague teach (Papay and Johnson, 2012[41]) or others that have theoretical justification despite mixed evidence such as co-teaching in a classroom (Hattie, 2008[42]; Murawski and Lee Swanson, 2001[43]), large proportions of Portuguese teachers report never having engaged in these activities (49.5% never co-taught; 71.2% never observed a colleague (Table 6.15 in OECD (2014[6]). Thus, while there may be goodwill between teachers, this is not being systematically leveraged to encourage teachers to engage in activities that will directly improve their practice.

As noted previously, few Portuguese teachers participate in formal induction programmes, few cost-free opportunities exist for ongoing professional development and even fewer are paid accompanied by release time. Teachers have time in their schedule for departmental meetings but no stakeholders reported activities in these meetings connected to deep learning such as critiquing others' lesson plans, looking at student work or debriefing peer observations. MacDonald (2011[44]) describes this pattern in schools as a "culture of nice" where teachers appreciate each other's company but resist providing meaningful feedback that improves school outcomes. Combined, Portuguese lower secondary teachers reported feeling the lowest levels of professionalism – as measured by an index measuring activities such as participation in and support for various formal training activities, autonomy over curriculum and pedagogy, the receipt of classroom feedback and participation in peer networks – than in any of the 36 TALIS 2013 participating countries (Figure 2.2 in OECD (2016[45])).

This lack of attention to the development of skills for classroom observation and feedback for the purposes of instructional improvement is evident in school practices and policy implementation. While observation by formal school leaders or external observers can be framed as an accountability process, these observations can also be used to diagnose instructional problems of practice in the school and plan group or individualised professional development. However, as Figure 4.13 demonstrates, only 41% of Portuguese teachers work in schools where principals or senior staff observe lessons to monitor teaching practice and even fewer external observations occur (31%). This accords with findings at the time of the 2012 *Review of Evaluation and Assessment in Education in Portugal* where the review team found that teacher appraisal policy provided few opportunities for feedback on practice and there were limited mechanisms to train school leaders in observation and feedback practices (Santiago et al., 2012[7]). These conditions have not changed substantively and, if anything, have worsened as career progression has been frozen since the review, obviating the accountability value of classroom observation. Even in the absence of accountability-driven observation, formative teacher appraisal driven by schools could have occurred while teachers' career progression was frozen. Even without formal stakes, teachers could have received high-quality feedback or suggestions for professional development. However, no stakeholders reported that it was common practice for principals (or deputies) to observe classes. In some schools, there were reports of department co-ordinators observing struggling teachers but this was not a systematic practice.

Figure 4.13. Monitoring teaching practices, PISA 2015

Percentage of students in schools that use observation to monitor teaching practices, results based on school principals' reports



Note: Select countries presented in the figure represent a mix of Southern European peers, Portuguese-language diaspora (Brazil) and high-performing Asian systems. OECD average represents the average for all 35 OECD systems. Countries and economies are ranked in descending order of the percentage of students in schools that use principal or senior-staff observations of lessons to monitor teaching practices.
Source: OECD (2016), *PISA 2015 Results (Volume II): Policies and Practices for Successful Schools*, http://dx.doi.org/10.1787/9789264267510-en, Table II.4.39.

In addition to generalised concerns about the lack of teacher development opportunities, there are no targeted efforts to address the specific needs of teachers in high-needs schools. As noted in Chapter 3 and earlier in this chapter, there are significant concerns

about the academic and socio-emotional barriers to success for students from low socio-economic backgrounds. However, insufficient attention is paid to developing the pedagogical and socio-emotional support skill sets of teachers working in high-needs schools. As noted above, less than 20% of Portuguese teachers have received training on teaching in multicultural or multilingual settings, and no programmes exist to prepare teachers to work in high-needs communities. Contrast this approach with, for example, Uruguay where the Community Teachers Programme (*Programa Maestros Comunitarios*) allocates one or two community teachers to disadvantaged schools. Teachers are selected based on provenance from or familiarity with the community in which they will be working and receive specific training in serving the high-needs students from this area (Santiago et al., 2016[46]).

In addition, even when conditions are appropriate for ongoing learning, the broad coverage and prescriptive nature of the national curriculum constrains pedagogical autonomy and innovation, especially in examination years. Many teachers expressed concern that the broad and superficial skills required in the national curriculum inhibited teaching for understanding and resulted in students acquiring superficial knowledge. They indicated that in order to effectively teach the curriculum, they needed to teach in rapid, sequenced, linear ways which led to extensive lecturing, with limited opportunities for re-teaching content to students who did not understand.

While there may be promise in the Project for Autonomy and Curriculum Flexibility (PACF) contracts currently in place in 235 schools, with a plan to extend them to all schools in 2018/19, there remain tensions between this flexibility and the national curricular expectations. As the OECD review of *Curriculum Flexibility and Autonomy in Portugal* (OECD, 2018[14]) concludes, there is a tension between promoting active learning, formative assessment and teaching for a national exam. Many teachers in stakeholder groups during the review visit indicated that these autonomy contracts did little to relieve curricular pressure. In one school visit, stakeholders shared that the only added autonomy provided by their contract was an additional 22 hours of instruction and that the teacher who taught during these hours was centrally allocated. A review of an example school contract found the following available autonomies for one school cluster of 1 305 students: 1 teacher to be allocated to the *Turma+* project to add an additional class to 1 year to support struggling students (contingent on eligibility of the project for European funding), 24 teaching hours for a "Reading and Writing Workshop", 20 teaching hours for "Practical Science Classes", 2 student support staff and 1 permanent substitute teacher. If these reports are indicative of the typical levels of added resources and autonomies associated with these contracts, it should not be expected that they would offer substantial opportunities to create pedagogical innovations.

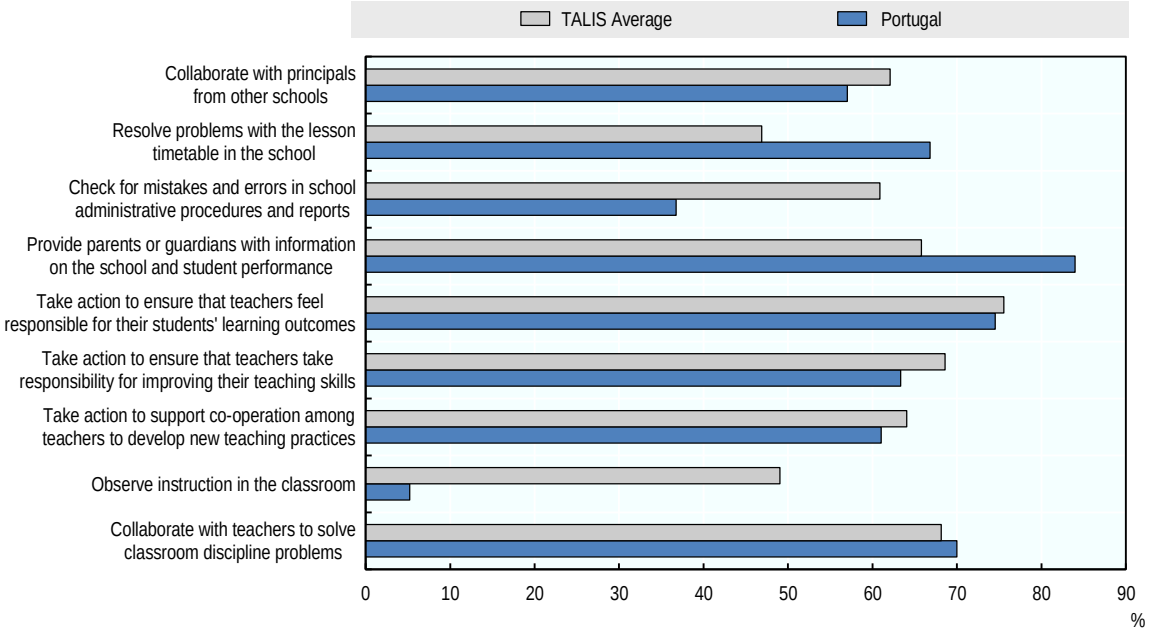
Finally, schools struggle to dismiss teachers even in extreme cases of underperformance. According to stakeholders, there are limited mechanisms to remove teachers, even when their behaviour is detrimental to the learning environment and safety of students. School principals representing 75.8% of Portuguese lower secondary teachers indicated on TALIS 2013 that teacher appraisal would "never" lead to dismissal or non-renewal of a contract (TALIS average: 44.0%) and only 1.8% indicated that it would lead to dismissal "most of the time" or "always" (Table 5.3.Web in OECD (2014[6])). This accords with the OECD collection of data for primary and upper secondary teachers as well (Tables D7.5a-5c in OECD (2015[47])). Several family members reported their concerns with small numbers of teachers who were derogatory or chronically absent but they reported feeling generally resigned to their children having these experiences, noting that there was no possibility of dismissing the teacher.

Formal leadership skills and responsibilities are insufficiently developed and overly focused on operational and managerial tasks

As evident in both system-level data collection and stakeholder reports during the review visit, there is an insufficient conception of school leaders as responsible for instructional leadership. Portugal has the lowest percentage of school leaders observing classroom instruction among OECD and partner countries, with only 5.2% reporting that they have observed classroom instruction "often" or "very often" in the past 12 months (see Figure 4.14). Additionally, Portuguese principals report participating in other activities such as promoting the use of new teaching practices, promoting responsibility for improving teaching skills or student outcomes at rates lower than the TALIS average. By contrast, Portuguese school leaders spend more time working on discipline problems, and especially on family interactions and the schedule of classes. These accord with impressions during school visits in which members of the Board of Directors said that they rarely engaged with teachers about instructional or pedagogical issues. Principals indicated that if a teacher was struggling, they would speak to the departmental head to provide help but did not seem to view this as primarily their responsibility.

