Review of School Spending in Wales

Building in evidence, fairness, transparency and clear expectations

Luke Sibieta
Director, Sibieta Economics of Education
https://sibieta-econ-ed.com

Mae’r ddogfen yma hefyd ar gael yn Gymraeg.
This document is also available in Welsh.

OGL
WG40736
© Crown copyright October 2020
Digital ISBN 978-1-80038-893-2

About the author

Luke Sibieta is Director and Lead Consultant at Sibieta Economics of Education. In addition, Luke is a Research Fellow at the Institute for Fiscal Studies, having previously led the institute's programme of research into education and skills between 2012 and 2017. Luke is also a Research Fellow at the Education Policy Institute.

Luke has undertaken a wide range of influential research on education across a variety of areas, with a particular focus on school and education funding, educational inequalities and evaluating the impact of different programmes.

Contents

Executive Summary

The Welsh Government has made improving education in Wales a national mission, with a major focus placed on both improving overall school standards and reducing inequalities. The school funding system represents a means to achieve these goals. It delivers the funding schools and local authorities need to provide a high-quality education. It also represents a means to potentially combat inequalities by providing extra funding and resources to schools with more learners from disadvantaged backgrounds.

School funding has also become an increasingly topical policy issue in Wales and the rest of the UK in recent years, both in terms of the overall level of spending and differences across schools and areas. This review of school funding in Wales was commissioned to offer analysis and recommendations as to how the school funding system can be adapted to best support policy goals and ambitions to improve school system in Wales.

This review was commissioned and mostly undertaken before the Covid-19 pandemic. However, it fully acknowledges that the pandemic will have profound implications for school resources and spending. This includes short-run costs as schools reopen and seek to minimise contagion risk, as well long-run consequences for educational inequalities. At the same time, the pandemic will also lead to massive strains on the public finances. Such challenges make it even more important to undertake a considered review of the school funding system to ensure it is well-placed to assist policymakers.

Looking across the review, four key themes emerge for improving the system:

1. **Spending decisions based on empirical evidence –** A strong consensus has now emerged in academic evidence showing large positive effects of school spending across a range of countries and contexts. These gains are larger for more disadvantaged learners and where children benefit from high-quality early investments. The actual effects will also reflect the quality of resources and how they are used. For disadvantaged learners, this will be heavily influenced by how teaching assistants are used, given this is the main way in which extra funding for more deprived schools is used. Policymakers throughout the system should base their spending and policy decisions on this and other high-quality evidence. Should budgets allow, this is likely to imply higher levels of deprivation funding for schools.

2. **Fairness and transparency in funding across schools and areas –** Under the current system, similar schools and areas can receive quite different levels of funding per learner. Simpler and more consistent school funding formulae across local authorities would reduce differences in funding per learner across similar schools and make the reasons for any remaining differences fully transparent. The Welsh Government and local authorities should continue to review the local government funding formula to ensure that it fairly reflects the needs and costs across areas.

3. **Effective scrutiny enabled by consistent and transparent data –** Effective scrutiny is only possible when all stakeholders have access to clear information and data on how school funding is allocated. More consistent and detailed spending data would enable informed discussions between local authorities and schools about how best to use funding.

4. **Clear expectations on future costs throughout the system –** The Welsh Government should produce rolling multi-year assessments of the likely future growth

in school costs. These would follow actual decisions on teacher pay for the year ahead and be based on a range of neutral assumptions for future years. Whilst such estimates could never be a guarantee of future funding changes, they would improve accountability by providing a high-profile benchmark against which to judge the funding decisions made by all layers of government (UK government, Welsh Government and local authorities). They would also provide a firmer basis for schools and local authorities to make long-term plans, as well as a long-term link between cost expectations and funding decisions.

School spending in Wales: the current offer to learners

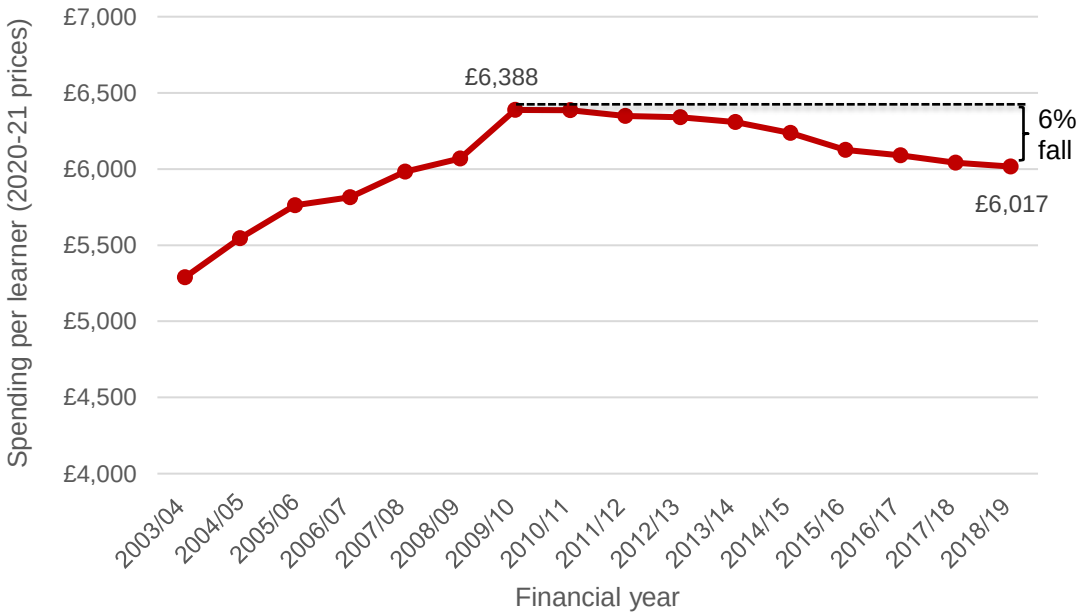
- Total public spending on schools in Wales was £2.6bn in 2018–19 or about £6,000 per learner in today's prices. This reflects spending decisions and trade-offs made by the UK government, Welsh Government, local authorities and regional consortia.

- About 83% (or £2.16bn) was spent by schools themselves. This provides for about one teacher for every 22 learners in primary schools and one for 17 learners in secondary schools, with lower ratios in special schools.

- Primary schools make extensive use of teaching assistants, with one for every 24 learners. Secondary schools make more use of non-teaching staff, such as administrative and pastoral care staff, with one non-teaching member of staff for every 67 learners.

- About 17% of total school spending (or £460m) relates to central services provided by local authorities. Around one quarter of this relates to home to school transport and a further quarter relates to provision for pupils with additional learning needs. The rest is then spread out across other central functions, such as cover for school staff, catering, school improvements and support for all learners in the area.

Figure A School spending per full-time equivalent learner in Wales over time



- Spending per learner grew rapidly over the 2000s to reach a high point of £6,400 in 2009–10. It has since fallen by about 6% in real-terms to reach just over £6,000 per learner in 2018–19 (in today's prices). This fall is near identical in value to the real-terms reduction in the block grant from the UK government over the same period.

- Such reductions have been at least partly delivered by higher pupil:teacher ratios, particularly in primary schools, where the number of learners per teacher has risen from about 20 in 2009–10 to about 22 in 2018–19. Teacher numbers have failed to keep pace with a growing primary school population.

Linking spending decisions to empirical evidence

- There is now a strong evidence base showing significant benefits from higher school spending. Across a range of contexts and countries, a 10% increase in spending has been found to improve educational and later life earnings by about 7-10%. These effects are larger for disadvantaged learners. The actual effects of spending changes will always depend on how such money is used and the quality of resources, but policymakers should recognise this positive evidence when making decisions on school spending.

- Constructing a single figure for a basic minimum cost of educating a child would require policymakers to make central judgements on the appropriate level of a vast range of input choices: the pupil:teacher ratio; average pay of teachers; how much time teachers should have outside of lessons; the number of teaching assistants and other staff; their pay; and, spending on non-staff costs such as books, utility bills, insurance and other factors.

- There is insufficient evidence to allow policymakers to reach reliable conclusions on the 'right' level of such factors for each school. Doing so would also risk undermining one of the key strengths of the current system: the autonomy granted to schools and local authorities to make choices that best suit their needs and circumstances.

- The scale of the variation in spending needs and resource choices shows that there is no average school in Wales either. A single minimum cost figure is unlikely to be relevant to most schools across Wales. It is therefore not possible to estimate the minimum cost of educating a learner in Wales in reliable and robust way, or in a way that could be used in a funding system.

- The Welsh Government should instead provide more information to allow stakeholders to argue for fully costed changes to resources. For example, the cost of a reduction in the pupil:teacher ratio of one would be about £75m, about 3% of school spending, and would be sufficient to take the pupil:teacher ratio back to 2014 levels in primary and secondary schools.

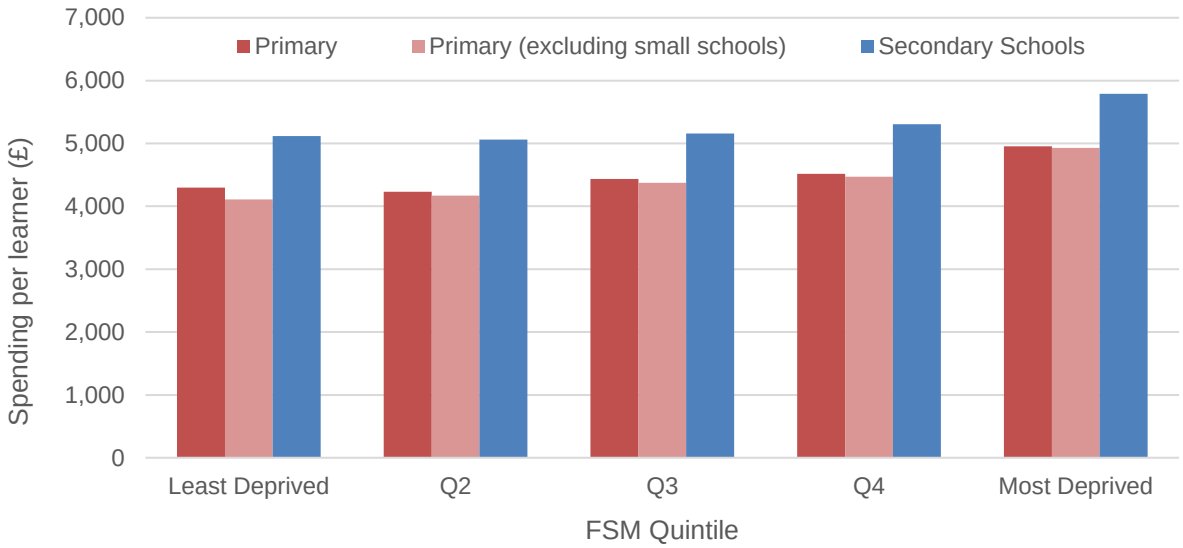
Differences in spending and resources across schools

- Spending per learner is about £650 higher in the most deprived 20% of primary schools as compared with the least deprived ones. This equates to an extra 15% in spending per learner. This difference is about £700 or 13% for secondary schools. This extra funding is mainly focused on the most deprived group of schools. There is little extra funding for schools with slightly above average deprivation.

- A large part of the funding for deprivation in Wales is driven by the Pupil Development Grant (PDG), which accounts for about 60% of the extra funding for more deprived primary schools and 40% of the extra funding for more deprived secondary schools.

- This extra funding for deprivation in Wales is generally used to reduce pupil:teacher ratios in primary schools, and to increase teaching assistant numbers in both primary and secondary schools. The quality and how these staff are deployed will determine the effectiveness of this deprivation funding.

Figure B Spending per learner by quintile of eligibility for free school meals (FSM), 2018–19



- Despite the introduction of the PDG, extra funding for more deprived primary schools has not grown over the last 10 years. Extra funding for more deprived secondary schools has grown over time, but not as much as one would predict given the introduction of the PDG. This is at least partly explained by the growing cost of small schools. However, the exact reason for this somewhat surprising result is unclear given changes to data, school organisation and highly complicated local school funding formulae. This underlines the importance of greater transparency and consistency in the school funding system in order to track whether school funding changes over time are in line with policymaker priorities.

- Extra funding for deprived schools in Wales is also lower than it is in England, where the most deprived primary and secondary schools receive 25-30% extra funding (as compared with about 15% extra in Wales).

- There is a strong empirical evidence base showing that higher school spending has a larger, positive effect on learners from deprived backgrounds and can play a major role in reducing the attainment gap. The Welsh Government and local authorities should therefore prioritise extra funding for deprivation.

- Small schools experience higher levels of spending per learner, sometimes over £8,000 or £9,000. This reflects the higher per learner costs of running a small school.

- Welsh-medium schools see slightly higher spending per learner than English-medium schools. However, this is almost entirely explained by the fact that such schools tend to be smaller, on average, and more likely to be in rural areas.

- Secondary schools with sixth forms have slightly higher levels of spending per learner, about £250 extra as compared with equivalent secondary schools without sixth forms. However, secondary schools with sixth forms are only able to maintain a pupil:teacher ratio about 0.5 lower than other secondary schools. It is questionable whether this is enough to deliver a range of high-quality sixth form options. Funding per learner in sixth forms in Wales is more than £500 below that in England and there have also been very large swings in funding and learner numbers in recent years.

- Spending per learner can vary by up to £1,500 between schools with similar levels of deprivation. This equates to a difference of over 35%.

- Even after accounting for learner and school characteristics and average levels of funding for each area, 15% of primary schools have spending per learner 10% or more above the national average, and 15% see spending per learner 10% or more below the national average. Differences are slightly smaller for secondary schools, though 6% have spending per learner 10% or more below the national average and 11% have spending per learner 10% or more above the national average.

- These large differences in spending per learner across similar schools will partly reflect the different funding formulae used by each local authority. These can be highly complex, with very different factors included. It would be highly desirable to reduce the complexity of these formulae and make them more consistent across areas. This would increase transparency and reduce funding differences across similar schools.

Spending by local authorities and regional consortia

- Local authorities spend about £1,000 per learner on services provided centrally. Provision for additional learning needs and home-to-school transport represents about 45% of central spending by local authorities, with home-to-school transport seeing the largest growth over the last five years.

- Central spending per learner can vary from about £600 to over £1,500 per learner. This partly reflects differences in needs and costs, such as higher transport spending in rural local authorities and higher spending on additional learning needs in other cases. However, it also reflects choices made by local authorities. For example, local authorities differ markedly in terms of how much provision for additional learning needs is done centrally and how much is delegated to schools.

- Inconsistent and incomplete data reduces the transparency in the school funding system and can feed myths. This includes inconsistent, and often confusing, data on how local authorities spend their money. Spending on service-level agreements is not detailed within current data releases. Such problems make it hard for schools to understand local authority spending choices and for all stakeholders to draw lessons from comparisons across local authorities.

- More detailed and transparent data should be used as a basis for open and regular conversations between schools and local authorities on funding and responsibilities. Delegation discussions should then be jointly owned by local authorities and schools.

- The regional consortia play a crucial role in the school funding system, distributing various specific grants to schools and providing a number of services themselves, such as school improvement and professional development. However, central spending by the regional consortia is only about £60 per learner or about 1% of total school spending in Wales. Despite this, the system of grants and reporting by regional consortia is highly complex and it is welcome that the regional consortia and Welsh Government are seeking to reduce this complexity.