Figure 4.14. Principals' leadership

Percentage of lower secondary education principals who report having engaged "often" or "very often" in the following leadership activities:



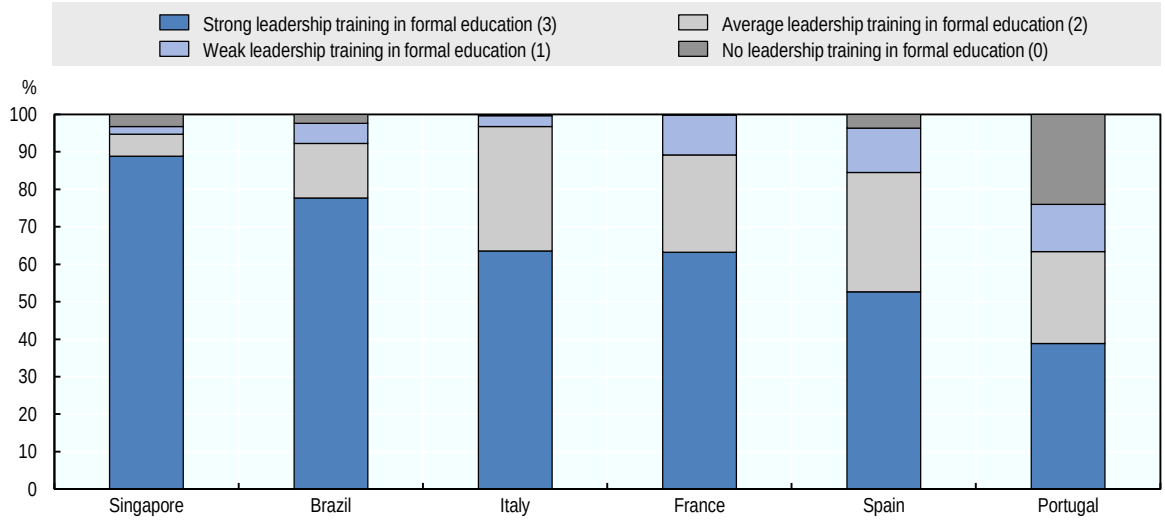
Source: OECD (2014), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, http://dx.doi.org/10.1787/9789264196261-en, Table 3.2.

This lack of focus on instructional improvement may stem from the fact that the role of school leader is not conceptualised as a profession into itself. The role of principal is an elected office; this results in the role being responsive to the General Council which is often dominated by fellow teachers, rather than student interests. This challenge also originates in the initial preparation requirements to become a school leader. While formal leadership training is a bonus in candidates' applications to the role of cluster principal, it

is not a requirement to become a principal. As evident in Figure 4.15, only 39% of Portuguese principals report having strong leadership training in their studies, significantly below the TALIS average and higher only than Serbia and Croatia (not pictured). A full 24% of Portuguese principals report having no leadership training, the highest proportion in TALIS. These values likely skew to even less formal leadership training for deputy and assistant principals.

Figure 4.15. Principals' formal education, including leadership training

Percentage of lower secondary education principals who report having received leadership training in their formal education



Notes: The leadership training index was constructed from the following variables: i) school administration or principal training programme or course; ii) teacher training/education programme or course; iii) instructional leadership training or course. Responses indicating "never" were coded as zero (0) and responses indicating that the training had occurred "before", "after" or "before and after" were coded as one (1). Each respondent's codes were summed to produce the following categories: 0 (no training), 1 (weak leadership training), 2 (average leadership training) and 3 (strong leadership training).
Select countries presented in the figure represent a mix of Southern European peers, Portuguese-language diaspora (Brazil) and high-performing Asian systems. TALIS average represents 31 participating countries with comparable data. Countries are ranked in descending order, based on the percentage of principals who received strong leadership training in formal education.
Source: OECD (2014), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, http://dx.doi.org/10.1787/9789264196261-en, Table 3.11.

In addition to limited pre-service development, Portuguese leaders have access to minimal ongoing professional development for the purposes of developing instructional leadership capacities. This challenge was first highlighted at the time of the OECD *Review of Evaluation and Assessment in Education: Portugal* (Santiago et al., 2012[9]). The review team noted that skills for teacher appraisal were underdeveloped. Limited master's programmes for educational evaluation existed. School leaders did not feel empowered to exercise their professional judgements of teachers' skills. Evaluators did not have sufficient legitimacy in the eyes of evaluees. Finally, minimal training had been provided (Santiago et al., 2012[7]). All these problems continue to exist at the time of this review, with the added challenges of school leader turnover since the first round of evaluation training and limited implementation of teacher evaluation procedures as a result of career progression being frozen.

Portuguese school leaders report limited opportunities for professional learning. They collaborate with other school leaders at lower rates than the TALIS average (Figure 4.14) and less than 11% participated in a professional network or mentoring activity compared to a TALIS average of 51.1%. 23.5% of Portuguese lower-secondary principals did not participate in any professional development in the past 12 months (TALIS average: 9.5%) (Table 3.14 in OECD (2014[6])). Thus, both prior to and during their career as school leaders, Portuguese principals have little opportunity to grow in their knowledge and skill sets.

Policy recommendations

Reconsider teacher career structure to respond to shifting teacher demographics

The average age of Portuguese teachers has increased substantially over the past decade, resulting in an above-OECD average, and in particular a large proportion of teachers over the age of 50, with almost no teachers under 30. The increasingly older profile of teachers has both financial and educational implications. From an educational standpoint, students may suffer from not being exposed to a range of teacher profiles during their educational trajectory. A large body of evidence indicates that teachers improve their effectiveness tremendously in the first years of their career but they improve only marginally (if at all) after five years or so (Rockoff, 2004[33]; Rivkin, Hanushek and Kain, 2005[48]; Harris and Sass, 2011[49]; Wiswall, 2013[50]). Though debate persists about the extent of the flat-lining of teachers' productivity and is subject to methodological specifications (Papay and Kraft, 2015[51]), teachers with more experience are incontrovertibly costlier to employ. Recent increases in the Portuguese age of retirement as part of its austerity measures were intended to reduce the country's pension commitments. Portugal now has the third highest standard retirement age in the OECD at 66.2 years (Figure 3.8 in OECD (2017[52])) and it is projected to grow to 68 for a 20-year-old entering the labour market in 2016. These shifts will exacerbate the monochromatic, older profile of Portuguese teachers and continue to impose strains on the educational portion of the state budget.

Portugal should consider offering voluntary retirement buyouts with no pension penalty incurred. As the 2017 OECD report *Pensions at a Glance* argues, introducing flexible retirement rules carries many benefits, with some pitfalls to avoid (OECD, 2017[52]). Offering early retirement can provide a mechanism for ageing teachers to leave a mentally and physically demanding profession in a dignified manner. It can also limit the negative effects of teacher absenteeism resulting from incapacitation common to old age. Additionally, opening up additional teaching positions may stimulate new entrants into the profession. This infusion of new teachers could also receive cohort-wide training in line with national priorities to shape the development of the profession for the next generation. Finally, shifting the age profile of the teaching profession can reduce expenditures within the education budget by replacing high-salary senior teachers with lower-cost early-career ones. The School Resources Review of Lithuania provides some additional strategies to manage the transfer of knowledge from soon-to-be retirees to the rest of the profession and highlights some caution about appropriate long-term planning to avoid cycles of teacher oversupply and shortages (Shewbridge et al., 2016[53]).

However, flexible retirement policies should be accompanied by other complementary labour market policies to avoid possible negative side effects. Opportunities for part-time teaching should exist to make early retirement a financial possibility. Teachers need clear and honest information on the benefits they can expect to receive if they retire early to

assist with making an early retirement decision to avoid mis-estimation of their financial needs in retirement (OECD, 2017[52]).

Portugal may also consider shifting the progression of teacher salary schedules to prioritise higher levels of pay in the initial years of the career, with flatter increases later on. As Figure 4.3 above shows, the rates of teacher salary increases grow after 22 years of service, in both nominal and percentage terms. Given the above evidence that the bulk of teacher effectiveness increases occurs during the early years of their careers, this may not be the most effective way to apportion incentives. As a mechanism to attract and retain new teachers to the profession and ensure they remain during their early improvement years, Portugal could consider shifting the largest salary increases to earlier in the career progression. Salary increases could be smaller in later years, resulting in an overall budget-neutral reform. Estimates in the United States context reveal the potential for improved student learning gains from just this sort of budget-neutral change to the teacher salary structure (Hendricks, 2015[27]). Austria pursued a similar approach in 2015 to attract and retain high-skill young teachers (Nusche et al., 2016[54]). However, important cautions exist: first, such an approach has high budgetary costs in the short term until current high earners at the end of their careers retire; and second, Austria created a transitional plan that allowed teachers to opt in or out of the new salary schedule, coupling the higher early career pay with an additional two hours of instruction per week. Less than 5% of new teachers chose to participate and the current government has now expressed interest in abandoning this approach.

Explore intensive residency models for teacher preparation

Teacher preparation in Portugal is unduly focused on disciplinary knowledge at the expense of opportunities to practice pedagogical skill. Wide variety exists in country practice but broad international agreement exists on the importance of opportunities to practice the skills required of teaching during initial teacher education (OECD, n.d.[55]).

Portugal should consider piloting an ISCED level 7 training programme that prioritises the development of applied pedagogical skills in an intensive teaching residency. Models of teacher residency exist in OECD countries developed based on the medical residency system (see Box 4.3 for examples from the United States). These residencies integrate aspects of traditional university classroom preparation with the on-the-job learning of alternative pathways into an immersive learning experience. The model in Portugal could include a selective application process targeting top performers in ISCED level 6 university subject-area courses. This would ensure that these prospective teachers would meet the high subject-matter expertise standards. Candidates would then be placed for a one-year residency in a local school. Prospective teachers could spend four days per week in the classroom with a highly-effective experienced teacher, progressively taking more responsibility for leading the classroom. The fifth weekday could be spent learning with the cohort of residents at a local polytechnic or university.

The effective development of this pilot depends on the quality of the polytechnic/university partnership, the skill of the host classroom teachers and the design of the residency pilot in such a way to evaluate its effectiveness. In order for the residency to provide the appropriate mix of skills, the co-operating polytechnic/university department will need to agree to design the programme curriculum to align with the goals of the project. Specifically, the coursework should efficiently introduce key theory around learning sciences, while primarily supporting teaching candidates in building skills in response to the realities they face in their classrooms. This may mean participating in

non-traditional learning pedagogies such as role-play, lesson plan workshopping, etc. A second key determinant of the success of the pilot will be the quality of the co-operating teachers in which the residents are placed. Working with school leadership, residency programme leaders should work to identify high-capacity experienced teachers to serve as host classrooms for teaching candidates. Instructional as well as adult coaching skills are important in these roles. Finally, if the pilot programme is to provide valuable lessons for the broader development of teacher education in Portugal, formal evaluation structures should be in place. The evaluation should be comprehensive, measuring growth in prospective teacher skills, host school satisfaction with resident teachers and teachers rank in the national teacher selection process. In addition to these process goals, formal outcome impact assessment can be accomplished by designing the residency application process to allow identification of the causal impact of participating in the residency by comparing the growth of the students of teachers who just miss being accepted into the residency programme with those who just make it in, or by the random assignment of classes to residency graduates in their teaching placements. The design of such a pilot should consider the most appropriate actor to manage the pilot, either a unit within the Ministry of Education or the Ministry of Science, Technology and Higher Education, a joint venture between them or a non-governmental actor.

Box 4.3. Urban teacher residencies (UTRs) in the United States

Urban teacher residencies (UTRs) integrate aspects of traditional and alternative teacher preparation programmes. Typically run by a US school district independently or in partnership with a non-profit organisation, residency programmes select teaching candidates to work alongside a mentor for a full year before becoming a teacher of record. Residents also complete a set of coursework leading to both state certification and a master's degree from a partner university. In exchange for tuition remittance and a residency-year stipend, they commit to teaching in the district for a specified period, generally three to five years.