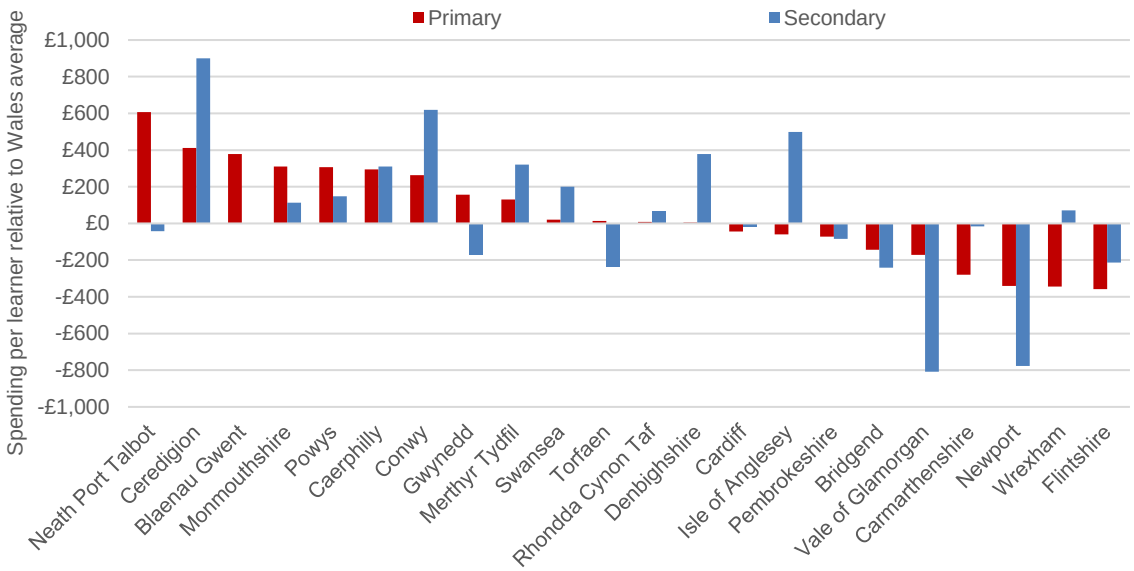
Differences in school spending levels across areas

- There are significant differences in spending per learner across local authorities even after accounting for differences in learner and school characteristics, such as deprivation and sparsity. For example, total spending per learner in primary and secondary schools is around £300 above the national average in Ceredigion, Conwy, Caerphilly and Blaenau Gwent. It is around £200 or more below the national average in primary and secondary schools in Newport, the Vale of Glamorgan and Flintshire.

- Such differences will reflect local choices on much how to spend on schools, given the grants and income they receive, as well as other detailed measures of need. However, they will also partly reflect differences in the levels of grants they receive too.

- It is important for the Welsh Government and local authorities to continue to review the local government settlement to ensure it accurately reflects underlying needs and costs. For instance, they should review the extent to which including additional measures of in-work poverty could improve the system

Figure C Differences in total primary and secondary school spending per learner after accounting for learner and school characteristics, 2018–19



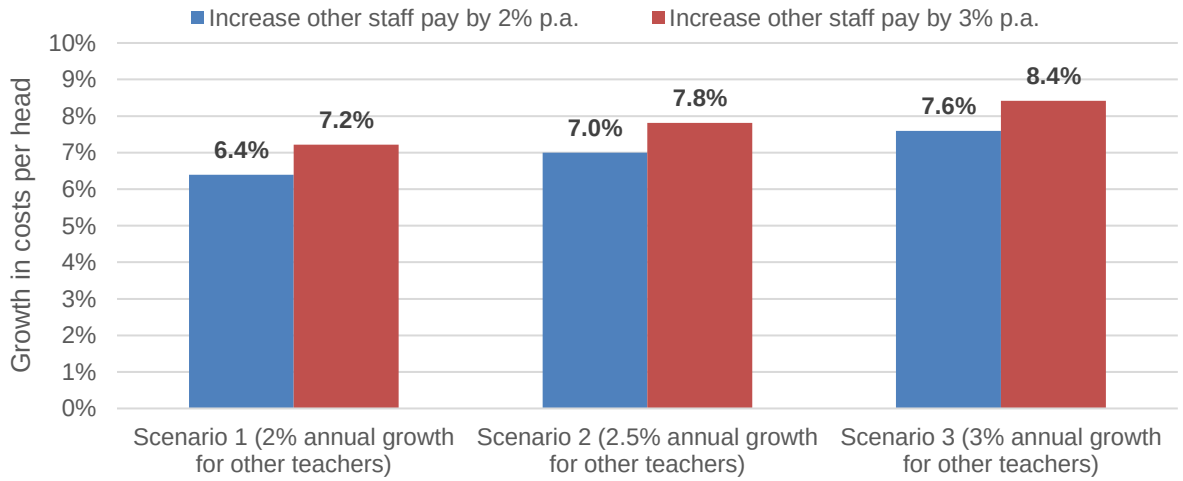
Notes: Figure for secondary schools in Blaenau Gwent is not shown due to a low number of 11-16 or 11-18 secondary schools.

Future Cost Pressures

- In the short run, the main driver of school costs will be the level of teacher pay, particularly the extent to which policymakers in Wales chose to follow the commitment in England to increase teacher starting salaries to £30,000 by 2022. The Welsh Government has already made steps in this direction, with an 8.48% increase in starting salaries proposed for 2020–21, and between 2.75% and 3.75% for other teachers.

- If policymakers did follow a similar approach to England on teacher pay, school costs would be expected to grow by about 8% per learner between 2019–20 and 2022–23 (assuming other staff pay grows at 3% per year) or about 6% (assuming other staff pay grows at 2% per year). This provides an indication of the likely amount school funding per learner will need to grow by to prevent real-terms cuts to resources.

Figure D Potential growth in school costs per learner under various scenarios for teacher pay, 2019–20 to 2022–23



- The new Additional Learning Needs system represents a major change set to come in from 2021, creating a single system for learners up to age 25. The Welsh Government has taken a number of mitigating actions to reduce the risks of a large growth in costs and numbers in the post-16 sector, as happened in England after a similar set of reforms.

- The scale of the expected transformation in Wales, combined with the English experience, suggests a need to work with local authorities and other stakeholders to keep the new system and level of resources under continual review.

- Demographic change will create further pressures on school spending. Declining child populations will increase the per pupil cost of running small schools. An ageing population will also rapidly increase the demand for adult social care over time. Without significant additional overall funding, there is a risk that school spending could lose out incrementally to the demands of adult social care.

- A ring-fenced schools grant could help protected school spending over the long-run. Such an approach would clarify accountability within the current system and allow the Welsh Government to directly control grant levels to ensure they follow expected cost pressures. However, most local authorities already spend more than their assessed education spending needs. A ring-fenced grant would run the risk of some areas

levelling down spending and may prevent local authorities from drawing links across spending areas and responding to local needs and priorities.

- This review recommends the Welsh Government publish rolling assessments of future cost pressures on schools, similar to those in Figure D. These would follow annual decisions on teacher pay to produce a precise estimate for the year ahead, with future years likely to be an indicative range based on neutral assumptions. Whilst not a guarantee of future funding growth, this would improve accountability by creating a high-profile comparison to judge funding decisions made by the UK government, Welsh Government and local authorities. It would assist schools and local authorities in making long-term resource plans and provide a focus for debate on how policy decisions are likely to affect school costs.

1. Introduction

School spending is a significant component of public spending, representing about 3% of national income, on average, across OECD countries[1]. Such spending can potentially be used as an engine of productivity growth and social mobility[2].

The Welsh Government has high ambitions for the school and broader education system. The Minister for Education has sought to make improving education in Wales a national mission, writing:

> *"A nation's economic prosperity, social cohesion and well-being are built on the foundations of a strong and successful education system. That is why I describe our focus on raising school standards, reducing the attainment gap between different groups of learners and delivering an education system that is a source of national pride and public confidence as our national mission[3]."*

As part of such efforts, the Welsh Government is making substantial reforms to the school system, including the new Curriculum for Wales, a transformation of professional learning and a new Additional Learning Needs system. These reforms focus on improving overall school standards and reducing inequalities. This makes it crucial to understand the sufficiency of current school funding levels and whether the school funding system in Wales is delivering funding to schools and learners in a fair and equitable manner.

School funding has also become a highly topical policy issue in Wales and the rest of the UK in recent years. Concerns have been raised about real terms falls in school spending per learner, as well as differences across schools and areas. Such concerns led the Senedd Children, Young People and Education Committee to launch an inquiry into school funding in Wales in 2018. This inquiry resulted in a range of recommendations[4] focused on determining the sufficiency of current school funding levels and improving the operation of the school funding system, including.

> *"That the Welsh Government commission an urgent review of how much funding is required to fund schools sufficiently in Wales, particularly given the level of reform currently being undertaken. The review should: Consider, as its basis, what the basic minimum cost is of running a school and educating a child in Wales, before allocating additional resources required for other factors such as deprivation and sparsity and local circumstances; and provide an estimate of the current funding gap between the amount currently spent on schools and the amount required to deliver on all that is required of them - including the considerable reform agenda."*

The Welsh Government agreed that "a review of this nature has merit … [and that] the costs of any review will be met from existing budgets[5].

This review of school funding in Wales was commissioned to inform the Welsh Government's decisions in response to this and other recommendations from the inquiry,

---

[1] https://www.oecd.org/education/education-at-a-glance/educationataglance2019-dataandmethodology.htm
[2] Becker and Chiswick (1966); Card and Krueger (1992); Psacharopoulos and Patrinos (2018); Chetty and Hendren (2018).
[3] https://gov.wales/sites/default/files/publications/2018-03/education-in-wales-our-national-mission.pdf
[4] http://www.assembly.wales/laid%20documents/cr-ld12643/cr-ld12643-e.pdf
[5] http://senedd.assembly.wales/documents/s93706/Welsh%20Government%20Response.pdf

and to offer analysis of how the school funding system can be adapted to best support policy goals and ambitions to improve the school system in Wales.

Approach to review

The school funding system represents a means to achieve education policymakers' goals. It delivers the funding schools need to provide a high-quality and well-rounded education. It provides the funding local authorities need to provide key services, including school transport and support for vulnerable learners. The school funding system ensures that schools with higher costs, such as small schools, receive appropriate levels of extra funding. It also represents a means to combat inequalities through providing extra funding and resources to schools with more learners from disadvantaged backgrounds.

Ensuring these goals are met requires transparent and consistent information on what the current system delivers in terms of actual resources, and how this varies across schools in different circumstances and areas. This review therefore seeks to illustrate how spending per learner and resources have changed over time and how they vary across schools facing different costs and needs. It makes specific recommendations on how to further improve transparency to enable all stakeholders to effectively scrutinise what the school funding system delivers across Wales. This will ensure the system achieves value-for-money and equitable differences in resources.

Achieving these outcomes also requires detailed knowledge of empirical evidence to ensure that funding and resources are directed to where they are likely to have the largest impact. This review seeks to detail the current state of the empirical evidence base and the extent to which current differences in spending per learner are aligned with this evidence. This illustrates the extensive recent evidence showing potentially high benefits from extra spending on schools, with even larger gains for learners from disadvantaged backgrounds.

Ensuring that funding reflects costs over the short- and long-run also requires continual assessment of the likely cost pressures on schools. This review therefore seeks to estimate likely short-run costs as a result of potential changes to teacher pay and assesses long-run pressures. It makes specific recommendations on how the Welsh Government could provide annual assessments of cost pressures facing schools. This would enable schools and local authorities to make longer term plans for resources and allow stakeholders to scrutinise the extent to which actual funding changes reflect cost pressures.

Covid-19 Pandemic

This review was commissioned in October 2019, with much of the work undertaken in late 2019 and first part of 2020. As a result, this review is unable to consider the implications of the continued Covid-19 pandemic for school resources. However, it fully acknowledges that the pandemic will have profound implications for school resources and spending.

This includes short- and medium-term consequences for schools as they reopen and seek to minimise contagion risk through social distancing, with measures potentially required well into 2021. It also includes the long-run consequences for the educational inequalities and mental health issues that seem likely to emerge as a result of this crisis. As Professors Burgess and Vignoles state "The crisis will lay bare the already stark inequalities in educational attainment that are a feature of the UK[6]." Such challenges make it even more

[6] https://campaignforsocialscience.org.uk/news/the-covid-19-crisis-and-educational-inequality/

important to undertake a careful and considered review of the school funding system to ensure it is well-placed to assist policymakers.

At the same time, the pandemic will lead to massive strains on the public finances, with the OBR currently expecting UK public borrowing to reach almost £300bn in 2020-21[7]. The future path of UK public spending is therefore deeply uncertain, as is the overall budget for the Welsh Government.

Review structure

This review is divided into four different components, listed below. Each chapter contains a set of recommendations, which are then collated in the final concluding section.

- **Chapter 2 - School spending in Wales: the current offer to learners:** This describes the overall structure of the school funding system and how the level of resources has changed over time. It sets out the major difficulties in calculating a single minimum cost for educating a child. Instead, it illustrates what the school funding system provides for in terms of the offer to learners and seeks to enable policymakers and all stakeholders to reach clear judgements on whether the current offer is sufficient in all cases. It also provides additional evidence on the potentially significant benefits of increases to school resources.

- **Chapter 3 - Differences in spending and resources across schools:** This chapter analyses differences in spending per learner and resources across schools in detail. Special focus is placed on the extent of funding for more deprived schools. In addition, the chapter also examines differences in funding and resources by school size, medium of education and sixth form provision. It also quantifies the extent to which spending per learner varies across similar schools in different areas.

- **Chapter 4 - Spending by local authorities and regional consortia:** This chapter examines levels of spending by local authorities and the regional consortia. This includes how much they retain for central spending, what they spend their money on and how this affects the level funding received by schools. It also shows how spending varies across areas after accounting for differences in needs and costs.

- **Chapter 5 - Future Cost Pressures:** This final chapter examines future cost pressures. This includes the likely growth in school costs per head as a result of potential changes to teacher pay in the short run. It also considers longer-term cost pressures as a result of the new Additional Learning Needs system and demographic change. The chapter concludes with a discussion of potential mechanisms to protect school spending over the long-term.

Most of the empirical analysis in this report is based on funding and learner characteristics from 2018–19, the last full financial year of data available at the time of writing. Full details on the empirical approach are detailed in Appendix A. Analysis is undertaken separately for primary and secondary schools throughout, with analysis on middle and special schools provided wherever sample sizes allow. The focus of the review is school spending. Nurseries, early years providers and exclusively post-16 providers are outside of the scope of this review. However, because of the nature of the school funding systems, differences across schools will often include the effects of early years and school sixth form funding.

[7] https://obr.uk/coronavirus-analysis/

2. School spending in Wales: the current offer to learners

There is significant public debate on both the level and distribution of funding across schools in Wales. The question of whether schools have sufficient levels of funding lies at the heart of this debate and the recommendations of the 2019 inquiry into school funding by the Senedd Children, Young People and Education Committee[8]. This included a recommendation to establish "the basic minimum cost … of running a school and educating a child in Wales, before allocating additional resources required for other factors such as deprivation and sparsity and local circumstances."

Establishing the minimum cost of running a school is not straightforward. Schools differ significantly in terms of factors likely to influence their costs: schools with more experienced teachers will face higher costs; rural schools with smaller class sizes will have higher costs; physical and environmental factors will influence maintenance and energy costs. Schools will also make different choices on how to make use of other staff, such as teaching assistants. Schools and learners will also benefit from services provided by local authorities, such as support for additional learning needs and school transport costs, with needs differing across areas and contexts. As a result, there is no average school in Wales.

Setting a minimum cost of running requires judgements on key factors. How big should classes be? How much should we pay teachers? How much time do they need outside of lessons? What other staff are required and how much should we pay them? What other services and resources are required? These questions are paramount to how the school system operates, and local and national decisions should be informed by robust empirical evidence. However, there is no empirical evidence that provides clear and straightforward answers to these questions. The decisions must be based on the available evidence, the total budgets for the Welsh Government and local authorities, and the needs of other spending areas.

This chapter therefore starts in section 2.1 by providing a review of the empirical evidence on the effects of school spending on learner outcomes across a range of countries and contexts. This highlights recent academic evidence showing positive effects of school spending. However, the actual effects will always be determined by how it is used, and the literature does not provide a guide to a 'right' level of spending per learner.

Understanding the sufficiency of school funding in Wales also requires clear understanding of what the current system provides, and how this varies across different types of schools, areas and learners, which will have different needs and costs. To inform the debate on sufficiency, this chapter provides a detailed overview of what the current offer looks like for learners in Wales. This includes where the money comes from, who spends the money, how it's changed over time and what learners receive in terms of actual resources for their education. This includes teacher and staff ratios, the average costs of teachers and other staff, and spending on other key areas, such as learning resources and utility bills.

As well as providing a detailed account of what the current average offer looks like, this and later chapters will also show how this varies across schools and areas in Wales. This will show that there is no average school in Wales and why it would therefore be infeasible to produce a single, minimum figure for the cost of educating a pupil.

[8] http://www.assembly.wales/laid%20documents/cr-ld12643/cr-ld12643-e.pdf

Instead, this report seeks to enable policymakers and all stakeholders to reach clear conclusions as to whether the current offer to learners in Wales meets their expectations, both on average and for schools in different circumstances (e.g. by deprivation, sparsity, medium of provision). It will also analyse the extent to which the current distribution of spending fits with empirical evidence on the effects of school spending. It will also estimate the costs of specific changes to the current offer and therefore provide a means for policymakers and stakeholders to cost and argue for changes to resources.