The UTR model has spread rapidly in the United States since the first programmes were launched in Boston, Chicago and Denver between 2002 and 2004, attracting substantial public and philanthropic investment. A 2016 survey of the residency landscape found at least 50 residency programmes nationwide (Guha, Hyler and Darling-Hammond, 2016[56]). The National Center for Teacher Residencies lists 28 programmes serving some of the largest US school districts (e.g. Chicago, Los Angeles and New York) (National Center for Teacher Residencies, 2018[57]). The federal government has created targeted funding programmes to support UTRs and 15 states proposed in 2018 to leverage residencies to improve teacher effectiveness (National Center for Teacher Residencies, 2018[58]). The practice-based training model developed by UTRs has also influenced broader conversations about the reform of university-based teacher preparation programmes, with an intra-state educator preparation accreditation governing body articulating clinical partnerships as one of five core principles of effective initial teacher education programmes (Council for the Accreditation of Educator Preparation, 2013[59]).

Most studies reveal improved retention outcomes for teachers entering the profession through these residencies, with potential but not definitive learning gains for students of teachers prepared through the residency pathway. Five empirical studies found teacher retention rates between 10% and 50% better than non-resident teachers in the same

district (Guha, Hyler and Darling-Hammond, 2016[56]). The only existent causal evaluation of a UTR on student learning growth revealed mixed outcomes. Papay et al. (2012[60]) found that the Boston Teacher Residency produced graduates who were more likely to remain teaching in the Boston school district. However, they improved their students' literacy skills at no higher rates than their early career peers who had not participated in a UTR. They initially underperformed their early career peers in improving their students' mathematics performance, but outperformed them by their 4th year of teaching. The authors conclude that the programme's overall effect was at best likely to improve overall student achievement only modestly.

Sources: National Center for Teacher Residencies (2018), *NCTR's Teacher Residency Program Partners*, https://nctresidencies.org/about/who-residencies-serve/; National Center for Teacher Residencies (2018), *Part 2: States' ESSA Plans and Teacher Residencies - NCTR*, https://nctresidencies.org/part-2-states-essa-plans-teacher-residencies/; Guha, R., M. Hyler and L. Darling-Hammond (2016), *The Teacher Residency: An Innovative Model for Preparing Teachers*, https://learningpolicyinstitute.org/product/teacher-residency; Council for the Accreditation of Educator Preparation (2013), *2013 Council for the Accreditation of Educator Preparation Standards*, CAEP, Washington, DC; Papay, J. et al. (2012), "Does an urban teacher residency increase student achievement? Early evidence from Boston", http://dx.doi.org/10.3102/0162373712454328.

Though a teacher residency pilot could catalyse meaningful shifts towards more applied pre-service training in other initial teacher preparation programmes, additional work in tandem with higher education institutions will be required to fully reform the pre-service curriculum.

Examine short- and long-term approaches to better match teachers' skills and interests with schools' needs

Portugal is one of a handful of school systems that places teachers in schools in a national assignment process. While teachers can indicate preferences for regions or schools, these are dependent on their ranking in the placement process. Schools have no say in who they receive through either the permanent or temporary teacher assignment process. There is a rich economic literature on the benefits to productivity and job satisfaction of allowing workers and firms to mutually match (e.g. Jovanovic (1979[61])). This theoretical benefit is evident in the teaching profession as well. Jackson (2013[62]) finds that teachers' effectiveness improves substantially when they switch to a school that matches better with their preferences. According to this study, the quality of a teachers' match with a school explains two-thirds of their overall effectiveness. Beyond teacher instructional effectiveness, locally determined matching has benefits in terms of job satisfaction (Daly et al., 2008[63]), length of commute, absenteeism rates and school autonomy.

Of particular concern is the unique negative impact the current arrangement in Portugal has on schools serving underserved communities. Over the course of the review visit, stakeholders in Priority Educational Intervention Area (TEIP) schools indicated that there was a proportion of the school's faculty who were not motivated to work with the particular population of students the school served. Additionally, some stakeholders reported that some teachers, including effective ones, would seek to leave challenging school environments after securing sufficient seniority to guarantee themselves a more desirable position at a lower-needs school. This practice of "teacher creaming" to more well-resourced schools is a common phenomenon observed in OECD School Resources Reviews of, among others, the Flemish Community of Belgium, the Slovak Republic and

Uruguay (Nusche et al., 2015[64]; Santiago et al., 2016[65]; Santiago et al., 2016[46]) as well as in the research literature (Lankford, Loeb and Wyckoff, 2002[66]; Jackson, 2009[67]).

Thus, Portugal's current teacher assignment policy does not maximise teachers' or students' interests. However, reform to this long-standing practice should preserve the advantages of the current system in terms of transparency and equity. The current process was developed to avoid local nepotism or cronyism. Multiple stakeholders expressed value in the equitable nature of the current system and others indicated that a shift would be politically unfeasible. However, room for policy innovation exists insofar as nearly all stakeholders indicated that more should be done to improve the match between under-served schools' needs and the teachers employed in them. The subsections detail a series of politically possible short-term projects, followed by longer-term system reform options.

Short term

The OECD review team recommends that Portugal develop a force of high-skill and high-motivation teachers who have priority placement in the most challenging school contexts and receive additional support and compensation as a result. Teaching candidates would apply to a simultaneous national placement process that would be used to assign teachers to high-needs schools. Schools participating in the TEIP programme could be the primary targets. Participants in this parallel placement contest would go through a screening process to ensure they had the appropriate beliefs and attitudes to work with students and families from different backgrounds. Strong evidence indicates that teachers' beliefs in their students' potential is a strong predictor of their success (Boser, Wilhelm and Hanna, 2014[68]) whereas a lack of belief in their students, especially those from different backgrounds, can negatively impact their performance (Steele and Aronson, 1995[69]; Ferguson, 2003[70]).

The programme to recruit high-skill teachers to under-served contexts should be supplemented by efforts to build its profile to attract a broad base of candidates of diverse backgrounds. The programme should be accompanied by status-enhancing publicity campaigns similar to those used by Teach for All, a network of teacher-recruitment and development programmes in 45 countries that attracts teachers from non-traditional backgrounds via a rigorous and competitive application process. Additionally, specific outreach should be made to attract candidates whose socio-economic, ethnic and racial background matches the students who the Portugal education system does not currently serve well. Growing evidence supports the value of students experiencing teachers in the classrooms who are from similar backgrounds (Dee, 2005[71]; Gershenson, Holt and Papageorge, 2016[72]; Egalite and Kisida, 2018[73]). In addition to making such proposed programmes attractive through their prestige and social-welfare orientation, this programme could incentivise candidates to work in high-needs schools with additional compensation.

While building interest in working in high-needs contexts is important, fully preparing candidates to teach in these environments is critical. Portugal has no programmes designed explicitly to prepare teaching candidates to work in multicultural and multilingual contexts. Box 4.4 highlights efforts in Latvia and Malta to explicitly prepare teachers to work across differences. As a complement to the targeted recruitment and placement of teachers in under-served communities, Portugal could work with one or several polytechnics/universities to develop a graduate programme to build teachers' abilities to successfully meet the needs of low-income, Roma, Brazilian, African

Portuguese-Speaking Countries (*Países Africanos de Lingua Oficial Portuguesa* – PALOPs) and other groups of students who have traditionally been disfavoured in Portuguese society.

Box 4.4. Preparing for Diversity

Model programmes from Latvia and Malta

Latvia – Equal Treatment of Diversity

In Latvia, the Equal Treatment of Diversity (ETD) Master's programme in Education Sciences and Pedagogy trains teachers with an interdisciplinary system of knowledge, skills and socio-pedagogical and psychological abilities to support the inclusion of students from diverse backgrounds in schools.

Compulsory courses include 'International and comparative frame of educational treatment of diversity'; 'Educational treatment of special needs proceeding from cultural diversity'; 'Management of and programmes for the educational treatment of diversity;' and 'Guide for practical implementation in the educational treatment of diversity.'

The master's coursework places students in previously unfamiliar situations and challenges them to communicate across cultural differences. Evidence exists that these forms of inter-cultural exchanges positively and significantly affect the quality of student-student and student-staff interactions, as well as the quality of diversity-related experiences through students' participation in problem-solving and information exchange during the learning process.

University of Malta – Supporting student diversity

In **Malta**, the initial teacher education module on 'Responding to student diversity in the primary classroom' at the University of Malta has become mandatory in the Master's in Teaching and Learning. The module aims to prepare student teachers to include students with diverse backgrounds in their lessons and to help them blend theory and practice in responding to student diversity.

Theoretical component: In the first semester, student teachers are first introduced to issues of student diversity and inclusion and how these can be addressed in the classroom, including using individual educational plans (IEPs). This is done mainly through reflection on one's own background, discussion and group work.

Practical component: In the second semester, while student teachers are doing their six-week block teaching practice, they identify a student who is having particular difficulties with classwork or in social adaptation, and they plan and implement a strategy for that student's inclusion in their lessons.

The main strength of the measure is the blending of theory and practice. Student teachers are first prepared in how to recognise difference, how to draw up an individualised plan, how to modify the classroom environment and lesson content, process and products which they then have an opportunity to implement during teaching practice.

Source: Public Policy Management Institute (2017), *Preparing Teachers for Diversity: The Role of Initial Teacher Education Final Report*, European Commission Directorate-General for Education, Youth, Sport and Culture.

Finally, since individual schools best understand the needs of their students, school clusters participating in this pilot could express preferences for the characteristics and skill sets of prospective teachers for their schools. Clusters' ability to influence the particular teachers chosen for their schools could range from minimal, e.g. setting a preference for an Arabic-speaking teacher, to substantial, e.g. placing representatives on a hiring panel with the discretion to approve all candidates. The following subsection outlines more approaches to integrating local preferences in hiring decisions while preventing favouritism and promoting transparency.

Long-term

Simultaneous to or after the development of a programme to ensure that there exists a mutual match between the interests and abilities of teachers and the needs of schools serving under-resourced communities, Portugal can explore a system-wide reform to its teacher placement process. Portugal should consider creating regional or local hiring competitions that use multiple screens and actors to preserve impartiality. Multiple methods could be explored to preserve impartiality but ensure mutual matches. For instance, regional or municipal review panels could identify sets of qualified candidates who enter into a local hiring pool. These panels could include members from schools, municipalities and the ministry to balance local interests with national standards. The panel screen could then present a list of qualified candidates to school leaders, and school leaders would be free to pick from among the list. An alternative process could involve a system where school leaders can view teacher profiles and exert some level of influence on the placement of a new teacher in the school. For example, school leaders could have veto power over a defined number of teachers if they felt that the profile of the teacher did not match their needs. There could be a more formal probationary period where if a teacher was deemed ineffective in a particular school context within a set timeline, school leaders could request the re-assignment of this teacher to another context. While there are several methods to accomplish this end, the key is to achieve some level of mutual consent in placement between teacher and school.