The rest of this chapter starts by reviewing the evidence on the effects of school spending. Section 2.2 describes the current system. Section 2.3 focuses on the level, trends and variation in spending per learner. Section 2.4 describes the current resources and inputs provided for learners, mainly in terms of staffing levels. Section 2.5 describes spending by local authorities and the regional consortia. Section 2.6 provides additional information to better understand the costs of the current system and potential changes to the current offer. Section 2.7 summarises and makes initial recommendations on overall spending.

2.1 Effects of changes to school resources

Before examining how much is spent on schools in Wales, it is important to provide a clear overview of the empirical evidence on the effects of school resources. Here, there is a strengthening academic consensus on the potential benefits of additional school spending.

Effects of school spending

The previous consensus was that increasing spending had a relatively weak effect on learner outcomes (Hanushek, 2003). This consensus was mostly based on descriptive comparisons between spending and learner outcomes. Such comparisons are unlikely to be informative about the true effect of spending on outcomes. There are many other reasons why funding and learner outcomes may be correlated, e.g. funding is often directly targeted at learners and schools in disadvantaged circumstances. International comparisons of spending and learner outcomes are subject to the same problem.

Recent work has adopted a range of sophisticated methodological strategies to estimate the true relationship between spending and outcomes. Jackson et al. (2015) use court-ordered school finance reforms in the US to estimate the effects of funding per pupil on later life outcomes. They find that a 10% increase in spending per pupil throughout childhood increases later life wages by 7%, on average.

A range of other papers from the US come to similar conclusions. Hyman (2017) uses school finance reforms in Michigan to find large effects of increases in school spending (a 10% increase in funding increases the share of students achieving a post-secondary degree by 7%). Baker (2019) finds that a 10% increase in school expenditure during childhood in Georgia increases later life wages by about 7%. Lafortune et al. (2018) use a range of US school finance reforms during the 1990s to estimate that a $1 increase in spending leads to a $1 increase in discounted lifetime earnings. Whilst most papers examine the impact of increases in school funding, Jackson et al. (2018) also show that reductions in school spending lead to large reductions in test scores too

This pattern of findings is confirmed across a range of countries and contexts too. Gibbons et al (2018) make use of historical school funding anomalies in England to estimate that a

30% increase in school spending (relative to the mean) increases pupil attainment by about 30% of a standard deviation. Holmund et al (2010) provide further evidence of a substantial positive effect of school spending in England by using variation in the political control of councils. Haegeland et al (2012) exploit the location of waterfalls and hydropower plants in Norway to find positive effects on school spending on pupil outcomes

The academic consensus has therefore moved decisively towards finding consistent positive effects of higher school spending. However, these are average effects and provide no guarantee that an increase in funding will produce a given improvement in outcomes. Any change in outcomes will clearly depend on how it is used and where it is directed.

How spending is used

Where positive effects of school spending are found in the academic literature, these have generally been driven by some combination of lowering class sizes and using higher salaries to attract high-quality teachers. This fits with the academic evidence on both class sizes and teacher salaries. Across a range of countries and contexts, empirical evidence suggests that reductions in class sizes can have modest, positive effects on pupil outcomes (e.g. Angrist and Lavy, 1999; Krueger, 2003; Fredriksson et al, 2013). There is also a range of high-quality evidence showing that higher teacher salaries can improve student achievement. This includes evidence from the US (Loeb and Page, 2000; Hendricks, 2014), UK (Britton and Propper, 2016) and Australia (Leigh, 2012).

Whilst the academic evidence is relatively clear on the potential benefits of extra spending on teachers, there is also a balance to be struck and any likely benefits will depend on the overall context. The likely benefits of reducing class sizes would depend on the size of any reduction and the existing level, though the literature does not come to any conclusion on a 'right' level. It would also depend on the quality of existing teachers, which will partly reflect their underlying skills and the quality of training they receive (Fletcher-Ward and Zuccollo, 2020). The potential benefits of increasing salaries to increase teacher quality will in turn depend on the extent to which there is a ready pool of individuals who might consider being a teacher. The best use of any extra funding is thus likely to be a compromise

The evidence on the effectiveness of extra spending on other school inputs is relatively thin and mixed in terms of its findings. With respect to teaching assistants, the evidence that does exist suggests that pupils attached to teaching assistants make little extra educational progress than other equivalent pupils, and can even make less progress if time with the teaching assistant diverts from time with a more highly qualified teacher (Blatchford et al; 2011; Farrell et al. 2010). There are, however, numerous trials showing how teaching assistants can be used to deliver effective one-to-one catch-up programmes (e.g. Gorard et al. 2014; NFER, 2014). A recent campaign by the Education Endowment Foundation in England has further shown how schools can make better use of teaching assistants[9].

There is even less evidence on the effectiveness of other spending. This is not to say that spending on other inputs like training, learning resources, energy or other staff is not

[9] https://educationendowmentfoundation.org.uk/tools/guidance-reports/making-best-use-of-teaching-assistants/

important. Such spending is fundamental to the operation of a school. There is just very little evidence on which to make firm conclusions on the most appropriate level.

Distribution of spending

There is stronger evidence on where and when extra spending can have the biggest impact. Most of the studies on school spending find higher effects of school spending on pupils from deprived backgrounds. For example, Jackson et al (2015) find that the positive effects of increases in school spending are concentrated amongst children from low-income families, with a 10% increase in school spending throughout childhood enough to increase adult earnings by 10% and reduce incidence of poverty by 6 percentage points. The authors also show that a 25% increase in school spending throughout childhood for low-income families would be enough to eliminate the attainment gap in the US.

Such evidence and calculations cannot translate exactly to a Welsh or UK context, given the very different social and economic context in the US. However, it is important to note that higher effects of school spending for pupils from deprived backgrounds have also been shown for England (Machin et al, 2010; Holmlund et al, 2010; Gibbons et al, 2018).

This suggests high potential for targeted deprivation funding to be a positive force in raising pupil attainment amongst children from low-income families. How any extra funding is used will then play a big part in determining its effectiveness. As we shall see in later chapters, a large element of deprivation funding has been used to employ extra teaching assistants. How they are deployed and used is therefore very important in determining the overall effectiveness of deprivation funding in Wales.

There is also a growing literature on the dynamics and efficient timing of investments. Cunha et al. (2010) argue that earlier investments in skills are likely to be more productive than later investments, and that early investments raise the productivity of later investments. This is confirmed by Johnson and Jackson (2019) who show that the effect of higher school spending is larger when preceded by high-quality pre-school provision in the US (combining the effects of US school finance reforms and the introduction of Head Start). For the UK, Nicoletti and Rabe (2018) have shown that the effects of investments in secondary school are higher for those with greater levels of skills gained at primary school.

This evidence implies that higher education spending early in children's lives can be highly effective. However, it also implies a need for this to be followed up throughout their school career in order to reap the full benefits.

Summary

The academic literature therefore shows that the effects of school spending on learner outcomes appear to be large across a range of countries and contexts (with a 10% increase in spending increasing outcomes by about 7-10%). The effects are larger for disadvantaged children, and there is a consensus that earlier investments can have larger effects.

These impacts are higher than previously assumed in the literature about ten years ago. However, these are still average figures and there is no guarantee that any extra spending will always produce such a large impact in every context. The effectiveness of any extra spending will also be determined be how it is used. Here, there is good evidence to suggest that using extra spending to increase the quantity and quality of teachers through lower class sizes and higher teacher salaries can lead to positive effects. There is less evidence

on spending on other areas. This would make it extremely hard to estimate the 'right' level of spending across different areas. However, it is certainly possible to examine the extent to which the current distribution of spending and inputs matches the broad recommendations from empirical evidence, which is the approach taken in this review.

2.2 Structure of the current system

Total public spending on schools in Wales represented £2.63 bn in 2018–19 (the last complete financial year of data at the time of writing)[10]. This represents (net) day-to-day spending by schools and local authorities across Wales, i.e. it excludes capital spending on new buildings and central spending by the Welsh Government on areas such as teacher training and maintaining the qualifications system. This section outlines how this is derived, distributed and spent.

Figure 2.1 illustrates where this money comes from, the choices at various layers of government that determine this spending and ultimately who spends the money. The system involves four main sets of institutions and decision makers: the Welsh Government; local authorities; regional consortia; and, schools themselves. Although this is simplified as much as possible, the complexity of the current system is immediately obvious. The arrows and boxes are coloured to reflect the decisions made by different layers of government: Welsh Government (red); local authorities (green); regional consortia (orange); individual schools (blue).

The first clear conclusions from this figure is that the system is complicated and involves trade-offs and movements of funding across multiple layers of government.

There are then three sources of funding for spending on schools in Wales: funding from the Welsh Government; council tax revenues; and, income from sales, fees, charges and donations.

The Welsh Government's spending decisions are financed by the block grant from the UK government determined through the Barnett formula and Welsh tax revenues, such as non-domestic rates and Welsh Rates of Income Tax. Total spending by the Welsh Government was £18.5bn in 2018–19, of which about £15.7bn relates to current or day-to-day spending[11]. This is divided up across the different spending areas and functions of the Welsh Government, including funding for local government, health and social care, transport, housing, the environment and other spending areas.

Funding from the Welsh Government for schools is by far the single largest source of funding, though this comes through various channels.

First, the Welsh Government provided around £4.2bn[12] in 2018–19 through the local government settlement to support the running of local authority services[13]. The settlement funding formula is used to distribute the available funding according to relative need. The mechanism used to distribute the funding relies on Standard Spending Assessments, which

---

[10] https://statswales.gov.wales/Catalogue/Local-Government/Finance/Revenue/Education/educationrevenueexpenditure-by-service

[11] Welsh Government, 2nd Supplementary Budget for 2018 to 2019 (https://gov.wales/welsh-government-budgets#id_2018to2019)

[12] Aggregate external finance plus top ups

[13] Welsh Government, Local government revenue and capital settlement: final 2018 to 2019 (https://gov.wales/local-government-revenue-and-capital-settlement-final-2018-2019).

include a modelled council tax amount. Of over £5.6 billion allocated through these Standard Spending Assessments, around £2.2bn in 2018–19 was distributed according to indicators relating to school services. This mechanism is used to distribute the funding available between the 22 local authorities and is not an expected or minimum funding level.

Second, local authorities/ schools also receive other specific grants, predominantly from the Welsh Government, which totaled £370m in 2018–19[14]. This includes some grants, such as funding for post-16 sixth form provision in schools (£93m in 2018–19), which flow directly to local authorities, whilst other grants, such as the Pupil Development Grant (£94m in 2018–19) and the Regional Consortia School Improvement Grant (£158m in 2018–19), flow through the regional consortia and then on to local authorities and schools. There are often conditions on how these specific grants must be spent and allocated to individual schools.

The second source of income is council tax revenue collected and set by each local authority to support their functions. It would be impossible to establish how much of this is used to fund schools specifically. However, about £1.56bn was collected by local authorities in 2018–19 after deducting council tax benefit and reductions[15].

The third and final source of funding is income from sales, fees, charges and donations. The schools element totaled about £247m in 2018–19. The lion's share (£144m) flowed directly to schools, from say renting out their facilities and income donations, whilst a little over £100m went directly to local authorities.

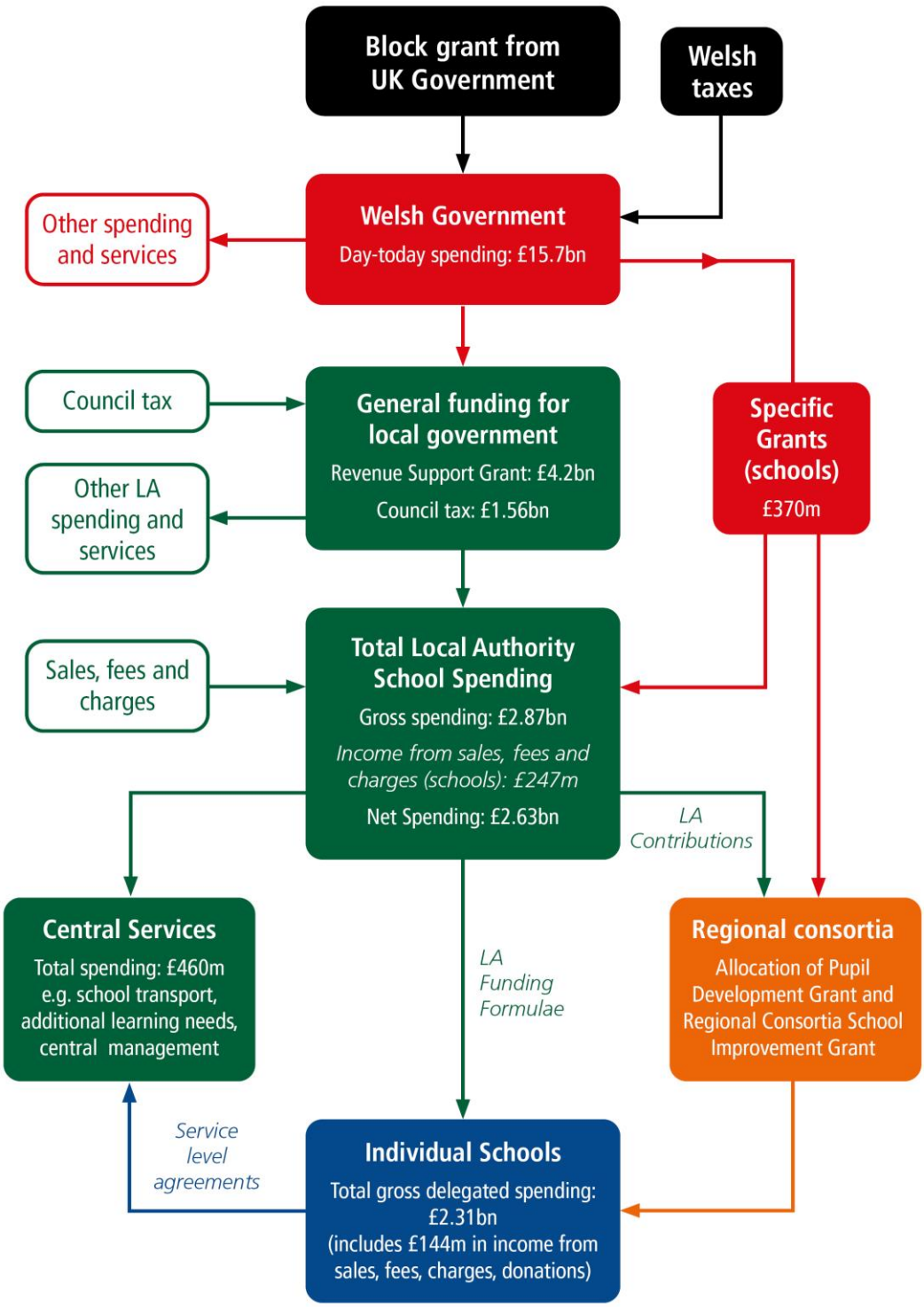
Local authorities set local levels of spending on schools and other service areas by dividing up the approximately £5.8bn they receive through the main grant and council tax revenues, plus the income they receive through specific grants and sales, fees, charges and donations, according to their local priorities. In 2018–19, local authorities set a total gross spending on schools of about £2.87bn. The second largest element of total Welsh council spending in 2018–19 was social services (£2.3bn), followed by housing (£1.0bn)[16].

The £2.87bn of spending on schools includes about £370m in specific grants from the Welsh Government, such as the Pupil Development Grant and funding for post-16 sixth form provision in schools, that are expected to be passed on to schools in specific ways. Some of these specific grants (including the Pupil Development Grant and Regional Consortia School Improvement Grant) are included in local authority accounts, but are formally the responsibility of the regional consortia.

Deducting income from sales, fees, charges and donations for schools gives a total level of net spending on schools of £2.63bn in 2018–19, the figure quoted at the start of this section. This represents the most commonly used measure of total public spending on schools in Wales used throughout this review.

[14] Stats Wales, Education Revenue Outturn Expenditure.
[15] Stats Wales, Local Government Financing.
[16] Stats Wales, Revenue Outturn Expenditure.

Figure 2.1 The school funding system and spending levels in Wales in 2018–19



Sources and notes: Welsh Government, Local government revenue and capital settlement: final 2018 to 2019; Welsh Government, 2nd supplementary Budget for 2018-19; Stats Wales, Education Revenue Outturn Expenditure

In terms of who spends the £2.63bn, there are three main institutions: local authorities; schools; and, the regional consortia. First, local authorities allocate most of this spending to individual schools themselves. This is allocated via local funding formulae decided upon by each local authority in consultation with their school forums. The main elements of each funding formula are learner numbers, as well as learners from deprived backgrounds and those with additional learning needs (including learners with specific entitlements and those with additional needs in a broader sense). At least 70% of funding must be allocated based on learner numbers.

This resulted in net spending by schools of about £2.16bn in 2018–19 and is often referred to as 'delegated spending'. In addition, schools receive income from sales, fees, charges and donations (worth about £144m in 2018–19). This leads to total gross delegated expenditure to schools of about £2.31bn in 2018–19. This is the main measure of school-level expenditure used in this review as it represents overall expenditure by a school on the different resources and inputs it provides. However, some of this funding is returned to local authorities in the form of service level agreements to provide specific sets of services for all schools in the areas, such as payroll, insurance cover or other services.

In chapter 3, this review looks at the result of all these decisions in terms of how funding and school inputs vary by deprivation, sparsity and medium of education.

Second, local authorities spend about £460m themselves on central services, which accounts for about 17% of total net school spending, but the services which are delegated can differ between authorities. This covers spending on a range of functions, such as support for children with additional learning or special educational needs, school improvement services, home-to-school transport and strategic management of schools.

Finally, the regional consortia spend about £28m collectively. This spending covers their general functions, such as providing school improvement and professional development services to schools. It is funded through contributions from local authorities (about £11m in total in 2018–19 across local authorities) and through retaining some of the specific grants passing through the consortia (£17m of the Regional Consortia School Improvement and Pupil Development Grants were retained in 2018–19[17]).

Chapter 4 looks at the role of local authorities in more detail by examining how spending varies across the different functions by area and how this has changed over time. It also examines the spending and role of regional consortia in more detail.

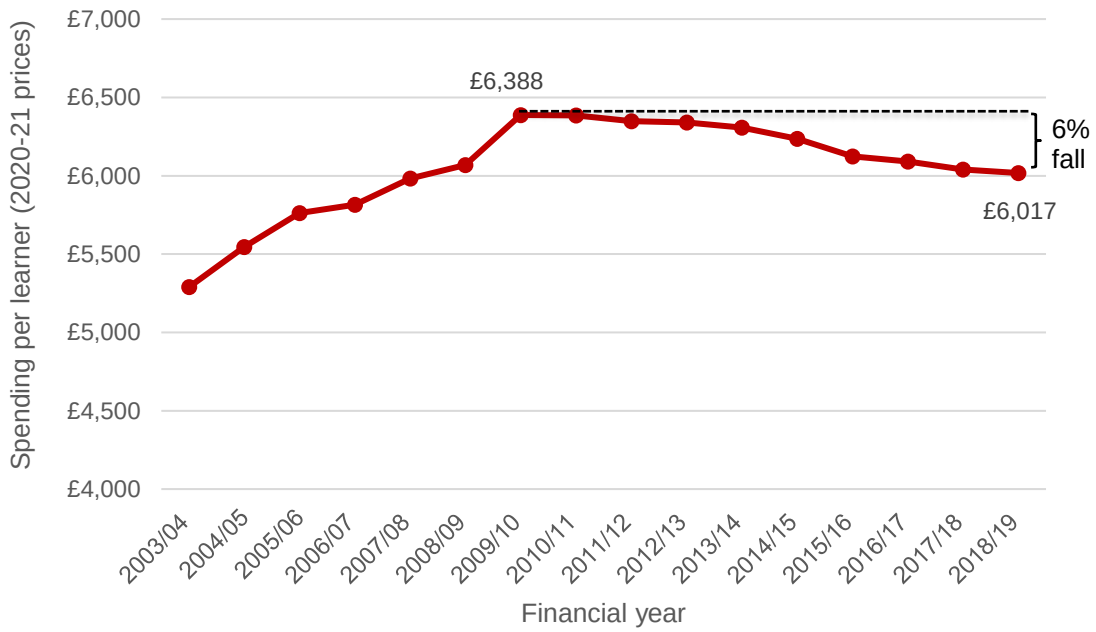
In summary, the total net spending of £2.63bn on schools in Wales in 2018–19 is the result of decisions and trade-offs made at various layers of government. It is the result of decisions by the Welsh Government on how to divide its budget between general funding for local government, specific grants for schools and spending on other public service functions, such as healthcare and transport. It is also the result of decisions by local authorities on how much of their budgets they allocate to schools and how much to spend on other areas, such as social care. Within the amount allocated to school spending, local authorities must also decide how much to delegate to individual schools in their area and how much to spend centrally. Regional consortia also play a role in the system by allocating some specific grants and spending a small amount themselves.

[17] Only the Looked After Children element of the Pupil Development Grant can be retrained.

2.3 Spending per learner

Spending per (full-time equivalent) learner in Wales represented £6,017 in 2018–19 (in today's or 2020–21 prices). This represents total net spending on schools, £2.63bn, divided by the total number of full-time equivalent learners aged 3-19 across maintained schools in Wales in January 2019 (454,000). As Figure illustrates, this is about 6% below its most recent high-point in 2009–10 in real-terms, when it stood at £6,388 per learner in today's prices. This followed on from rapid growth in spending per learner over the 2000s.

Figure 2.2 School spending per full-time equivalent learner in Wales over time



Sources and notes: Total school spending from 2003–04 to 2018-19 represents total net current expenditure on schools as taken from Stats Wales, Education Revenue Expenditure. Number of pupils in state-funded schools taken from Welsh Government, Wales School Census Results 2019 and 2014, and Stats Wales, Pupil Numbers. HM Treasury, Budget 2020 Deflators.

Reflecting the overall structure of the system, this reduction in spending per learner since 2009–10 will be the result of policy decisions and spending priorities at various levels of government. They will reflect overall reductions in spending by the UK government, which then feed through to the block grant received by the Welsh Government. For example, the block grant for day-to-day spending fell by about 6% in real terms over the same period[18].

They will also reflect the extent to which the Welsh Government has prioritised local government and education spending in setting its overall budget over time. They will also have been driven by the extent to which local authorities have prioritised school spending against other areas of spending, such as social care and other services. Cost pressures will have been further driven by policy decisions on pay levels and overall levels of inflation.

The overall result is a reduction in spending per learner of 6% in real-terms since 2009–10. This is a smaller reduction than that seen for England (8% real-terms reduction since 2009–

[18] Author's calculations using HM Treasury (2018 and previous) Public Expenditure and Statistical Analysis: https://www.gov.uk/government/statistics/public-expenditure-statistical-analyses-2019. Relates to total resource DEL (excluding depreciation) in 2018-19 prices. Adjustments are made for devolution of council tax benefits in 2013-14, non-domestic rates in 2015-16 and stamp duty land tax in 2018-19.

10) and Northern Ireland (11% fall since 2011–12), but slightly larger than that seen in Scotland (2% fall since 2009–10)[19].

Variation in spending per learner

Spending per learner is not the same across all schools in Wales, varying from about £3,000 to over £9,000 per learner in some cases. A lot of this variation is intentional to reflect the higher needs and costs of delivering schooling for some learners and areas. For example, schools with a greater share of learners from deprived backgrounds receive higher levels of funding per learner, as do small schools in rural areas.

Table 2.1 shows the average levels of spending per learner at primary and secondary schools in 2018–19, in addition to a measure of the range (the 90th and 10th percentiles). This is based on gross spending per learner at the school-level, and thus includes income from sales, fees, charges and donations. This measure is adopted as it represents the total budget of each school for spending on staffing and other resources.

The average levels of spending per learner is about £4,490 in primary schools, though 10% of primary schools have levels of spending per learner below £3,720 and 10% above £5,390 per learner. The average level of spending per learner is 18% higher in secondary schools, but with a slightly narrower range between £4,670 and £6,020 for the 10% of secondary schools with the lowest and highest levels of spending per learner, respectively. The higher level of spending in secondary schools largely reflects higher costs and a need to provide smaller classes for GCSE and A-level options.

Table 2.1 Summary of spending per learner in 2018–19

	Spending per learner			Number of schools
	Average	10th Percentile	90th Percentile	
Primary Schools	£4,487	£3,718	£5,391	1,237
Secondary Schools	£5,284	£4,671	£6,020	187
Middle Schools	£4,670	£2,772	£6,136	18
Special Schools	£22,549	£16,321	£30,273	41

Sources and notes: Spending represents total delegated school expenditure, including use of reserves. Spending figures taken from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers.

Table 2.1 also shows levels of spending per learner for middle and special schools. Average spending per learner in middle schools (£4,670) is somewhere in between primary and secondary schools, reflecting the fact that middle schools teach learners across both primary and secondary age ranges. There is also a bigger range, reflecting the wider age range and that a lot of middle schools are relatively new and still filling up.

Spending per learner in special schools is naturally much higher, at over £22,500 per learner and with a very wide range. This reflects the fact that special schools cater for learners with varying, complex and highly costly needs.

Spending per learner is also intentionally higher in schools with a greater share of learners from more deprived backgrounds in order to provide a higher level of support for greater

[19] Institute for Fiscal Studies, 2019 Annual Report on Education Spending in England (https://www.ifs.org.uk/publications/14369)

learning needs. Schools in sparsely populated and rural areas also have higher levels of spending per learner to reflect the higher costs associated with small schools.

The local government settlement distributes more funding to local authorities with higher relative deprivation levels and more sparsely populated areas. Local authorities also use their own funding formulae to allocate more funding to schools with more deprived learners, those with greater numbers of learners with additional learning needs and smaller schools. In addition, specific grants are often directed at schools and learners with specific needs. For example, the Pupil Development Grant provides £1,150 for each learner in years 1-11 ever eligible for Free School Meals, as well as funding for other learners in the early years and education outside of school.

Figure 2.3 and Figure **2.4** illustrate the scale and nature of this variation. Every dot represents a primary school (Figure 2.3) or secondary school (Figure 2.4), with the size of the dot proportional to the number of learners at the school. Big dots equate to big schools. Small schools are coloured blue to differentiate them from other schools[20]. Reading across to the vertical axis gives the level of spending per learner at that school. Reading down to the x-axis gives the share of pupils eligible for free school meals (FSM) at that school, to give an indication of the level of deprivation experienced by learners at that school. This is not a perfect measure of deprivation, but is a means of illustrating how spending per learner varies by deprivation.

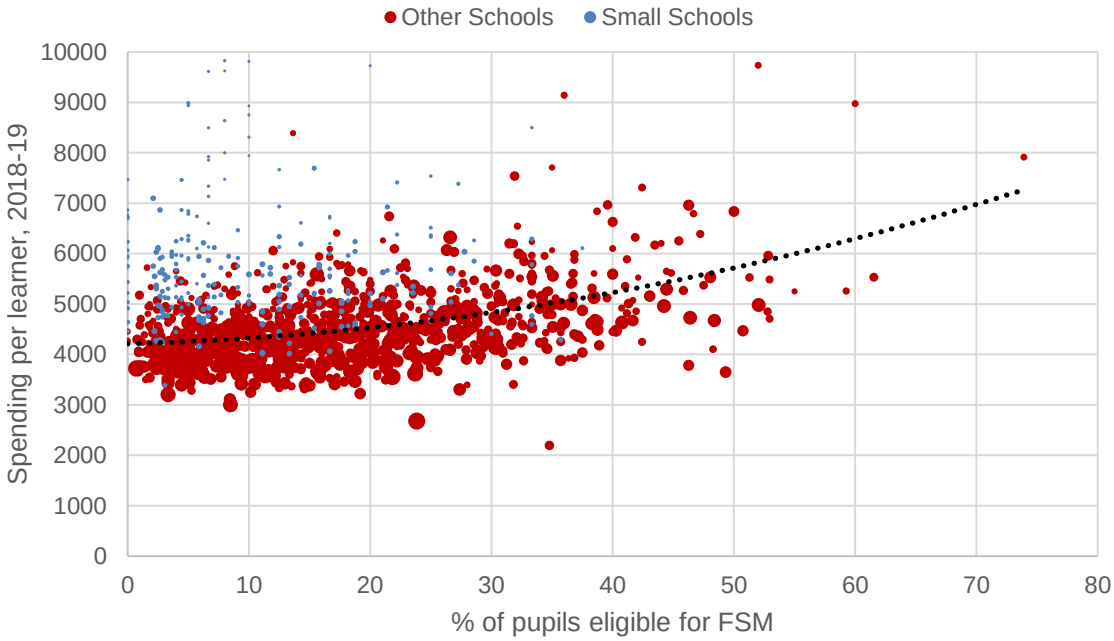
What is immediately clear from both figures is the scale of variation across schools. In the case of primary schools, this is substantial, with spending per learner varying from just over £3,000 to over £9,000 in some cases. Spending per learner is clearly much higher in small primary schools, varying from about £5,000 to over £9,000 per learner in some isolated cases. This reflects the higher cost per learner in small and rural primary schools, which must maintain smaller class sizes. However, these account for a relatively small share of primary school learners across Wales (about 5% of learners in 2018–19) and a relatively small share of the overall budget too (about 7% in 2018–19). This is the national picture. As we shall see in chapter 5, this can be over 30% of learners and budgets in some rural local authorities, such as Ceredigion and Gwynedd.

Spending per learner is also higher in more deprived schools. However, this increase is relatively gradual for the most part, with only the very most deprived primary schools seeing notably higher levels of spending per learner. Amongst primary schools with less than 10% of pupils eligible for FSM, spending per learner is about £4,200, increasing to about £4,500 per learner for schools with between 20% and 30% of pupils eligible for FSM. This then increases more sharply for primary schools with very high shares of pupils eligible for FSM, up to over £5,000 per learner for primary schools with over 30% of pupils eligible for FSM.

Spending per pupil also varies substantially across schools with similar levels of deprivation. Some of this variation will capture other differences in needs and costs of schools, but the scale of the differences is significant. For example, looking at schools with similar shares of learners eligible for FSM and excluding small schools, differences between the highest and lowest spending schools is regularly £1,500 or more. This equates to a difference in spending per learner of over 35% between schools with similar levels of deprivation.

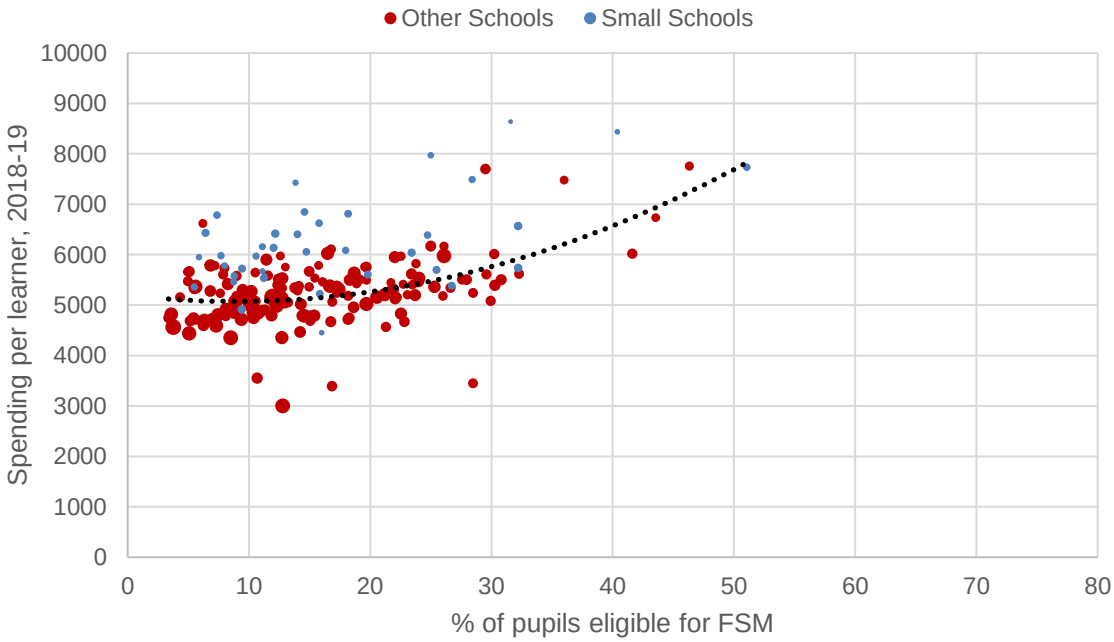
[20] Defined according to the Welsh Government definition for the small and rural schools grant (less than 91 learners for primary schools and less than 601 for secondary schools).