As important as the mutual agreement between school and teacher in making matches, the criteria by which teachers are screened and selected for open positions is even more so. Currently, teacher rankings in the national competition are based primarily on university course grades and years of experience. However, extensive evidence suggests these are not effective predictors of teaching skill (Kane, Rockoff and Staiger, 2008[74]; Boyd et al., 2008[34]; Staiger and Rockoff, 2010[75]; Rockoff et al., 2011[32]; Rockoff, 2004[33]). Thus, reforming the ranking system to include multiple internal and external observations of student and temporary teachers would improve the quality of the ranking system. This could be incorporated into the local hiring process described above, such that an initial screen could be performed on standardised indicators such as higher education marks and student-teacher ratings, and then final selection at the school level would be determined by several observations of teaching practice.

Analyse staffing needs across educator category and revisit appropriate balance

Multiple stakeholders repeatedly stressed the shortage of operational assistants. However, though data is limited on this, Portugal appears to staff these positions at levels at least comparable if not higher than other OECD countries. Further, Portugal has very high teaching staffing levels. In addition, the evidence on the educational benefits of learning support staff is quite mixed (contrast, for example, the benefits Banerjee et al. (2007[76]) found in developing country contexts with the lack of impact Mosteller (1995[77]) found in

the United States). Ultimately, Portugal must address these concerns around a shortage of operational assistants through a needs-assessment study. The study should examine what roles are currently performed by operational assistants, how their time is spent, what needs schools have that are currently unmet and whether operational assistants are the key employment category to fill these responsibilities.

As part of this needs-assessment, it will be valuable to explore the extent to which these concerns on staff shortages are manifestations of the need for support for students with behavioural disorders and/or special educational needs. School stakeholders tended to describe the benefits of operational assistants as able to supervise students in corridors, play areas and help when students were misbehaving in class. If these are the primary needs schools experience, increased training for all staff in developing trauma-sensitive schools and building school culture (Souers and Hall, 2016[78]) may be a more efficient and effective use of resources than investing in untrained support staff.

Support schools to become learning organisations – for adults as well as students

Portuguese schools are not currently sites where adults engage in significant collective learning activities. Given Portugal's centralised administrative structure, central authorities have a meaningful opportunity to both mobilise and support efforts to help schools become learning organisations. However, this needs to be balanced with providing local autonomy to schools to help them take responsibility for improving results and reducing the impact of students' background on their learning. Given the documented ineffective time use by Portuguese teachers, collaboration for the purpose of instructional improvement may generate outsize gains in teaching quality. Portugal's education sector should consider four levers for instructional improvement: i) induction, mentoring and coaching; ii) teacher teaming; iii) peer observation and feedback; and iv) formal appraisal for the purpose of growth.

Induction, mentoring and coaching

While Portuguese teachers report participating in frequent informal induction and mentoring experiences, no formal induction programme exists within the public school system. Furthermore, no formal mentorship or coach roles exist. These three types of support for new (or struggling teachers) are related but distinct. Induction focuses on a series of activities to orient teachers to the profession or context of a new school. Mentoring more often focuses on providing general advice rather than responding directly to observed classroom practices (Wildman et al., 1992[79]). While induction and mentoring show mixed results, intensive teacher coaching has been demonstrated across multiple contexts to improve teaching practice and student achievement outcomes (Powell et al., 2010[80]; Campbell and Malkus, 2011[81]; Allen et al., 2011[82]; Kraft and Blazar, 2016[83]). In fact, a recent meta-analysis of 44 causal research studies found improvements in teaching practices on the order of a half of a standard deviation and on student achievement of around a fifth of a standard deviation (Kraft, Blazar and Hogan, 2018[84]).

Portugal should create formal induction and coaching supports for new and struggling teachers. Portuguese schools already provide multiple leadership opportunities at departmental, class and school levels for its teachers. However, these leadership roles do not tend to provide direct support to teachers' instructional practices. A shift of the

conception of teaching leadership roles to involve more direct feedback on practice could have significant positive impacts on teachers' growth trajectories.

Teacher teams

Portugal should work to establish professional learning communities in schools through capacity development and use of non-teaching time in educator teams. This can be accomplished through a combination of reconceptualising the role of department co-ordinators and class heads, repurposing some portions of non-instructional time away from tutorials towards goal-oriented team meetings and building the capacity of teachers to work in teams through system-wide professional development priorities. Teachers have time devoted to meeting with their colleagues during the school day in Portugal but, during the review visit, few teachers indicated that they felt this time was used effectively.

Portugal can consider building teachers' capacity to collaborate in ways similar to those articulated in Ontario, Canada (Box 4.5). Central (or in the case of Ontario, subcentral) officials have a critical role to play in the successful execution of these school-level practices. Creating resources, protocols and providing technical support have been critical tools in the spread of such practices.

Peer observation and feedback

As it stands, teachers rarely observe each other teaching in Portugal. While a sudden culture change is unlikely to take root overnight, Portugal can consider incremental steps to open up the classroom door to promote the sharing of strong practices and the development of pedagogical skills. As a first step, Portugal should develop the capacity of departmental co-ordinators and class heads to observe and provide regular feedback to teachers. This might be accomplished through the formal writing of this expectation into the roles and responsibilities of the position. Additionally, or alternatively, targeted professional development or working groups for these categories of educators could be used to build capacity for these mid-level leaders to observe and provide feedback.

Formal appraisal and feedback

Portugal should move incrementally towards meaningful feedback and appraisal for teachers. Portugal's current appraisal framework only requires observation of teaching practice in the case where a teacher seeks a rating higher than "good", or when an evaluator seeks to assign a rating of "insufficient" for most steps of the career progression. Furthermore, due to the recent freeze of career progressions, there have been essentially no formal appraisals that include an observation of teachers' practice since the framework for appraisals was instituted in 2007 and career progressions have been frozen since 2008. It is politically infeasible and inadvisable to attempt an immediate shift to high-stakes, large-scale, rigorous appraisal based on observation of teaching practice and student outcomes.

Box 4.5. Types of teacher collaboration in schools in Ontario, Canada

The Canadian province of Ontario has invested significant energy in supporting teachers to successfully and effectively collaborate. The Ontario Ministry of Education produces a series of *Capacity Building* briefs that share actionable strategies for teachers and leaders to improve their practice. The ministry supports a process of "collaborative inquiry" in which teachers working in teams at their school research problems of practice. They generate evidence of what is and is not working at their school, make decisions about interventions, take action and then evaluate the effectiveness of their intervention before starting the cycle over again (Ontario Ministry of Education, 2014[85]) – a modified version of Deming's Plan-Do-Study-Act cycle (Deming, 2000[86]).

Among other actions that teachers are encouraged to participate in through collaborative inquiry include:

1. Co-teaching classes: Involves a small group of teachers co-planning a lesson, co-teaching that lesson with assigned roles and reflecting on the student learning outcomes of the learning experience, including naming evidence of the impact on student learning.
2. Teaching Learning Critical Pathway: Inquiry involving the gathering of data, analysing it to determine area of greatest student need, identifying relevant curriculum, reviewing current practice, determining assessments to be used to monitor student learning, planning a teaching block of time (approximately six weeks), sharing evidence of student learning with other teachers, developing and administering a culminating task, engaging in teacher moderation of student work from the task and reflecting on what has been learned and what the next steps are in teacher learning.
3. Looking at Student Work (LASW): Educators collaboratively discuss student work based on common assessment criteria.
4. Deconstructing curriculum: Educators examine curriculum expectations in order to understand what is written as it might be translated into what students learn.
5. Examining student learning progression: Deconstruct a curriculum concept from when a child enters schools through many years or levels to understand what a student is expected to learn at each level of the system.
6. Monitoring marker students: Teachers pick a small number of students in a class, year or school, share their assessment results with others in the school and document the use of teaching strategies against the learning outcomes for these students.

Sources: Deming, W. (2000), *The New Economics: For Industry, Government, Education*, MIT Press, Cambridge, MA; Ontario Ministry of Education (2014), *Capability Building Series: Collaborative Inquiry in Ontario*, https://thelearningexchange.ca/wp-content/uploads/2017/02/CBS_CollaborativeInquiry.pdf; Nusche, D. et al. (2016), *OECD Reviews of School Resources: Denmark 2016*, http://dx.doi.org/10.1787/9789264262430-en.

Rather, Portugal should consider investing in ongoing capacity development support for teacher evaluation among its school principals (including deputy and assistant principals). Compelling evidence exists that if school principals do not feel skilled or have the time to successfully evaluate their staff, they will not do so (Kraft and Gilmour, 2016[87]). Principals should be paired with the external evaluators provided for in the current evaluation framework to build appraisal capacity throughout the school system and especially at the school level. Once confident in the majority of evaluators' alignment, Portugal should reintroduce observation-based appraisals tied to teachers' progression past Steps 2, 4 and 6 of the teaching career. The initial goal of these appraisals should be primarily developmental in nature. Thus, the emphasis can be on ensuring the quality of the feedback is high, rather than on assigning a certain proportion of teachers to each of the five rating levels. As the *OECD Review of Teacher Evaluation in Portugal* (2009[10]) recommended, schools could develop an internal component of the evaluation system that had as its products: i) a qualitative assessment of the teacher's practice; and ii) a personalised professional development based on the appraisal for each teacher.

Leverage network of Regional Training Centres to provide more incentives and opportunities to participate in ongoing professional development

The strength of the Regional Training Centres lies in their ability to respond to the authentic challenges faced by educators in schools around the country and to design a sequence of learning events to build skill and collaboration to respond to these challenges. Portugal can leverage the credibility these centres have, as well as the practice-informed problems they address, to promote system-wide priorities. Based on articulated needs on PISA, TALIS and through site visit focus groups, clear priorities exist for ongoing professional development around: i) teacher-driven, in-class formative assessment; ii) responding to difference among students; iii) building student relationships and classroom management; and iv) the use of ICT in the classroom. Portugal should leverage the Regional Training Centres to build skills in teachers around the country in these areas. To complement the bottom-up, volunteer-reliant existing model of Regional Training Centres, Portugal will need to invest additional resources in the centres to allow them to recruit external expertise, increase the centres' organisational capacity and, potentially, to provide teachers release time or remunerate them for their time participating in ongoing professional development. As noted above, Portugal trails OECD and TALIS averages in its support of ongoing professional development activities. Further, the recent unfreezing of the teacher career progression pathway now reinstates incentives for teachers to pursue professional development. This creates a meaningful opportunity to strategically grow teachers' skills. The financial investment need not be substantial in order to significantly extend opportunities for teachers to participate in professional development.

Reconceptualise educator career development, including re-imagining formal leadership roles as professional pathways

The Portuguese education system already has a strong concept of the formal school leader as a career teacher who must bring instructional expertise to the role. Portugal should build off this conception of principals as instructional leaders to expand expectations that they are the strategic and pedagogic leaders of the school. This requires re-envisioning the roles of school leaders as professionalised ones that mandate candidates acquire additional skills beyond the ones they developed as teachers.

School leaders should have formal training in educational strategy, system management and adult learning. These should complement the training required of department heads in school management, teacher evaluation or pedagogical supervision. By linking the development of skill sets across roles, Portugal can create a sequenced, professional pathway for teachers to take on additional leadership responsibility, from classroom teacher to department head, to assistant/deputy principal to cluster principal. Some of Portugal's higher education institutions already offer master's degrees in educational administration that cover these critical responsibilities (e.g. education management master's programmes at the University of Lisbon, ISG University of Business and Economics, the Polytechnic Institute of Lisbon, the Catholic University of Portugal and ISCTE-University Institute of Lisbon). The challenge is now to develop a sequenced leadership development pathway starting with classroom teachers through experienced school leaders and extend these skills across the system. Box 4.6 highlights programmes Singapore uses to develop early-career leaders (Management and Leadership Studies Programme) and promising mid-career leaders (Leaders in Education Programme). Critically, Singapore conceives of the progression of teachers interested in leadership opportunities as one requiring a sequential progression in which key skills must be acquired at benchmark points during their career development.

Once in the role, school principals continue to benefit from opportunities for growth and development. Portugal should develop more explicit connections between school leaders from various clusters to allow leadership teams to collaborate and learn from each other. As Box 4.7 highlights, explicit allocation of resources to free up school leaders' time and strategic decisions about the leadership developmental areas on which to focus are important. Further, as principals develop expertise over the course of their tenure in the role, they should be provided with the opportunity to mentor other principals. As in the Flemish Community of Belgium where a co-ordinating principal guides the other principals within her school association, Portugal could consider creating formal opportunities for cross-school leadership for successful cluster principals.

Box 4.6. Preparing leaders in Singapore

The Management and Leadership Studies (MLS) Program

The Management and Leadership Studies (MLS) Program is designed for teacher leaders who are department, year or subject group heads. It comprises 17 weeks of funded training, during which time they receive their full salary. Participants attend a series of courses to develop leadership, teaming and operational management skills. They also spend a week travelling to another Asia-Pacific country to provide them with new perspectives on the Singaporean context (Keo, 2016[88]). From this programme, candidates become competitive for the positions of assistant principal or may move to the National Institute for Education (NIE), Singaporean Ministry of Education.

The Leaders in Education Program (LEP)

The Singaporean Leaders in Education Program (LEP) is a highly selective programme that prepares highly effective assistant principals and ministry officials for the principalship. The programme was launched in 2001 by the National Institute for Education (NIE). Between 30 and 40 candidates are selected in each cohort for an intensive six-month executive education programme based on their prior performance appraisals, situational tests, a professional portfolio and selection interviews. Once selected, they receive a full salary, while participating full-time in the LEP programme. The programme aims to develop capacity that is "values-based, purposeful, and forward-looking, anchored on both strong people leadership and instructional leadership" (Jayapragas, 2016[89]). The curriculum draws on leaders in adult learning to develop five skill sets: the disciplined mind; the synthesising mind; the creating mind; the respectful mind; and the ethical mind (Walker, Bryant and Lee, 2013[90]).

Every LEP cohort member is placed in a local school in Singapore where they are mentored by an experienced principal. In the school, they conduct a Creative Action Project to design an innovation alongside the school's faculty with the goal of transforming the school over the long term. Participants also take part in a two-week international study trip in order to gain comparative perspectives on school leadership.

The LEP has had positive participant feedback, but to date, no formal evaluation exists assessing its impact on leaders' future skills or on student learning outcomes.

Sources: Jayapragas, P. (2016), "Leaders in education program: The Singapore model for developing effective principal-ship capability", *Current Issues in Comparative Education*, Vol. 19/191, pp. 92-108; Walker, A., D. Bryant and M. Lee (2013), "International patterns in principal preparation: Commonalities and variations in pre-service programmes", http://dx.doi.org/10.1177/1741143213485466; Keo, S. (2016), *Shaping Strong Principals in Singapore: Success by Design*, http://ncee.org/2016/02/shaping-strong-principals-in-singapore-success-by-design/.

Box 4.7. Networks for school leaders in the Flemish Community of Belgium

In 1999, the authorities of the Flemish Community of Belgium launched a policy to encourage school leader collaboration through the establishment of "school associations" (*scholengemeenschappen*) in secondary education. In 2003, school associations were also introduced in the primary sector. School associations are collaborative partnerships between schools in the same geographical area. On average, they comprise between 6 and 12 schools. In 2010, the vast majority of schools (96.7%) belonged to a school community. The key goal of this initiative is to strengthen schools' organisational and leadership capacities through increased co-operation. In secondary education, the policy also aims to improve the co-operation of schools in the supply of study options, career guidance and efficient use of resources. Joining a school association is voluntary, but the Flemish Ministry of Education and Training provides incentives for schools to join an association by attributing resources to the association and granting more organisational flexibility in the case of secondary schools. School associations receive a package of points for the management and support staff in their schools, which are then redistributed among the individual schools in the community based on a repartition system agreed between the schools forming the community. In elementary education, some of these points may be used to appoint a co-ordinating principal of the school community, and in secondary education, the school community can retain up to 10% of the points to ensure its own functioning.

In some respects, Portugal's school clusters reproduce many of the same possibilities for leadership capacity development as the Flemish Community's school associations. Several key differences exist, however. First, formal opportunities and resources exist for leadership development in the Flemish Community but these are absent in Portugal. Second, Flemish schools participating in school associations preserve their building-level principal in addition to benefiting from the co-ordinating principal. This additional resource performs the full duties of instructional improvement, strategy development, etc. This is an important distinction with the current responsibilities of the school co-ordinator within Portuguese school clusters.

Source: Nusche, D. et al. (2015), *OECD Reviews of School Resources: Flemish Community of Belgium 2015*, http://dx.doi.org/10.1787/9789264247598-en.

Notes

[1] Comparisons between countries and to cross-country averages on the OECD Teacher and Leader International Survey (TALIS) should be made with great caution. Comparison of single items may capture variation that is not reflective of the latent attribute being measured. TALIS does not support comparison of indices across country settings as its analytic approach – continuous multi-group confirmatory factor analysis (MGCFA) – cannot determine whether the level of an index in one setting corresponds substantively to the same level in a different setting. On the other hand, the OECD Programme for International Student Assessment (PISA) makes efforts to construct indices of student responses that permit cross-country comparisons through testing scalar invariance with categorical multi-group confirmatory factor analysis (MGCFA), which permits linkage of items across countries. Nevertheless, there exists disagreement about whether metric and scalar invariance can be truly achieved in cross-cultural studies. This report avoids comparisons between TALIS indices across countries and reports single-item TALIS comparisons for illustrative purposes only. One instance in which cross-country comparisons are more justifiably supported in TALIS is when school principals report on policy frameworks as these questions tend to demand simple, objective response. Thus, the report presents comparative evidence on these items.

[2] An additional role of Head of Administrative Services sometimes also exists to manage operational and business aspects of the school. This role tends not to be filled by an educator or professional teacher. This role does not exist in all clusters. Teachers may also participate in the leadership structure of the school through election to the General Councils (see Chapter 3).

[3] PISA asked students how frequently ("never or almost never", "some lessons", "many lessons" or "every lesson or almost every lesson") the following events happen in their science lessons: "The teacher explains scientific ideas"; "A whole class discussion takes place with the teacher"; "The teacher discusses our questions"; and "The teacher demonstrates an idea". The index of teacher-directed instruction combines these four questions to measure the extent to which science teachers direct student learning in science lessons. Higher values on this index and other indices on science instruction indicate more frequent use of these strategies, according to students' reports.

[4] PISA asked students how frequently ("never or almost never", "some lessons", "many lessons" or "every lesson or almost every lesson") the following happens in their science lessons: "The teacher adapts the lesson to my class's needs and knowledge"; "The teacher provides individual help when a student has difficulties understanding a topic or task"; and "The teacher changes the structure of the lesson on a topic that most students find difficult to understand". The index of adaptive instruction combines these three questions to measure the extent to which students perceive that their science teachers adapt their instruction based on students' needs, knowledge and abilities.

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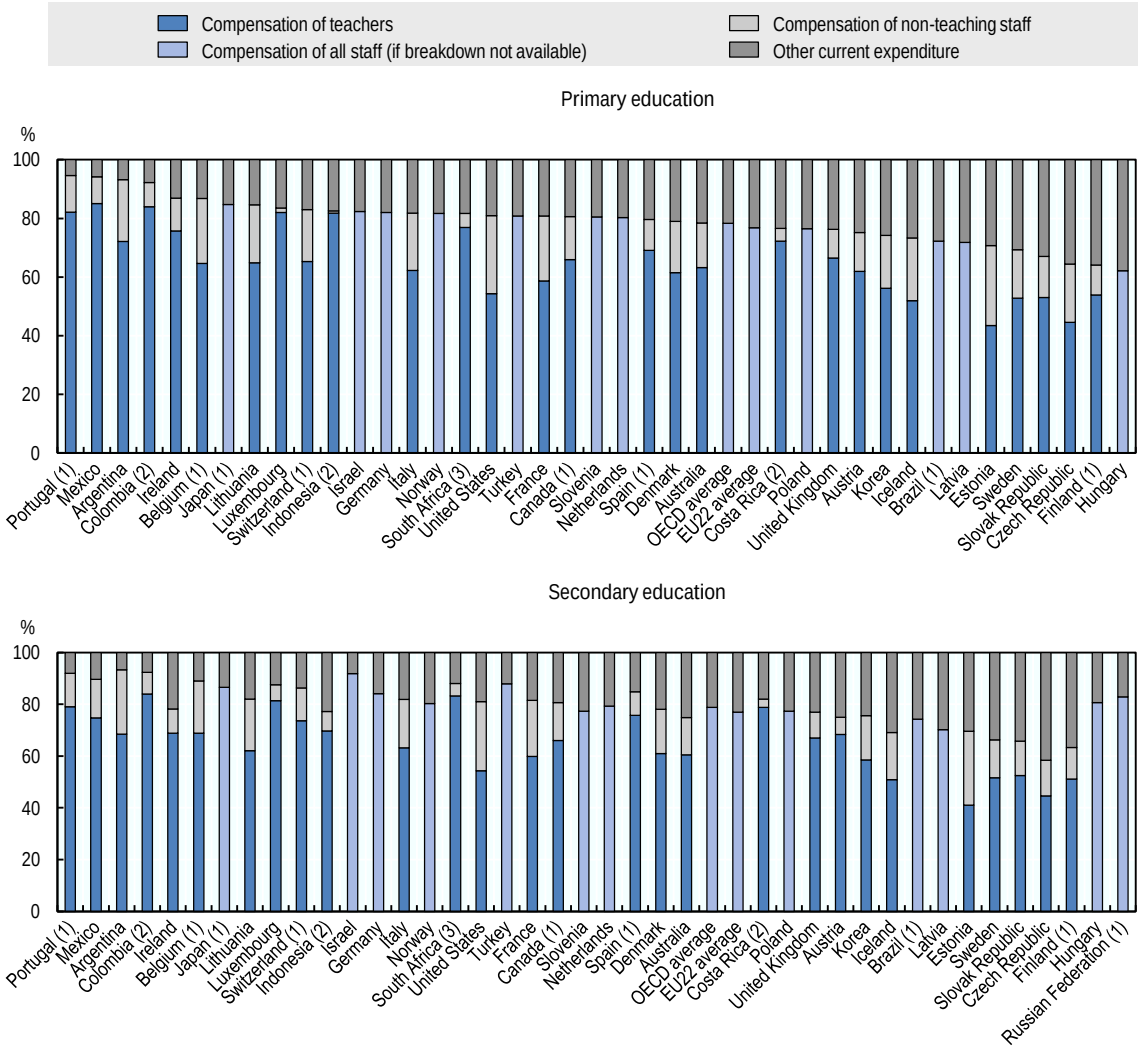
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Annex 4.A. Current expenditures