Figure 2.3 Variation in primary school spending per learner by deprivation and school size



Sources and notes: Size of each bubble is proportional to the number of learners. Line of best fit represents a quadratic line of best fit for other schools. Spending represents total delegated school expenditure, including use of reserves. Spending figures taken from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Figures for Free School Meal Eligibility taken from Stats Wales, Provision of Meals and Milk.

Figure 2.4 Variation in secondary school spending per learner by deprivation and school size



Sources and notes: Size of each bubble is proportional to the number of learners. Line of best fit represents a quadratic line of best fit for other schools. Spending represents total delegated school expenditure, including use of reserves. Spending figures taken from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Figures for Free School Meal Eligibility taken from Stats Wales, Provision of Meals and Milk.

The overall picture for secondary schools is very similar, although spending per learner is naturally higher. Spending per learner varies from just over £4,000 up to £8,000. Small secondary schools clearly have higher levels of spending per learner, though there is less of a divergence as compared with small primary schools. This is because small secondary schools are more comparable to other secondary schools in terms of their size.

We again see a positive, but relatively gradual relationship between spending per learner and levels of deprivation. Spending per learner is just over £5,000 for secondary schools with low shares of learners eligible for FSM and for secondary schools with about 20% of pupils eligible for FSM. It then increases a bit more sharply so that secondary schools with more than 25% of pupils eligible for FSM have spending levels in excess of £5,500 per learner, and sometimes over £6,000.

As with primary schools, there is substantial variation between secondary schools with similar shares of learners eligible for FSM. Schools with similar levels of deprivation can regularly differ by about £1,500 in their levels of spending per learner, particularly amongst less deprived schools. As with primary schools, this represents a difference in spending per learner of more than 35% for similarly deprived schools.

As shown in Chapter 3, a large part of the extra funding for deprivation is driven by the Pupil Development Grant, which accounts for about 60% of extra spending in the most deprived primary schools. This is allocated based on the number of learners ever eligible for free school meals, rather than those eligible in the current year. This difference will account for some of the differences in funding per learner for schools with similar share of pupils eligible for free school meals, but certainly not all of it.

Summary
Total school spending per learner in Wales stood at just over £6,000 per learner in 2018–19, about 6% lower in real-terms than its high-point of £6,400 per learner in 2009–10. Spending per learner varies significantly across schools in Wales. A lot of this is intentional to reflect higher needs and costs, with higher levels of spending in more deprived schools, smaller schools and special schools. However, the relationship between spending per learner and deprivation is relatively weak across most schools. It is only the very most deprived primary and secondary schools that see notably higher levels of spending per learner. There is also significant variation amongst schools with similar levels of deprivation, often £1,500 per learner or more. Chapter 3 analyses this relationship in more detail, as well as the role of sparsity and medium of education.

2.4 What spending provides for learners

Table 2.2 gives an overview of what spending on schools provides for learners in terms of staffing and spending on other inputs. Equivalent figures for middle and special schools are shown in Appendix B.

Spending on teachers represents the single largest element of spending by schools, representing about 53% of gross primary school spending and 61% of gross secondary school spending.

This provides for just under 12,000 teachers in primary schools and 10,000 in secondary schools, which represents one teacher for every 22 learners in primary schools and one for every 17 learners in secondary schools. This ratio is lower for secondary schools as they must provide lower class sizes in GCSE and A-level option subjects. These figures do not

equate to class sizes, however, as teachers also spend time performing management duties (e.g. head teachers and deputy heads) as well as time spent planning, preparing, marking and performing other tasks. The average cost per head of a teacher is about £53,000 in primary schools and about £56,000 in secondary schools. This is the full cost to schools, including salaries and employer on-costs (such as employer national insurance and pension contributions, both of which have increased in recent years). This will vary across individual schools as teacher salaries vary by levels of experience.

Spending on other staff represents about 26% of spending by primary schools. This covers over 14,000 staff members, one for every 18 learners in primary schools. This is largely made up by about 12,700 teaching assistants in a variety of roles, including special needs staff. There are then about 1,600 other staff covering administrative and other roles.

Spending on other staff represents a smaller share of secondary school spending, about 17% of gross spending and covers just under 6,000 staff members. This is equally split across about 3,000 teaching assistants and 3,000 other roles, such as 1,150 administrative staff, 580 pastoral support staff, 770 technicians, 190 school business managers and a range of staff in other roles. The staffing structures of secondary schools are clearly more complicated, though all play a crucial role.

Unfortunately, it is not possible to isolate spending on supply teachers or staff. Staffing expenditure will include insurance premiums for staff cover (such as supply teacher insurance) and any uninsured expenses. Some costs will also be met by local authorities in their central staffing budgets, the extent of which will vary across area.

Non-staff costs represent a further 20% of both primary and secondary school spending, covering a variety of different costs. In both cases, about 2% of spending relates to indirect costs of staff, such as training or insurance. Spending on the physical environment represents about 7% of primary and secondary school spending, with 5% on premises spending (such as utility bills and cleaning) and 2% on repairs and maintenance (such as the upkeep of buildings). About 3% of spending relates to education equipment, such as books and ICT resources. A further 2% relates to catering (here, it is important to note that this this represents spending *after* deducting income for catering services). Primary schools spend a further 5% of their budgets on other non-staff costs and secondary schools a further 7%. This covers costs such as transport to school trips and office expenses.

Adding all these spending areas together gives total gross spending per learner of around £4,540 per learner in primary schools and £5,440 in secondary schools, largely matching the figures described above in section 2.3.

Once you then deduct the income received through sales, fees, charges and donations (about £72m for primary schools and £57m for secondary schools), this then gives net spending by schools. This equates to about £4,260 per learner in primary schools and £5,110 per learner in secondary schools. Sales, fees, charges and donations here will include any income that passes through local authority accounts, such as contributions to the costs of school trips, renting out of facilities and donations to the school.

It will not include any donations that do not pass through local authority accounts, such as if a Parent Teacher Association bought play equipment for the school or resources bought by teachers out of their own money. Whilst such donations have received significant attention in public debate, there is unfortunately no data that can be used to examine such donations in any detail.

Table 2.2 Overview of inputs and spending across primary and secondary schools, 2018–19

	Staff Numbers	Ratio of Pupils to Staff	Cost per staff member (£)	Total spending (£m)	As % of Gross Spending
Primary Schools - 260,546 learners					
Teachers	**11,829**	**22.0**	**£53,028**	**627**	**53%**
Other staff	**14,289**	**18.2**	**£21,261**	**304**	**26%**
Non-staff costs	n/a	n/a	n/a	**236**	**20%**
Of Which:					
Indirect employee costs				*22*	*2%*
Repairs & Maintenance				*20*	*2%*
Premises				*56*	*5%*
Education Equipment				*37*	*3%*
Catering				*29*	*2%*
Other				*63*	*5%*
Adjustment for reserves				*8*	*1%*
Total Gross Spending				**1,183**	
Income from sales, fee, charges, donations				72	
Total Net Spending				**1,111**	
Gross spending per learner (£)				**£4,542**	
Net spending per learner (£)				**£4,264**	
Secondary Schools - 170,277 learners					
Teachers	**10,012**	**17.0**	**£56,110**	**562**	**61%**
Other staff	**5,850**	**29.1**	**£27,440**	**161**	**17%**
Non-staff costs	n/a	n/a	n/a	**195**	**21%**
Of Which:					
Indirect employee costs				*17*	*2%*
Repairs & Maintenance				*15*	*2%*
Premises				*46*	*5%*
Education Equipment				*28*	*3%*
Catering				*20*	*2%*
Other				*64*	*7%*
Adjustment for reserves				*5*	*1%*
Total Gross Spending				**926**	
Income from fee, charges, donations				57	
Total Net Spending				**870**	
Gross spending per learner (£)				**£5,439**	
Net spending per learner (£)				**£5,106**	

Sources and notes: Spending figures taken from Stats Wales, Education Revenue Outturn Expenditure. Full-time equivalent learner numbers Welsh Government, Wales School Census Results 2019. Staff numbers are full-time equivalent and taken from Stats Wales, School Staff.

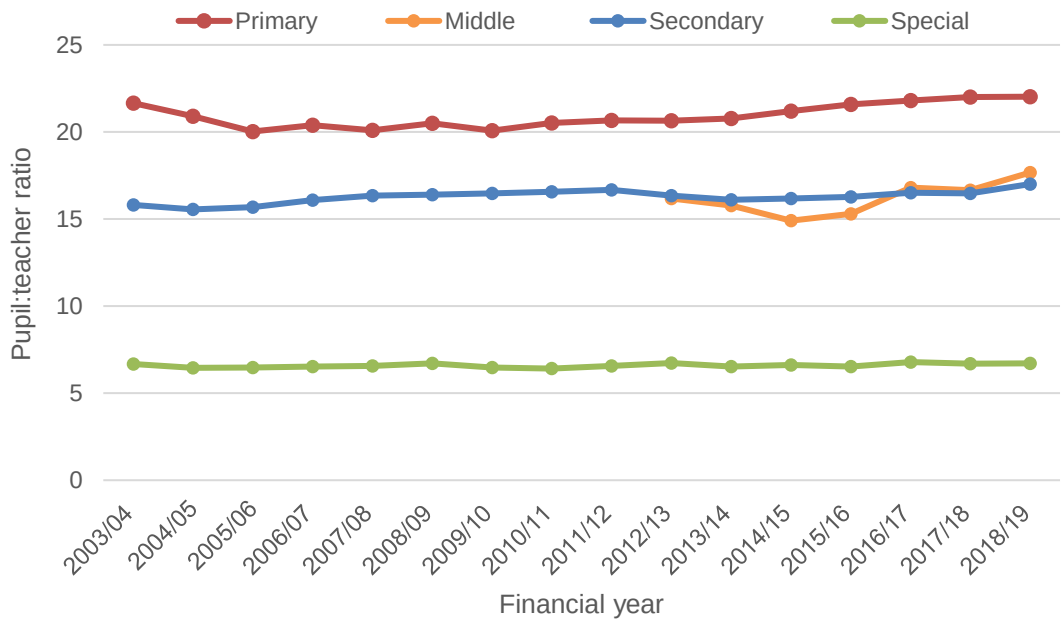
Changes over time and variation

How have these staffing levels changed over time and how do they vary across schools in Wales? Figure 2.5 shows the pupil:teacher ratio over time for primary, secondary, middle and special schools. In primary schools, the pupil:teacher ratio fell from about 22 pupils per teacher in 2003–04 to a low point of about 20 in the late 2000s. Since then it has risen back up to about 22 pupils per teacher in 2018–19. In secondary schools, the pupil:teacher ratio has gradually risen over time from just over 15 pupils per teacher in the mid-2000s to reach about 17 by 2018–19.

The pupil:teacher ratio in middle schools is similar to that in secondary schools. It has increased by more in the last 5 years, but relates to a small and changing number of schools over time.

The pupil:teacher ratio is much lower in special schools (about one teacher for every seven pupils and is largely unchanged over time) to cater for the higher needs of pupils in special schools.

Figure 2.5 Pupil:teacher ratio by school phase over time



Sources and notes: Full-time equivalent teacher numbers taken from Stats Wales, School Staff. Number of pupils in state-funded schools taken from Welsh Government, Wales School Census Results 2019 and 2014, and Stats Wales, Pupil Numbers.

Table 2.3 shows the variation in the ratio of pupils to different types of staff across schools. For each school phase and staff type, it shows the average, the 10th percentile and the 90th percentile[21]. As can be seen, there is substantial variation across each phase in the use of different types of staff.

Whilst the average pupil:teacher ratio is 22.5 in primary schools, there are fewer than 19 pupils per teacher in one in ten primary schools and more than 26 pupils per teacher in 10% of primary schools. There is slightly less variation in secondary schools, with a 10th percentile of about 15 pupils for every teacher and a 90th percentile of about 19. As shown

[21] The figures in Table 2.3 are based on school-level data and the average are thus very slightly different from those based on national data in Figure 2.1.

in Chapter 3, these lower pupil:teacher ratios are generally more common in smaller schools and schools with larger numbers of learners from deprived backgrounds.

The pattern for middle schools is similar to that for secondary schools. Special schools naturally see much lower pupil:teacher ratios, with an average of 7 pupils per teacher, one in ten seeing a ratio below 5 pupils per teacher and one in ten more than 9 pupils per teacher.

There are much bigger differences in the use of teaching assistants. Primary schools make the most use of teaching assistants with one for every 24 pupils, though this varies a lot. One in ten primary schools have fewer than about 14 pupils for every teaching assistant and one in ten more than 32 pupils for every teaching assistant. Secondary schools make much less use of teaching assistants with one for every 90 pupils. Some make more use of teaching assistants, with one in ten using one teaching assistant for less than 34 pupils, though some make even less use. The pattern for middle schools lies somewhere in between that for primary and secondary schools, as one might expect. Special schools make extensive use of teaching assistants, with about 3 pupils for every teaching assistant and one in ten using one teaching assistant for less than about 1.6 pupils.

Schools also vary in their use of other non-teaching staff, such as administrative and pastoral care staff. Secondary schools make widespread use of such staff, with one for every 67 pupils, on average, and one for every 38 pupils or less in 10% of cases. Middle schools look broadly similar to secondary schools. Primary schools make much less use of such staff, with mostly one staff member for nearly 200 pupils. As with teachers and teaching assistants, special schools have lower ratios, with one other member of staff for about every 30 pupils and sometimes one for every 13 pupils.

Table 2.3 Variation in staffing levels in 2018–19

	Pupil to staff ratios		
	Average	**10th Percentile**	**90th Percentile**
Teachers			
Primary Schools	22.5	18.7	26.2
Secondary Schools	17.1	15.1	18.9
Middle Schools	17.6	16.1	19.6
Special Schools	7.1	4.9	9.2
Teaching Assistants			
Primary Schools	23.8	14.3	32.5
Secondary Schools	88.3	34.3	133.1
Middle Schools	50.1	21.5	89.0
Special Schools	2.7	1.6	4.1
Other Staff			
Primary Schools	184.8	99.6	264.3
Secondary Schools	66.9	38.5	95.1
Middle Schools	73.6	48.0	101.7
Special Schools	31.2	13.4	61.2

Sources and notes: Staff numbers are full-time equivalent and taken from Stats Wales, School Staff. Teaching Assistants includes Higher-Level Teaching Assistants, Specials Needs Staff and Foreign Language Assistants. Full-time equivalent learner numbers from Stats Wales, Pupil numbers.

Summary
Spending delegated to schools provides for a range of inputs. Teachers represent the single largest element of school spending, accounting for just over half of primary school spending and over 60% of secondary school spending. This allows for one teacher for every 22 learners in primary schools and one for every 17 pupils in secondary schools, though this can vary a lot across individual schools. In the case of primary schools, the pupil teacher ratio has risen from about 20 learners for every teacher in 2009–10. There has been a more gradual rise over time for secondary schools.

In addition, primary schools make extensive use of teaching assistants, with one for every 24 learners and even greater use in some cases. Secondary schools make less use of teaching assistants, but greater use of non-teaching staff such as administrative, pastoral care and technical staff.

Chapter 3 will look in more detail at how differences in spending by deprivation, sparsity and medium of education relate to the variation in staffing inputs across schools.

2.5 Role of local authorities and regional consortia

Local authorities and the regional consortia play a crucial role in the school funding system. First, they are responsible for distributing funding to schools. This will explain some of the patterns in funding and spending by school characteristics. Second, they hold back some funding to deliver some services themselves. This section describes what they provide for schools and learners across Wales.

Local authority spending
Spending by local authorities was just over £1,000 per learner in schools across Wales in 2018–19, which represents around 17% of total spending on schools, leaving 83% delegated to schools. The amount delegated to schools has increased significantly over time from about 75% in 2010–11[22]. This follows on from local authorities committing to a Welsh Government target to delegate 85% of spending to individual schools.

Figure 2.6 shows the amount of spending per learner on different areas (as elsewhere, this represents spending net of any income received by local authorities). The single largest area of spending was school transport at just over £260 per learner or over one quarter of local authority spending on schools. This includes home to school transport for learners in mainstream schools and transport for learners with additional learning needs.