Annex Figure 4.A.1. Composition of current expenditure in public educational institutions, 2014



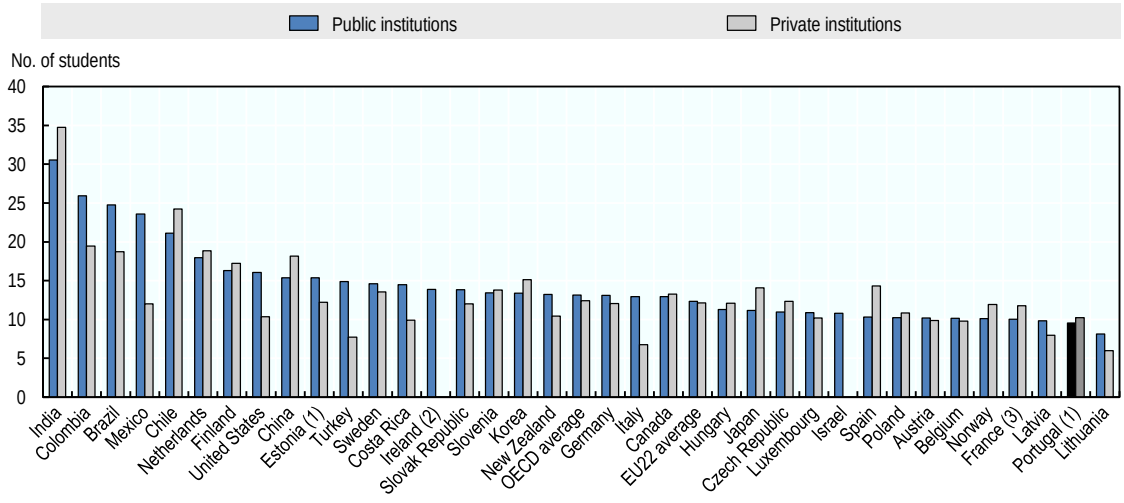
1. Some levels of education are included with others. Refer to "x" code in Table B6.1 for details.
2. Year of reference: 2015.
3. Year of reference: 2013.

Note: Countries are ranked in descending order of the share of all staff compensation in primary education.

Source: OECD/UIS/Eurostat (2017), *Education at a Glance Database*, http://stats.oecd.org/. See Source section for more information and Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

Annex 4.B. Staff salary and working conditions

Annex Figure 4.B.1. Ratio of students to teaching staff in upper secondary education, by type of institution, 2015

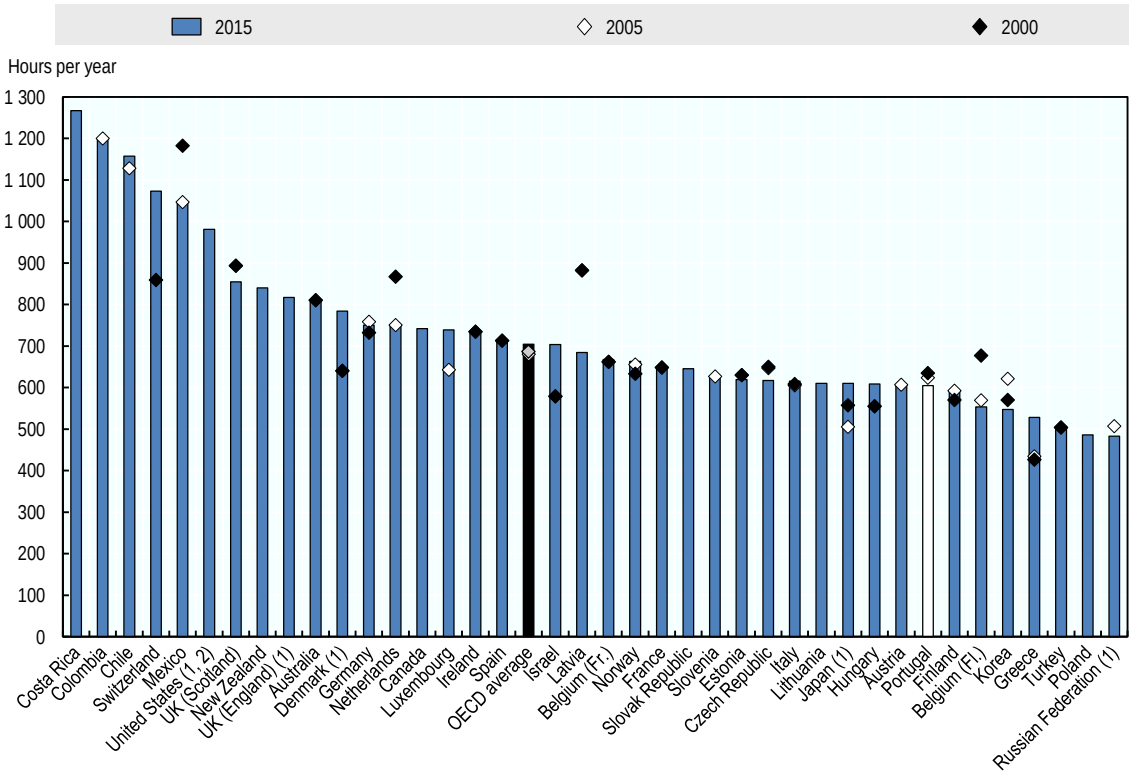


1. Some levels of education are included with others. See Table D2.3 or Annex 3 for details.
2. Upper secondary education includes lower secondary.
3. Government-dependent private institutions only.

Note: Countries are ranked in descending order of the ratio of students to teaching staff in public institutions.
Source: OECD/UIS/Eurostat (2017), *Education at a Glance Database*, http://stats.oecd.org/, Table D2.3. See Source for more information and Annex 3 for notes (www.oecd.org/edu/education-at-a-glance-19991487.htm).

Annex Figure 4.B.2. Number of teaching hours per year in general lower secondary education, 2000, 2005 and 2015

Net statutory contact time in public institutions



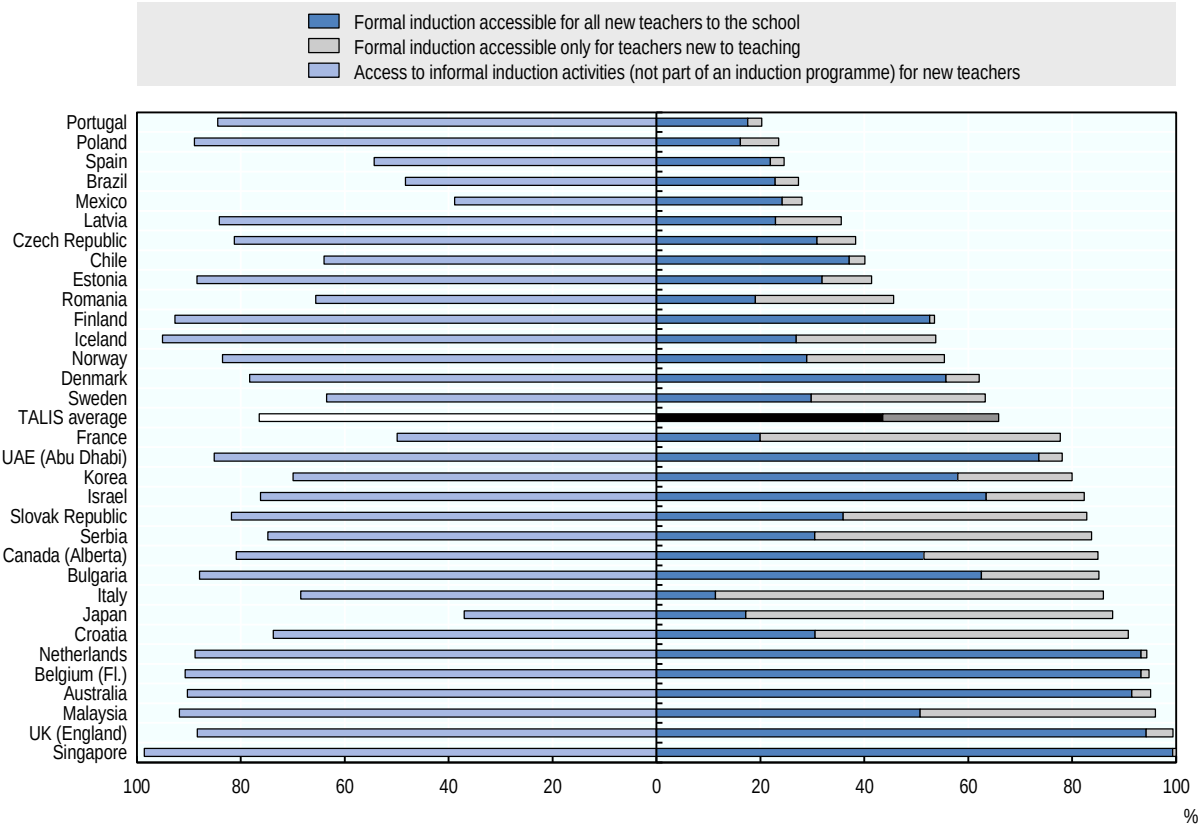
1. Actual teaching time.
2. Year of reference 2013 instead of 2015.

Note: Countries and economies are ranked in descending order of the number of teaching hours per year in general lower secondary education in 2015.

Source: OECD (2017), *Education at a Glance 2017: OECD Indicators*, http://dx.doi.org/10.1787/eag-2017-en, Table D4.2. See Source section for more information and Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

Annex Figure 4.B.3. Access to formal and informal induction programmes or activities

Percentage of lower secondary education teachers whose school principal reports the existence of formal and informal activities

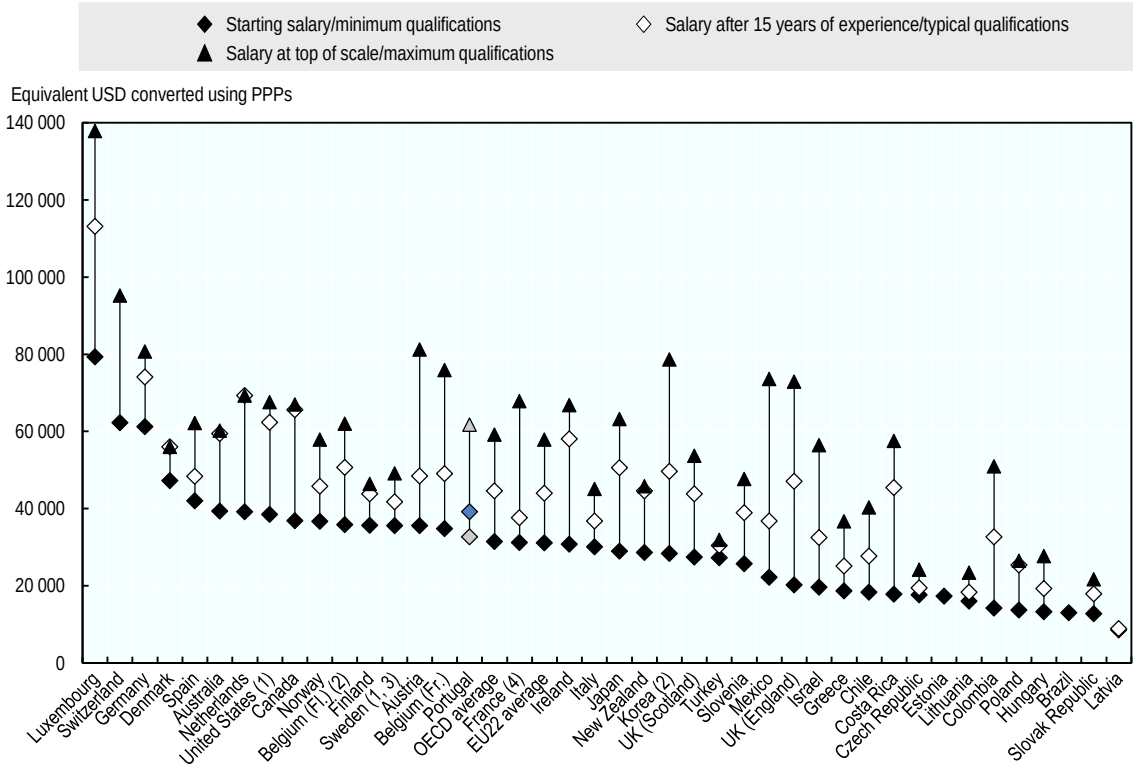


Note: Countries are ranked in ascending order, based on the cumulative percentage of teachers whose school principal reports access to formal induction programmes for all new teachers to the school and for only teachers new to teaching.

Source: OECD (2014), *TALIS 2013 Results: An International Perspective on Teaching and Learning*, http://dx.doi.org/10.1787/9789264196261-en, Table 4.1.

Annex Figure 4.B.4. Lower secondary teachers' statutory salaries at different points in teachers' careers, 2015

Annual statutory salaries of teachers in public institutions, in equivalent USD converted using purchasing power parity (PPP)



1. Actual base salaries.
2. Salaries at top of scale and typical qualifications, instead of maximum qualifications.
3. Salaries at top of scale and minimum qualifications, instead of maximum qualifications.
4. Includes the average of fixed bonuses for overtime hours.

Note: Countries and economies are ranked in descending order of starting salaries for lower secondary teachers with minimum qualifications.

Source: OECD (2017), *Education at a Glance 2017: OECD Indicators*, http://dx.doi.org/10.1787/eag-2017-en, Table D3.1a, Tables D3.1b and D3.6, available on line. See Source section for more information and Annex 3 for notes (www.oecd.org/education/education-at-a-glance-19991487.htm).

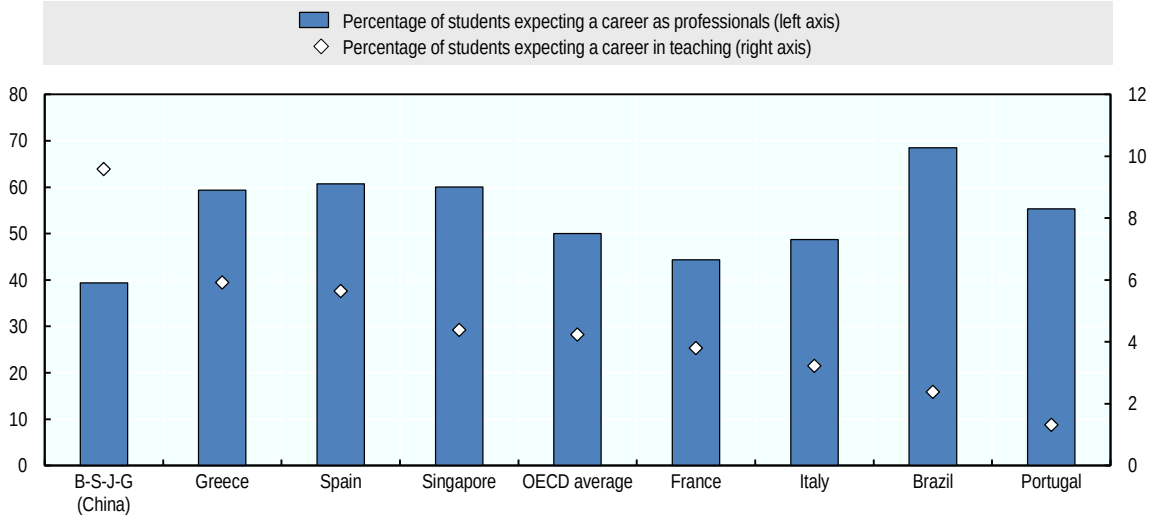
Annex Table 4.B.1. Percentage of teaching time devoted to tutorials

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/`7	2017/18
Permanent contracts (%)	3.8	2.8	3.0	3.9	6.6	5.8	5.9	5.5	6.2
Temporary contracts (%)	2.3	2.9	2.9	3.9	6.8	7.4	7.1	6.2	6.4

Source: Ministry of Education (2018), *OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools: Country Background Report for Portugal*, http://www.oecd.org/education/schoolresourcesreview.htm.

Annex 4.C. Attractiveness of teaching profession

Annex Figure 4.C.1. Percentage of 15-year-old students intending to enter teaching profession



Note: Select countries presented in the figure represent a mix of Southern European peers, Portuguese-language diaspora (Brazil) and high-performing Asian systems. OECD average represents the average for all 35 OECD systems.
Source: OECD (2018), *Effective Teacher Policies: Insights from PISA*, http://dx.doi.org/10.1787/9789264301603-en.

Annex A. The OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools

The **OECD Review of Policies to Improve the Effectiveness of Resource Use in Schools** (also referred to as the School Resources Review) is designed to respond to the strong interest in the effective and equitable use of school resources evident at national and international levels. It provides analysis and policy advice on how to govern, distribute and manage resources so that they contribute to achieving countries' educational objectives. School resources are understood in a broad way, including financial resources (e.g. monetary transfers, school funding mechanisms), human resources (e.g. distribution of teachers, school leaders, education administrators), physical resources (e.g. organisation of buildings and places, school networks and clusters), and other resources (e.g. learning and teaching time).

Eighteen education systems are actively engaged in the review. These cover a wide range of economic and social contexts, and among them they illustrate quite different approaches to the use of resources in school systems. This allows a comparative perspective on key policy issues. Participating countries prepare a detailed background report, following a standard set of guidelines. Some of the participating countries have also opted for a detailed review, undertaken by a team consisting of members of the OECD Secretariat and external experts. The participating countries are (in bold those that have opted for an individual review): **Austria**, **Belgium (Flemish Community)**, Belgium (French Community), **Chile**, **Colombia**, the **Czech Republic**, **Denmark**, **Estonia**, Iceland, **Kazakhstan**, **Lithuania**, Luxembourg, **Portugal**, the **Slovak Republic**, Slovenia, Spain, Sweden and **Uruguay**.

Thematic comparative reports synthesise the project's major findings on school resource policies. These reports bring together evidence from research and country practice to explore policy options for governments to consider. The first thematic report, *The Funding of School Education: Connecting Resources and Learning* published in 2017 systematically analyses school funding policies. The second thematic report, *Responsive School Systems: Connecting Facilities, Sectors and Pathways for Student Success* will be published in autumn 2018.

The project is overseen by the Group of National Experts on School Resources, which was established as a subsidiary body of the OECD Education Policy Committee in order to guide the methods, timing and principles of the review.

More details are available from the website dedicated to the review: www.oecd.org/education/schoolresourcesreview.htm.

Annex B. Composition of the review team

Pablo González earned his PhD from the University of Cambridge in 1996. He is currently Director of the Center for Public Systems, Department of Industrial Engineering, Faculty of Mathematical and Physical Sciences, University of Chile, Principal Researcher of the Center for Inclusive Education (financed by the National Sciences & Technology Commission) and external advisor of the National Fund for R&D in Education, Ministry of Education. Formerly, head of the division of Planning and Budget, Ministry of Education; advisor to the Ministry of Education; and the Ministry of Labor and Social Security; director of the Fund for Research in Public Policies. He coordinated three national Human Development Reports for the UNDP and several studies on children rights for UNICEF. He has also been consultant for the World Bank, IDB and ILO. He has published extensively on educational policies and human development.

Edith Hooge is full professor "Boards and Governance in Education" at TIAS, Tilburg University in the Netherlands. Her research activities revolve around governance and management in education systems and organisations. She is the academic director of the executive Master for Management in Education and teaches in the TIAS programs for professionalisation of (non-)executive board members in the public sector. Ms. Hooge is a non-executive board member of the University of Amsterdam and of the Utrecht University of Applied Science, and she regularly presides in monitoring committees of governance codes and advises boards in different public sectors. In 1998 she completed her dissertation about "the policymaking of schools against the background of deregulation policies and increased autonomy" at the University of Amsterdam. Edith Hooge lives in Amsterdam with her husband and two daughters.

David Liebowitz is a Policy Analyst in the OECD Directorate for Education and Skills. As a member of the Schools Resources Review team, he provides policy analysis and advice on the effective use of resources in OECD school systems. Prior to the OECD, David was a secondary school principal in Massachusetts, a policy advisor to the Massachusetts Secretary of Education and the New York State Commissioner of Education, and a secondary English teacher. David has published on the effects of the end of school desegregation, student assignment plans, and human capital policies. He holds a doctorate in Education Policy and masters' degrees in School Leadership and in Learning and Teaching from Harvard University.