Spending on learners with additional learning needs (excluding transport) is the next largest area of spending, around £250 per learner or a further one quarter of central spending on schools by local authorities. This includes the costs of one-to-one and specialist provision, fees for pupils at private and independent schools, and many other elements of provision. In addition to this spending by local authorities, schools will also spend a notable proportion of their budget on provision for pupils with additional learning needs. Relative spending on additional learning needs by schools and local authorities is analysed in more detail in Chapter 4.

The next largest area of spending is strategic management, about £135 per learner. This covers a range of different functions. It includes spending on central and management

[22] This is based on Local Authority Budgeted Expenditure, which gives a slightly higher level of delegation in 2018-19 as opposed to the outturn figures used throughout this report.

functions, such as local authority staff, human resources management, legal services and other administrative costs. However, it also includes early retirement and redundancy costs, which can be substantial in some cases. The exact split between these different types of expenditure is unclear in public statistics. It would therefore be helpful if future data could distinguish between central management costs and legacy costs associated with early retirement and redundancies.

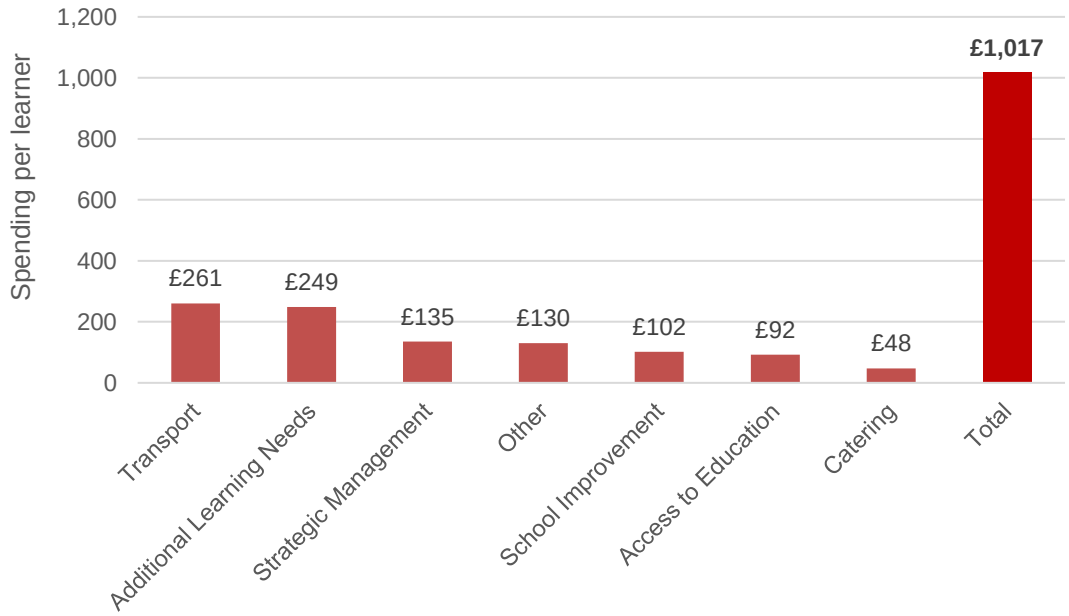
Local authorities spent about £100 per learner on school improvement services. This includes provisions for monitoring, supporting and challenging schools. It also includes contributions to the regional consortia (see below).

Around £90 per learner is spent on access to education. This covers a very wide set of different spending items, including school admissions, exclusions, planning and organisation, asset management plans, education welfare services, pupil support grants and a range of other items.

Just under £50 per learner represents net spending by local authorities on catering and free school meals provision. A further element will be spent by schools themselves.

Finally, about £130 per learner represents other spending. This includes transactions between local authorities (inter authority recoupment), central spending on staffing (such as maternity cover, payments to staff undertaking trade union duties and payments/cover for a range of other staff) and spending not captured elsewhere.

Figure 2.6 Local authority spending per learner on different functions in 2018–19



Sources and notes: Figures represent net current spending per full-time equivalent learner. Additional learning includes spending from both the schools and LA budget. Other includes inter-authority recoupment, capital expenditure from revenue account, other staffing and other spending not captured elsewhere. Spending figures taken from Stats Wales, Education revenue outturn expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers.

Regional consortia spending

The four regional consortia were established in 2012 to strengthen school improvement efforts and collaboration between local authorities. Their main role in the school funding system is to distribute specific grants made available by the Welsh Government. This

includes the Regional Consortia School Improvement Grant (RCSIG), £157m in 2018–19, and the Pupil Development Grant (PDG), £94m in 2018–19.

The regional consortia can retain up to 20% of the RCSIG to support their own functions and services, though most retain substantially less than this. Practically all of the PDG must be delegated to schools[23]. In total, the regional consortia retained about £17m of these grants in 2018–19. In addition to this, they receive income through contributions from individual local authorities. These contributions amounted to about £11m in 2018–19 and came via local authority school improvement budgets. Combining the two gives a total central spend of £28m for the regional consortia in 2018–19. This equates to about £63 per learner in 2018–19, equivalent to about 6% of central spending by local authorities or 1% of total spending on schools.

This provides for a range of services and activities, including school improvement, professional development, challenge advisors, data analysis and various leadership / coordination roles within the system.

Summary
Local authorities and the regional consortia play a crucial role in the school funding system. Their main role in the funding system is to distribute funding to individual schools and areas. They also retain some spending centrally to provide a range of services themselves. Central spending by local authorities was about £1,000 per learner in 2018–19 or 17% of total spending on schools. About half of this spending relates to home to school transport and provision for pupils with additional learning needs, with the rest spread across other functions, such as central staffing, management, provision for pupils outside of schools, catering, school improvement services and staff cover for schools. The regional consortia spend about £63 per learner in order to provide further school improvement, professional development and other services for schools.

Chapter 4 looks at the role of local authorities and the regional consortia in more detail, including what we can learn from differences across local authorities in spending on different functions over time.

2.6 Understanding the costs of changing the offer

Figures on average spending provide an illustration of the current school funding system and what it delivers in terms of actual resources for learners in schools in Wales. They can also be useful to provide the likely costs of changing the current offer. Indeed, one of the aims of this review is to make it easier for stakeholders to set out proposals and the costs of changing the current offer.

With this in mind, Table 2.4 below shows the cost of reducing the pupil:teacher ratio by one across primary, secondary, middle and special costs (holding all other spending and resources constant). The total cost of such a reduction would be £75m or about 3% of total spending on schools in 2018–19. This would reduce the pupil:teacher ratio in primary and secondary schools to about the level last seen in 2014. Such a reduction in the

[23] The Looked After Children component of the Pupil Development Grant is held centrally. The non-maintained settings element is distributed to local authorities to use either centrally for training or directly allocated to settings. Each local authority differs in their approach.

pupil:teacher ratio could be used to deliver lower class sizes or give teachers more time outside of lessons to plan, prepare and undertake management tasks.

Delivering even larger reductions in the pupil:teacher ratio would naturally come at a larger total cost. For example, delivering a reduction of two would double the cost to about £150m or 6% of current spending on schools.

Table 2.4 Cost of reducing pupil:teacher ratio by one in 2018–19

	Current Pupil:teacher ratio	After reduction of one	Cost (£m)
Primary Schools	22.0	21.0	**30**
Secondary Schools	17.7	16.7	**3**
Middle Schools	17.0	16.0	**35**
Special Schools	6.7	5.7	**8**
TOTAL			**75**

Sources and notes: See Table 2.2.

This gives the cost of a change in the pupil:teacher ratio. However, there is no guarantee that spending intended for such a change would be used in this way.

Any additional funding provided through the local government settlement would be subject to the political decisions of local authorities on how they spend the additional funding across all their spending needs. There is no guarantee that any additional money would be spent or allocated to schools. Even when it reaches schools, they possess substantial autonomy and could chose to allocate any extra funding to other priorities as they see appropriate.

The only way to ensure that extra funding is used as intended is through use of extra regulation or conditionality. This could take the form of regulation on local authority spending choices, such as ring-fencing grants for schools, as is the case for Dedicated Schools Grant in England, or through use of specific grants. It could also be achieved through regulation on school choices, such as maximum class sizes.

Such regulations should, however, be used relatively sparingly. The high level of autonomy and independence possessed by individual schools is a strength of the current system, allowing them to focus spending on where it can be put to best use. It would also go against Welsh Government commitments to reduce ring-fencing in the local government settlement and rely more on local authority discretion and assessments of needs.

A further important consideration is the extent to which resources would be available in all places for a such shift. Reducing the pupil:teacher ratio would require extra teachers. There are, however, growing problems in recruiting sufficient numbers of teachers for existing requirements, particularly in rural parts of Wales[24]. Reducing the pupil:teacher ratio would therefore almost certainly require other policy levers and costs, such as higher overall teacher pay or other changes to remuneration. Without such changes, some areas might

[24] https://gov.wales/sites/default/files/publications/2019-07/independent-welsh-pay-review-body-first-report-2019.pdf

not be able to achieve any planned reduction and it could cost more than stated above if some areas had to rely on supply or temporary teachers.

This highlights that changes in resources should be considered as a package rather than in isolation, as well as the value of local discretion in being able to respond to local circumstances.

Challenges in calculating minimum costs

Whilst it is possible to estimate the costs of changing the offer for learners in Wales, it is not possible to generate a single minimum cost in a robust way or in a way that could be used in a funding system.

> Constructing such a minimum cost measure would require policymakers to make clear judgements on what the offer should look like across a vast range of resource margins. This includes making decisions on the appropriate values of all the inputs listed in

Table **2.2**.

Policymakers would need to set a maximum pupil:teacher ratio, effectively setting maximum class sizes and time outside of lessons for teachers across all schools. Such figures would then be less relevant for small and rural schools, which must maintain smaller classes and the precise size of the classes reflects the very particular circumstances they face. More generally, we've already seen that the pupil:teacher ratio varies significantly across schools in Wales and reflects the circumstances faced and choices made by individual schools. As we shall see in chapter 4, the cost of a teacher also varies significantly across schools. This is because teacher pay increases with the experience and the profile of teachers by experience differs across schools. As a result, even if one were to construct the cost of implementing a specific pupil:teacher ratio across all schools or for a hypothetical school, it is unlikely to be relevant to the vast majority of schools since they already differ in both the number of learners per teacher and the average cost of a teacher.

Central judgements would also need to be made about the right level of provision and spending on other staff, which comprises about 20-25% of school spending. This includes setting the number of teaching assistants and other staff, and their respective pay levels. As the variation in Table 2.3 illustrated, schools already make very different choices and trade-offs in terms of the number of these types of staff. This partly reflects the fact that numbers of other types of staff are often set to provide for the specific set of additional learning needs faced by learners at a school. It is not clear that policymakers would be able to make better judgements than schools here.

Policymakers would also need to judge the minimum level of required spending on non-staffing inputs, from education equipment to spending on premises and utility bills. It is not clear policymakers have the right level of information and knowledge to make such decisions. The level of spending on such factors is also a reflection of the circumstances faced by schools, such as their physical environment and infrastructure.

As we have seen already, the empirical evidence shows benefits from increasing spending, as well as from reducing the pupil:teacher ratio. However, the likely benefits would depend on how inputs are used and there is certainly no conclusion from the evidence on a 'right' level of resources. This applies even more strongly to spending on other staff and non-staff spending, where there is very little good evidence.

Even if one were to reach judgements on all these factors and construct a minimum cost figure for a hypothetical school, there is no guarantee schools and local authorities would spend the money in the assumed way. Doing so would require additional and extensive regulation on school and local authority choices. This would remove one of the key strengths of the current system: the autonomy of schools and local authorities to direct spending to where it is most needed and likely to be most effective.

It would also be very difficult to use such a minimum cost figure in a funding system and doing so could lead to perverse consequences. There is no average school in Wales. Schools can and do make very different choices given the different costs and circumstances they face. Schools that made different choices to those underlying a minimum cost figure could end up being either penalised or rewarded just for making different choices. For

example, a school that had already decided to use its resources to prioritise lower class sizes might not benefit from any extra resources or funding. There would also be a natural temptation to base funding for deprived learners on a similar minimum cost approach. The evidence base is not strong enough to drive a specific figure here and could run the risk of turning into an implicit recommendation for how such extra resources should be used.

Instead, this review will examine how spending and resource choices vary across schools in different circumstances across Wales. This includes how spending and resource choices vary with deprivation, sparsity and medium of education. This analysis is designed to enable ministers, policymakers and stakeholders to reach clear conclusions as to whether the current distribution meets their expectations and intentions.

Whilst this review recommends against using a minimum cost figure to directly guide spending and funding decisions, the individual elements of such a calculation can represent very useful ways of estimating the costs of change in the current offer to learners in schools in Wales. Indeed, this section has already illustrated how to calculate potential changes in the pupil:teacher ratio, allowing for changes in class sizes and /or teacher time outside of lessons. Such calculations could also be repeated for other types of staff.

However, it is important to recognise that providing any extra funding for specific changes in staffing or other inputs might not necessarily lead to the desired change, given the autonomy of schools and local authorities. Guaranteeing specific changes would almost certainly require additional regulation or rules, which should be used sparingly in order to maintain the strengths of the current system.

2.7 Summary and recommendations

In summary, total (net) public spending on schools in Wales was £2.63bn in 2018–19 or just over £6,000 per learner in today's prices. This reflects spending decisions and trade-offs made by the UK government, Welsh Government, local authorities and regional consortia.

About 83% (or £2.16bn) was spent by schools themselves. This provides for one teacher for every 22 learners in primary schools and one for 17 learners in secondary schools, with lower ratios in special schools. Primary schools make extensive use of teaching assistants, with one for every 24 learners. Secondary schools make more use of non-teaching staff, such as administrative and pastoral care staff, with one for every 67 learners.

Schools spend about 20% of their budgets or over £450m on non-staff costs. Of this 20%, about 7-8% is spent on the physical environment, such as utility bills and repairs, with the rest spread out over the costs of insurance, education equipment, catering, indirect employee expenses and other factors.

About £460m or 17% of total school spending relates to central services provided by local authorities. Around one quarter of this relates to home to school transport and a further quarter relates to provision for pupils with additional learning needs. The rest is then spread out across central functions, cover for school staff, catering, school improvements and support for all learners in the area. In addition, regional consortia spend about £28m or £63 per learner on school improvement, professional development and other services.

Looking over time, spending per learner grew rapidly over the 2000s to reach a high point of £6,400 in 2009–10. It has since fallen by about 6% in real-terms to reach just over £6,000 per learner in 2018–19 (all figures in today's prices). Such reductions have been at least partly delivered by higher pupil:teacher ratios, particularly in primary schools, where the number of learners per teacher has risen from about 20 in 2009–10 to about 22 in 2018–19.

There is significant variation across schools in spending and staffing levels, partly reflecting higher spending for schools with more deprived learners and small schools serving rural and sparsely populated areas. But there is also large variation across schools in similar circumstances, an issue that will be revisited in later chapters.

The scale of the variation in spending needs and resource choices shows that there is no average school in Wales. It is therefore not possible to estimate the minimum cost of educating a learner in Wales in reliable and robust way, or in a way that could be used in a funding system.

To construct such a figure, policymakers would need to make central judgements on the appropriate level of a vast range of input choices: the pupil:teacher ratio; average pay of teachers; how much time teachers should have outside of lessons; the number of teaching assistants and other staff; their pay; and, spending on non-staff costs such as books, utility bills, insurance and other factors.

There is now a strong evidence based showing significant benefits from higher school spending and policymakers should recognise this evidence when making decisions on school spending and funding. However, there is insufficient evidence to allow policymakers to reach reliable conclusions on the 'right' level of such factors for each school.

In the absence of extra regulation, there is also no guarantee that schools would follow the desired level for each input. Imposing extra regulation would also run the risk of undoing one of the great strengths of the current system, which it the autonomy granted to schools and local authorities to make resource choices that best suit the needs and circumstances of their learners. Using such a figure in a funding system would also risk penalising some schools for just making different choices.

This review therefore recommends against using an estimate of a minimum cost of running a school to determine school funding and spending decisions. This is not the same thing as concluding that current spending is sufficient. Instead, this chapter has sought to provide more information and evidence about the costs and benefits of extra spending on schools.

Section 2.6 showed that the cost of a reduction in the pupil:teacher ratio of one would be about £75m, about 3% of school spending and would be sufficient to take the pupil:teacher ratio back to 2014 levels in primary and secondary schools. Providing more of such calculations would enable stakeholders to argue for fully costed changes to the current offer for learners across schools in Wales.

This chapter has also highlighted the raft of recent empirical showing the substantial positive effects of higher spending on schools, with a 10% increase in spending increasing learner outcomes by 7-10% and even larger effects for disadvantaged learners. Whilst this

is a positive and encouraging finding, these effects represent average changes and the actual effects of spending changes would always depend on how they are used. Furthermore, the Welsh Government will need to balance out competing demands and likely benefits from spending across other service areas. However, it is important that such decisions reflect the positive evidence on the likely benefits from spending more on schools.

To further address the question of sufficiency, later chapters in this review will examine how spending and resource choices vary across schools in different circumstances across Wales. This analysis is designed to enable policymakers and stakeholders to reach clear conclusions as to whether the current distribution meets their expectations and intentions. It also reaches specific conclusions where this distribution appears to deviate from the recommendations of the latest evidence, particularly the degree of extra resources for more deprived schools. It also estimates the future pressures on school costs, both in specific terms due to expected growth in pay for teacher and other staff, as well as more general pressures from demographic change future expectations on schools.

Recommendations

- **Recommendation 1**: **The Welsh Government should not adopt a single minimum cost approach for use in funding or spending decisions**. There is insufficient evidence to allow policymakers to determine the 'right' level of spending and provision for each type of resource. Instead, the Welsh Government should provide more figures and data on the likely cost of specific changes to the current offer to learners. This will allow stakeholders to argue for fully costed changes to the current offer. Whilst it is not possible to generate a single minimum cost per learner across the system, it is possible to estimate how costs could change over time (see recommendation 11).

- **Recommendation 2**: **Policymakers at all layers of government should make decisions on the basis of the latest evidence on the effects of school spending**. The latest empirical evidence shows that higher spending on schools can improve learner outcomes, particularly amongst disadvantaged learners. The actual effects of spending changes will always depend on how such money is used and the benefits of extra school spending will need to be balanced out against the likely benefits of spending more on other areas.

3. Differences in spending and resources across schools

There are substantial differences in spending per learner across schools in Wales. Spending regularly ranges from about £3,000 to over £9,000 per learner. Such differences naturally prompt questions about whether they are equitable.

A lot of these differences will represent intentional choices by policymakers at all layers of government to support schools with higher costs, e.g. small rural schools or schools with sixth forms. It will also represent policy decisions to provide more resources to schools with larger number of learners from disadvantaged backgrounds and greater learning needs in order to reduce educational inequalities.

Such differences in spending and resources will reflect a combination of mechanisms. First, local authorities receive different levels of funding in the local government settlement to reflect differences in needs and costs across areas. These get passed on to schools with different needs and costs via each local authority's school funding formula. Second, local authorities can and do make different choices about what sorts of schools should receive the highest levels of funding within their area and which indicators to use to distribute this funding. They make different choices about relative funding for primary and secondary schools, how much funding to provide for learners from deprived backgrounds, and how much to provide for small schools. These different choices lead to differences in spending per learner for similar schools across different areas. Third, the Welsh Government sets specific grants, which are targeted at specific sets of learners and schools.

This chapter analyses differences in spending per learner across schools in detail, including the source of the differences as well as the consequences for the resources available to different schools and learners. Section 3.1 describes differences in spending per learner across different sorts of schools in the latest year of data, 2018–19. It focuses on differences by levels of deprivation, given this is one of the main sources of differences in funding, but also looks at differences by school size, medium of education and sixth form provision. Section 3.2 examines how these differences in spending per learner translate into differences in the resources available to learners, principally in terms of staffing levels. Section 3.3 analyses the differences in spending per learner across similar schools once one accounts for learner and school characteristics. Section 3.4 focuses on differences in deprivation funding, comparing current levels with past levels of support, changes over time for England and the latest evidence on deprivation funding. Section 3.5 summarises and provides recommendations.

3.1 Describing the variation in spending per learner

As shown in chapter 2, spending per learner is higher in schools with a greater share of deprived learners. Figure 3.1 and Figure **3.2** quantify this directly by showing the levels of spending per learner for primary and secondary schools with different levels of deprivation in 2018–19.

Primary and secondary schools are divided into five equally sized groups or quintiles based on the share of learners eligible for free school meals, with quintile 5 containing schools with the highest levels of deprivation and quintile 1 containing schools with the lowest levels of deprivation. Figure 3.1 then shows the average levels of spending per learner for primary and secondary schools in each quintile, together with a measure of the variation (the

interquartile range between the 25th and 75th percentile). It also shows the same statistics for primary schools when you exclude small primary schools to gauge the extent to which small schools change the overall patterns. Figure 3.2 shows the levels of spending per learner relative to the least deprived quintile.

Amongst primary schools, spending per learner is about £4,950 for the most deprived groups of schools compared with about £4,300 for the least deprived group. This is a difference of about £650 or 15% in relative terms. However, the extra spending is only really experienced by the most deprived group of primary schools. The difference in spending per learner between the least deprived (£4,300) and 2nd most deprived group (£4,500) is only about £200 before it then jumps by an extra £450 for the most deprived group.

This overall pattern is little altered by excluding small rural schools. The main difference is that the gap in spending per learner between the most and least deprived primary schools increases from 15% to 20%.

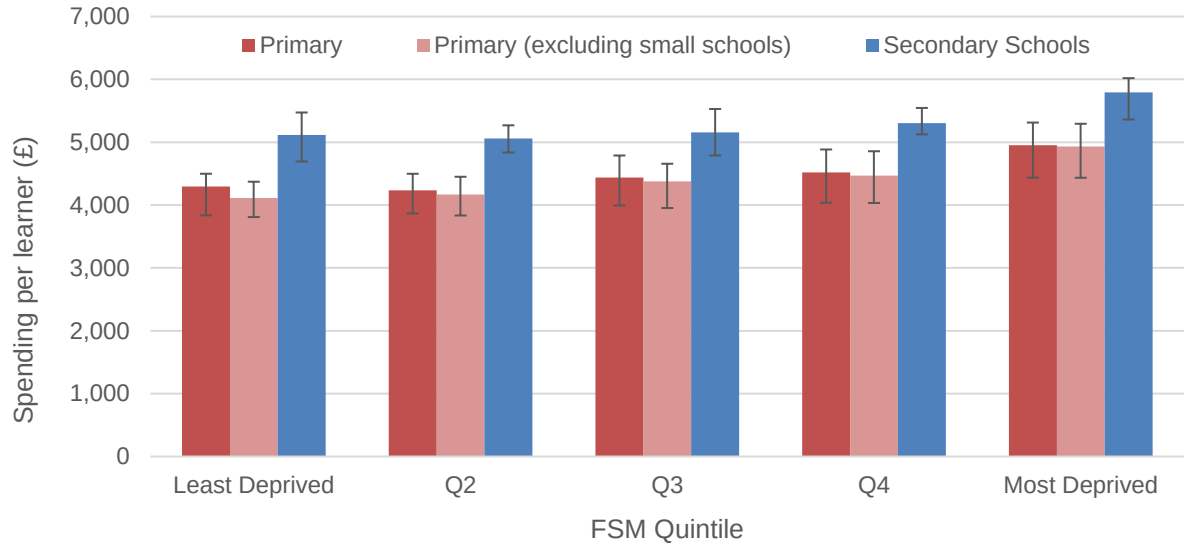
Spending per learner is naturally higher for secondary schools, but there is a similar pattern by levels of deprivation. Spending per learner is around £5,800 for the most deprived secondary schools as compared with £5,100 for the least deprived secondary schools. This leads to a gap of about £700 or 13%, a slightly lower relative difference than for primary schools. The extra funding is mostly focused on the most deprived secondary schools, with a difference of about £200 between the least deprived and 2nd most deprived group.

These differences in spending per learner will reflect a range of policy choices by central government, in terms of funding across areas and levels of specific grants, as well as choices by local authorities.

Given its prominence and importance, one can approximate the role played by the Pupil Development Grant (PDG). As detailed in section 3.4, the PDG can explain about £380 or nearly 60% of the difference in funding per learner between the most deprived and least deprived primary schools, and about £250 or nearly 40% of the same difference for secondary schools.

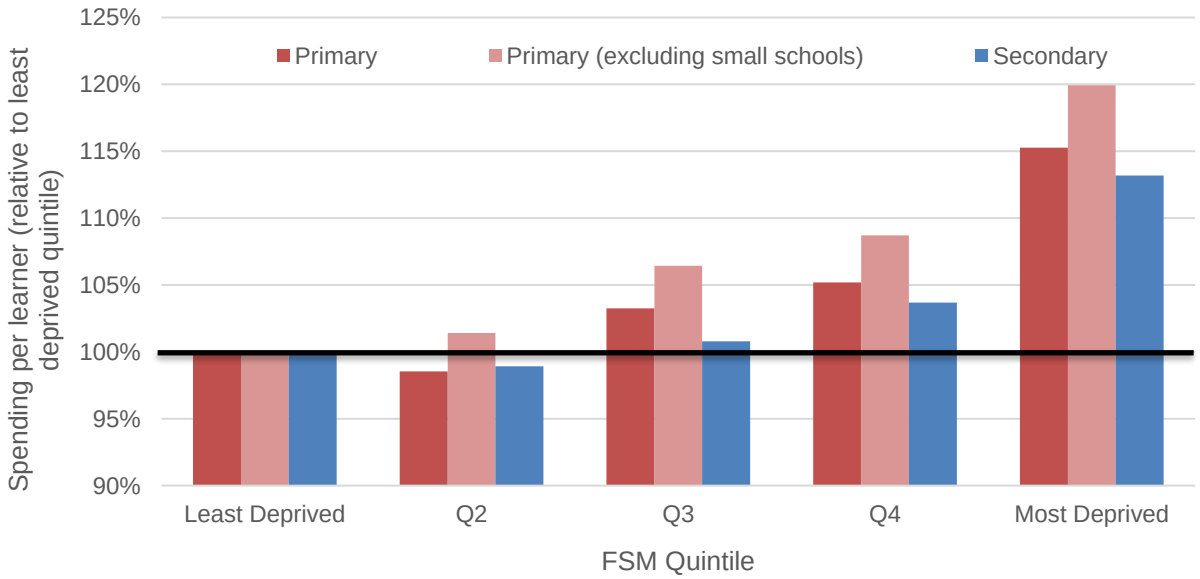
Given the introduction of the PDG in 2012, one might naturally expect the extra funding for more deprived schools to have risen over time. Section 3.4 shows that the extra funding for more deprived secondary schools has grown over time, but not by as much as one would expect given the introduction of the PDG. However, the extra funding for more deprived primary schools in 2018–19 is about the same as it was nearly 10 years earlier in 2009–10. The reasons that could have driven this somewhat surprising set of results are discussed in more detail later in this chapter.

Figure 3.1 Spending per learner by quintile of eligibility for free school meals (FSM), 2018–19



Sources and notes: FSM quintiles defined by total number of full-time equivalent learners. Errors bar interquartile range (25th and 75th percentile) within each quintile. Spending figures taken from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Figures for Free School Meal Eligibility taken from Stats Wales, Provision of Meals and Milk.

Figure 3.2 Relative differences in spending per learner by quintile of eligibility for free school meals (FSM), 2018–19



Sources and notes: FSM quintiles defined by total number of full-time equivalent learners. Spending per learner shown relative to average for least deprived quintile. Spending figures taken from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Figures for Free School Meal Eligibility taken from Stats Wales, Provision of Meals and Milk.

Almost as significant as the differences across quintiles of deprivation are the differences *within* each quintile. One in four schools in the least deprived primary schools spends less than £3,800 per learner and one in four spends more than £4,500 per learner, about the same average level as the 2nd most deprived group. Amongst the most deprived group of

primary schools, one in four spend more than £5,300 and one in four spend less than £4,400 per learner, a difference of about £900. These differences range from about £600 to about £900 across the quintiles.

We see smaller, though still significant, differences of between £400 and £800 for secondary schools. This means that amongst the most deprived secondary schools, one in four spends more than £6,000 per learner and one in four spends less than £5,400 per learner.

Such differences within quintile will reflect a range of factors. First, deprivation levels will vary within quintile, which will affect funding and spending. Second, other learner and school characteristics that drive costs and funding will differ between schools, such as school size and sixth form provision. Third, local authorities will make different choices about how much extra funding to provide to schools with more deprived learners.

The rest of this section focuses on the role played by other learner and school characteristics: medium of education; sixth form provision; and, overall learner numbers.

Other learner and school characteristics

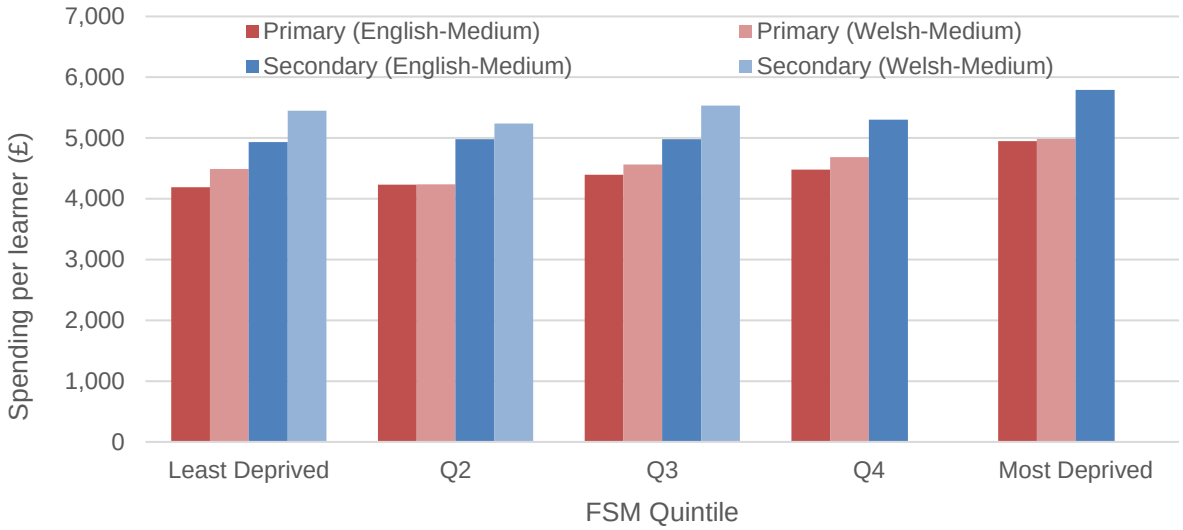
Welsh-medium schools are likely to require higher levels of spending per learner given that they often serve a wider geographic area. This will be true right across Wales. In North, West and Mid-Wales, this will partly reflect overall levels of sparsity. In South Wales, this will be because Welsh-medium schools tend to serve larger geographic areas than English-medium ones. Obtaining and maintaining Welsh-medium resources is also likely to be slightly more expensive than English-medium resources given the smaller market.

With this in mind, Figure 3.3 shows the level of spending per learner by FSM quintile and medium of education for both primary and secondary schools. The slightly lighter shaded bars represent spending per learner in Welsh-medium schools and it should be noted that there are no Welsh-medium schools amongst more deprived secondary schools. As can be seen, spending per learner is slightly higher in Welsh-medium schools. For primary schools, the difference ranges from close to zero to around £300 per learner. For secondary schools, it ranges from an extra £250 to £550 per learner.

From these figures alone, it is not clear whether higher spending per learner is a result of being a Welsh-medium school or because of other factors associated with medium of education, such as being a smaller school. The next section controls for all these factors together and shows that spending per learner in Welsh-medium primary schools is no higher than in English-medium equivalent schools. For secondary schools, spending per learner is about £100 higher in Welsh-medium schools when controlling for all learner and school characteristics.