Gonçalo Lima is a Consultant at the OECD Directorate for Education and Skills, currently contributing for a project on Strategic Education Governance, and having previously worked on the School Resources Review team. Working for the OECD, he has been helping to provide policy advice, conducting research on the measurement of efficiency and equity in education, besides having contributed to international thematic reports on the topics of school funding and the provision of school education. Gonçalo holds a Master's in Economics from ISCTE – University Institute of Lisbon.

Deborah Nusche is a Senior Analyst and Project Manager in the OECD Directorate for Education and Skills. She currently co-ordinates the OECD School Resources Review, which provides policy analysis and advice on the effective use of financial, human and physical resources in OECD school systems. She previously worked on the OECD thematic reviews of evaluation and assessment in education, migrant education and school. As part of these studies, she conducted country reviews in Australia, Austria, Belgium, Chile, the Czech Republic, Denmark, Mexico, the Netherlands, New Zealand, Norway, Portugal, the Slovak Republic, Sweden and the United Kingdom, leading to country-specific analysis and tailored policy advice. Prior to this, she was a Consultant for the OECD project on the Assessment of Higher Education Learning Outcomes (AHELO) and a Carlo Schmid Fellow at the United Nations Educational, Scientific and Cultural Organization (UNESCO). She holds a Master's Degree in International Affairs from Sciences Po Paris.

Annex C. Visit programme

1. The review team identified stakeholder groups with whom to meet via consultation with the national co-ordination team, soliciting input from stakeholders during the pre-visit and a desk review of key educational institutions in Portugal.
2. The review team selected schools to visit during the main visit by creating a stratified sample of schools, randomly selecting schools and then verifying the schools selected through this process captured the desired variation in school qualities. Specifically, the team created regional sub-samples of schools matching specific qualities. The team was interested in observing a range of school characteristics: varying levels of: i) socio-economic challenge (as measured by proportions of students receiving social support and average levels of maternal education); ii) student performance on national examinations; iii) eligibility and non-eligibility for Priority Educational Intervention Area (TEIP) support; iv) private and public governance; v) VET provision; and vi) rural, remote and urban settings. The team created sub-samples for the Lisbon municipality, the Lisbon Metropolitan Area outside of the Lisbon municipality, the Porto municipality, the North region outside Porto, Alentejo and the Algarve for its six school visits in the main visit. Within each regional sub-sample, the review team specified a desired mix of school characteristics (e.g. low socio-economic status school with strong academic results) and selected a school at random that matched these desired characteristics. For five of the six school visits, the randomly selected school was the one visited. In one case, the initially selected school had unique circumstances that would have led to an unrepresentative visit, so a replacement school was randomly selected to visit.
3. While visits took place in a particular school within a cluster, the review team met with school leaders, teachers, families and students representing all schools in the cluster.

Pre-visit programme

Monday, 2 October 2017, Lisbon	
09:00 – 10:00	National co-ordinator
10:00 – 11:15	Authors of the Country Background Report • Cabinet of the Minister of Education • Operational Programme for Human Capital (*Programa Operacional Capital Humano* – PO CH) • Institute for Financial Management of Education Finance *(Instituto de Gestão Financeira da Educação* – IGeFE) • Directorate-General of Statistics and Education and Science (*Direção-Geral de Estatísticas da Educação e Ciência* - DGEEC)
11:30 – 12:30	Ministry of Finance
14:30 – 15:45	Relevant officials from the Ministry of Education • Directorate-General for Education (*Direção-Geral de Educação* – DGE) • Directorate-General for School Administration (*Direção-Geral da Administração Escolar* – DGAE) • Directorate-General for Schools (*Direção-Geral dos Estabelecimentos Escolares* – DGEsTE) • Directorate-General of Statistics of Education and Science (DGEEC) • Inspectorate-General of Education and Science (*Inspeção-Geral de Educação e Ciência* – IGEC)
16:00 – 17:45	National institutes supervised by the Ministry of Education • Institute for Financial Management of Education Finance (IGeFE) • National Agency for Qualification and VET (*Agência Nacional para a Qualificação e o Ensino Profissional* – ANQEP) • Inspectorate-General of Education and Science (IGEC) • Education Evaluation Institute (*Instituto de Avaliação Educativa* – IAVE) • School Parks (*Parque Escolar* – PE) • Operational Programme for Human Capital (PO CH)
Tuesday, 3 October 2017, Lisbon	
9:30 – 10:30	National Federation of Teachers Unions (*Federação Nacional dos Professores* – FENPROF)
10:30 – 11:30	National Federation for Education (*Federação Nacional da Educação* – FNE)
11:30 – 12:30	Amadora Municipality Education Office
14:30 – 15:30	Representatives from related ministries • Ministry of Labour, Solidarity and Social Security (MTSSS) • Ministry of Science, Technology and Higher Education (MCTES)
15:30 – 16:30	Independent National Federation of Parents and Guardians in Education (*Confederação Nacional Independente de Pais e Encarregados de Educação* – CNIPE)
16:30 – 17:30	**National Confederation of Parents' Associations** (*Confederação Nacional das Associações de Pais* – CONFAP)
Wednesday, 4 October 2017, Lisbon	
9:30 – 12:30	*Escola Básica e Secundária Passos Manuel*, Cluster offers ECEC to upper secondary • School leadership • Teachers • Students
14:30 – 15:30	National co-ordinator • Cabinet of the Minister of Education • Operational Programme for Human Capital (PO CH) • Institute for Financial Management of Education (IGeFE) • Directorate-General of Statistics of Education and Science (DGEEC)

Review visit programme

Monday, 8 January 2018, Lisbon	
09:00 – 09:30	Authors of the Country Background Report (Cabinet, POCH, IGeFE, DGEEC) ● Cabinet of the Minister of Education ● Operational Programme for Human Capital (PO CH) ● Institute for Financial Management of Education Finance (IGeFE) ● Directorate-General of Statistics and Education and Science (DGEEC)
09:30 – 10:30	Ministry of Education ● Minister of Education (and State Secretaries) ● Directorate-Generals - Directorate-General of Education and Science Statistics (DGEEC) - Directorate-General for Education (DGE) - Directorate-General for Schools (DGEsTE) - Directorate-General for School Administration (DGAE) ● Secretariat-General of Education and Science (*Secretaria-geral da Educação e Ciência* – SGEC)
10:45 – 11:45	Institutes with financial responsibility and targeted programmes ● Institute for the Management of Educational Finance (IGeFE) ● Operational Programme for Human Capital (PO CH) ● School Parks (*Parque Escolar* – PE)
11:45 – 12:45	Institutes with evaluation responsibilities ● Inspectorate-General of Education and Science (IGEC) ● Education Evaluation Institute (IAVE) ● National Co-ordination of the School Success Programme (PNPSE)
13:00 – 14:00	Lunch
14:00 – 15:00	National Agency for Qualification and VET (ANQEP)
15:00 – 16:00	Ministry of Finance
16:00 – 16:30	Minister of Education
16:30 – 17:15 (Team A)	Associations of private providers ● National Confederation of Education and Training (CNEF) ● Association of Private and Co-operative Schools (AEEP) ● National Association of Professional Schools (ANESPO)
16:30 – 17:15 (Team B)	Associations of school principals ● Public School Clusters Principals Association (ANDAEP) ● National Association of School Principals (ANDE)
17:15 – 18:15	Meeting with researchers
Tuesday, 9 January 2018, Lisbon	
08:30 – 11:30	School visit 1: *Escola Secundária Rainha Dona Leonor*, Cluster offers ECEC to upper secondary ● School leadership ● Teachers ● Students ● Family members
12:00 – 13:00	**Teachers'** unions (FENPROF, FNE)
13:00 – 14:00	Working lunch with Lisbon Municipality Authorities
14:00 – 15:00 (Team A)	Education Council (CNE)
14:00 – 15:00 (Team B)	Schools Council (CE)
15:00 – 16:00 (Team A)	Secretary of State of Local Administration

15:00 – 16:00 (Team B)	**Employers'** confederations • Industrial Confederation (CIP) • Confederation of Commerce and Services (CCP) • Chamber of Commerce and Industry (AEP) • Tourism Confederation (CTP)
16:15 – 17:15	Ministry of Labour, Solidarity and Social Security (MTSSS)
17:15 – 18:15	Ministry of Science, Technology and Higher Education (MCTES)
Wednesday, 10 January 2018, Porto, Lisbon Metro Area, Beja	
09:30 – 12:00 (Team A)	School visit 2: *Escola Básica e Secundária do Cerco*, Cluster offers ECEC to upper secondary • School leadership • Teachers • Students • Family members
09:30 – 12:00 (Team B)	School visit 3: *Escola Básica do Miradouro de Alfazina,* Cluster offers ECEC to lower secondary • School leadership • Teachers • Students • Family members
12:00 – 13:00 (Team A)	Working lunch with Porto Municipal Authorities
12:00 – 13:00 (Team B)	Working lunch with Almada Municipal Authorities
14:00 – 15:00 (Team A)	National representation of municipalities • National Association of Portuguese Municipalities (ANMP) • National Association of Civil Parishes (ANARFE)
15:00 – 16:00 (Team A)	Independent National Federation of Parents and Guardians in Education (CNIPE)
15:30 – 18:00 (Team B)	School visit 4: *Escola Básica de Santa Maria* (Beja), Cluster offers ECEC to upper secondary • School leadership • Teachers • Students • Family members
16:15 – 17:15 (Team A)	**National Federation of Parents' Associations (CONFAP)**
Thursday, 11 January 2018, Porto, Northeast	
10:30 – 13:00 (Team B)	School visit 5: *Escola Básica Poeta Emiliano da Costa, Estoi, Faro*, Cluster offers ECEC to upper secondary • School leadership • Teachers • Students • Family members
13:00 – 14:00 (Team A)	Working lunch with Macedo de Cavaleiros Municipal Authorities
13:00 – 13:45 (Team B)	Working lunch with Faro Municipal Authorities
13:45 – 14:30 (Team B)	**Teachers' Professional Training Centre (CFAERF)** Ria Formosa Schools' Association
14:00 – 16:30 (Team A)	School visit 6: *Colégio Ultramarino de Nossa Senhora da Paz*, Publicly-funded private primary and lower-secondary school • School leadership • Teachers • Students • Family members

Friday, 12 January 2018, Lisbon	
08:00 – 14:00	Review team meeting
14:00 – 15:00	Non-governmental organisations • Calouste Gulbenkian Foundation (FCG) • UNICEF Portugal • National Commission for the Promotion of Rights and Protection of Children and Youth (CNPDPCJ)
15:15 – 15:45 (Team A)	Independent National Federation of Parents and Guardians in Education (CNIPE)
15:15 – 15:45 (Team B)	Pró - Inclusão National Association of Teachers of Special Education
16:00 – 17:30	Preliminary Impressions of the Review Team

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