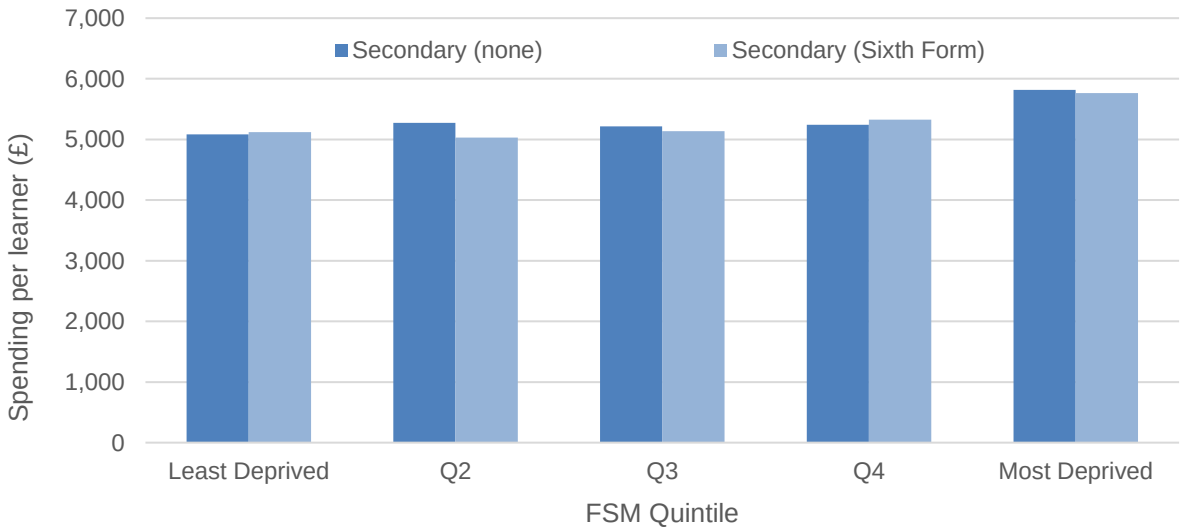
Secondary schools with sixth forms are likely to require higher levels of spending per learner in order to maintain smaller class sizes for sixth form pupils taking a range of subjects and options. However, Figure 3.4 shows that spending per learner appears to be no higher in secondary school with sixth forms as opposed to those with no sixth forms for given levels of deprivation. This lack of a difference is potentially concerning given the extra costs of maintaining sixth form provision. However, when controlling for all school and learner characteristics in the next section, schools with sixth forms do appear to have higher levels of spending per learner (around £250 higher).

Figure 3.3 Spending per learner by quintile of deprivation and medium of education, 2018–19



Sources and notes: FSM quintiles defined by total number of full-time equivalent learners across all schools (i.e. not separately by medium of education). There are no Welsh-medium schools in the most deprived quintiles. Spending figures taken from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Figures for Free School Meal Eligibility taken from Stats Wales, Provision of Meals and Milk. Medium of education defined as Welsh-medium if school is bilingual or Welsh-medium, Welsh Language

Figure 3.4 Spending per learner by quintile of deprivation and sixth form provision, 2018–19



Sources and notes: FSM quintiles defined by total number of full-time equivalent learners across all schools (i.e. not separately by medium of education). Spending figures taken from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Figures for Free School Meal Eligibility taken from Stats Wales, Provision of Meals and Milk.

Finally, Figure 3.5 considers the role of small school and sparsity funding. Each dot represents a group of primary (a) and secondary schools (b) with similar numbers of learners, with the y-axis showing the average levels of spending per learner in those schools. The size of the dot is proportional to the number of learners in such schools.

Small schools are coloured blue and, unsurprisingly, display higher levels of spending per learner, with spending per learner in excess of £7,000 for the smallest schools. Other schools are then divided into those located in sparsely populated areas (Ceredigion, Powys, Gwynedd, Carmarthenshire, Monmouthshire, Isle of Anglesey and Pembrokeshire) and those located in other areas. This allows one to examine whether there is a potential benefit to being in a sparsely populated areas (because of higher overall levels of funding for these areas) or a funding disadvantage (because funding is focused more on smaller schools).

Panel (a) shows that similarly sized primary schools in sparsely populated areas seem to have lower levels of spending per learner for school sizes between about 100 and 200 learners than schools in other areas. Panel (b) shows that spending per learner is also generally lower for secondary schools of a given size if they are located in sparsely populated areas.

The next section shows that spending per learner is about £20 lower for primary schools and £150 lower for secondary schools in sparsely populated areas once one controls for all school and learner characteristics. However, these differences are relatively small and not statistically significant.

Summary

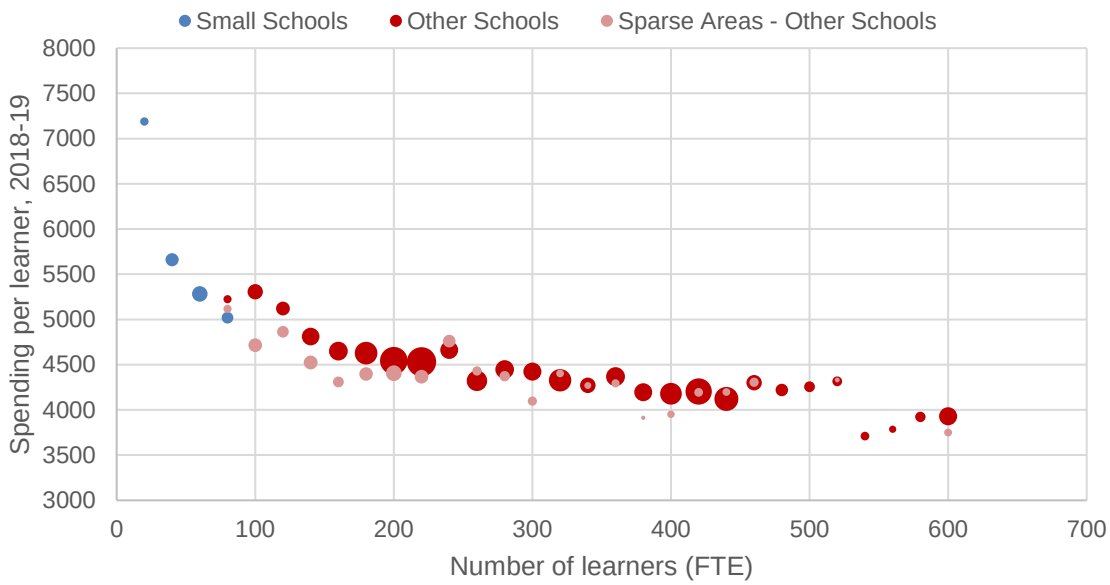
There is large variation in spending per learner across different schools in Wales, with higher levels of spending for schools containing more deprived learners and for smaller schools. Deprivation funding is relatively significant for the most deprived schools, with spending per learner about £650-£700 or 15-20% higher in the most deprived schools as compared with the least deprived schools. A large part of this is driven by the Pupil Development Grant. However, differences are relatively small outside the most deprived set of schools, raising concerns as to whether schools with above average (but not the highest) levels of deprivation are receiving sufficient levels of funding.

Welsh-medium schools tend to have higher levels of spending per learner, though most of this can be explained by the fact these tend to be smaller schools serving relatively sparsely populated areas. Small schools naturally have higher levels of spending per learner.

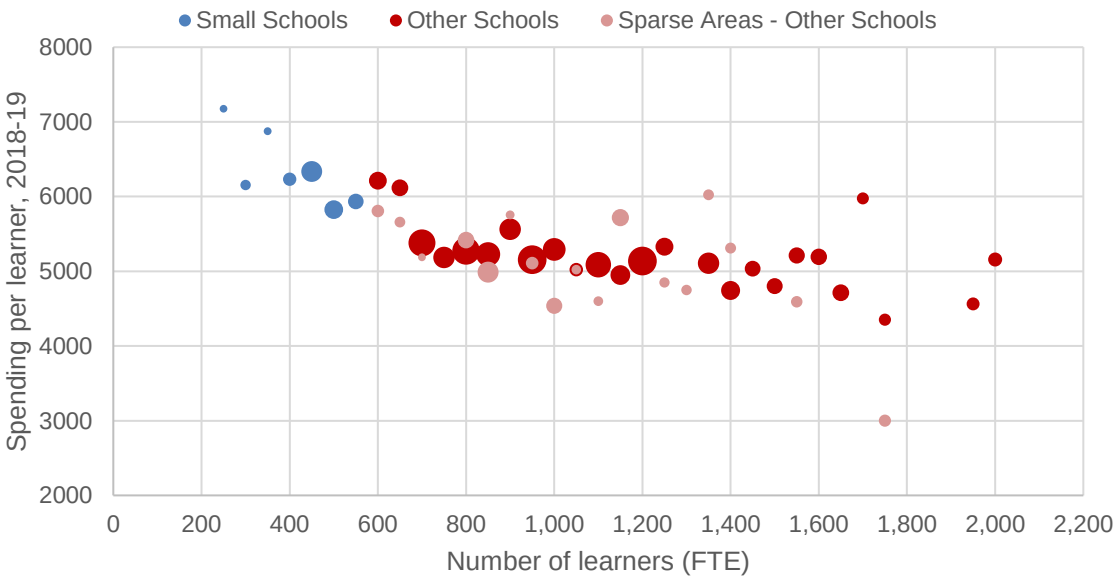
Secondary schools with sixth forms only seem to have slightly higher levels of spending per learner than equivalent schools, which might limit their ability to provide high-quality sixth form provision across a range of subjects.

Figure 3.5 Spending per learner by learner numbers and area sparsity, 2018–19

a) Primary schools



b) Secondary schools



Sources and notes: Size of each bubble is proportional to the number of learners. Spending represents total delegated school expenditure, including use of reserves. Spending figures taken from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Figures for Free School Meal Eligibility taken from Stats Wales, Provision of Meals and Milk. Sparse areas are the seven local authorities with the highest shares of the population in small settlements: Ceredigion; Powys; Gwynedd; Carmarthenshire; Monmouthshire; Isle of Anglesey; Pembrokeshire

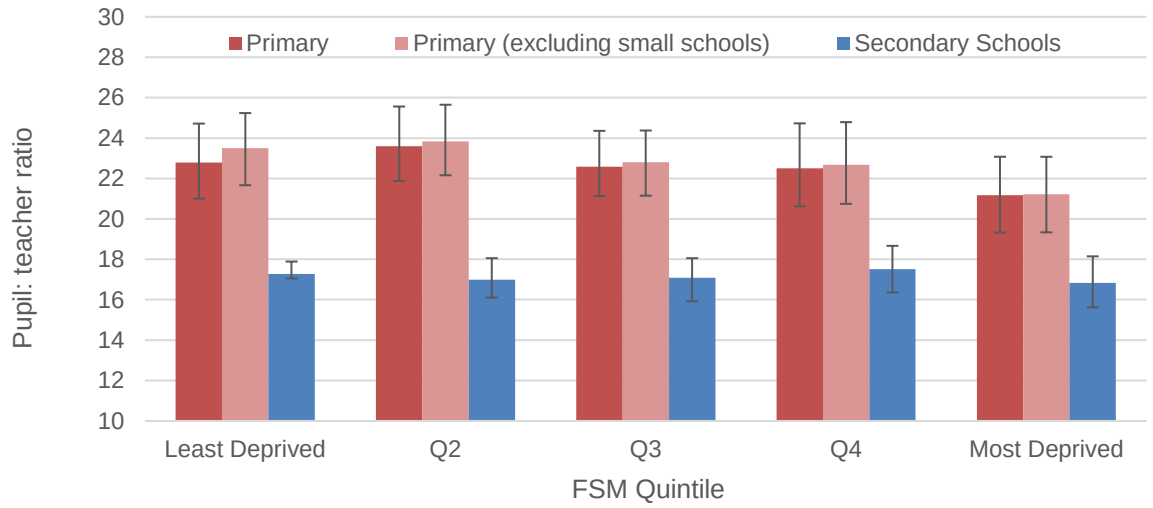
3.2 Relationship between spending and staffing levels

How do differences in spending per learner translate into the resources available to learners? This section seeks to answer this question by examining how differences in spending per learner translate into numbers of different types of staff, the main resource of

schools. Unfortunately, consistent data on non-staff spending is not currently available for all schools in Wales.

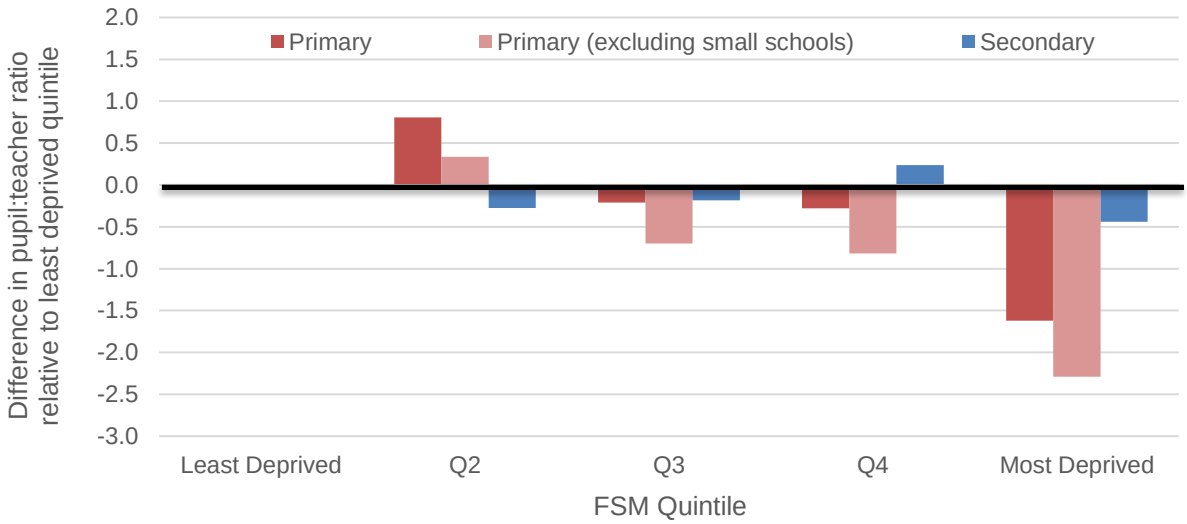
By way of an introduction to this issue, Figure 3.6 shows how the pupil:teacher ratio varies by quintile of eligibility for free school meals and Figure 3.7 shows the differences relative to the least deprived quintile. For consistency, this uses the same categories, groups and definitions as the previous section.

Figure 3.6 Pupil:teacher ratio by quintile of eligibility for free school meals (FSM), 2018–19



Sources and notes: FSM quintiles defined by total number of full-time equivalent learners. Errors bar interquartile range (25th and 75th percentile) within each quintile. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Figures for Free School Meal Eligibility taken from Stats Wales, Provision of Meals and Milk. Teacher numbers taken from Stats Wales, School Staff.

Figure 3.7 Pupil:teacher ratio by quintile of eligibility for free school meals (FSM) relative to least deprived quintile, 2018–19



Sources and notes: FSM quintiles defined by total number of full-time equivalent learners. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Figures for Free School Meal Eligibility taken from Stats Wales, Provision of Meals and Milk. Teacher numbers taken from Stats Wales, School Staff.

Amongst primary schools, the pupil:teacher ratio is between 22 and 23 outside the least deprived quintile, but declines to about 21 for the most deprived primary schools. The difference between the most and least deprived quintiles equates to about 1.5 fewer pupils per teacher, or 2 fewer pupils per teacher if we exclude the smallest primary schools. Clearly, lower pupil:teacher ratios is one important way in which the most deprived primary schools utilise their extra spending power. Amongst secondary schools, pupil:teacher ratios are generally lower, but there is little evidence that pupil:teacher ratios are much lower for the most deprived secondary schools.

Many factors that drive differences in spending per learner are correlated with one another. Smaller schools tend to be less deprived, Welsh-medium schools tend to be smaller and located in more sparsely populated areas and sixth forms tend to be located in less deprived schools. As a result, summary differences in spending and staffing ratios can hide the underlying or true differences.

To get around this issue, Table 3.1 (primary) and Table 3.2 (secondary) show estimates of the effect of different school characteristics on school resources after controlling for all learner and school characteristics together. This includes the effect of deprivation (FSM quintiles), school size (with non-linear terms), sparsity, medium of education (including effects of bilingual education for secondary schools) and sixth form provision (for secondary schools). The following subsections discusses each of these factors in turn.

The tables then highlight the effect of deprivation, medium of education, sparsity and sixth form provision on spending per learner and staff ratios. The average values for primary and secondary schools are shown at the top of each column. For pupil: staff ratios, a higher number indicates more pupils per staff member or fewer staff members for each pupil.

Table 3.1 Effect of school characteristics on primary school spending per learner and staff ratios after controlling for all characteristics, 2018–19

		Pupil: Staff Ratios		
	Spending per learner	**Teachers**	**Teaching Assistants**	**Other Staff**
Average value	**£4,469**	**22.6**	**23.8**	**184.7**
FSM Quintiles				
FSM Q1 (least deprived)	[omitted]	[omitted]	[omitted]	[omitted]
FSM Q2	+66.737	+0.344	-5.038	-18.215
	(40.695)	(0.242)	(3.592)	(11.824)
FSM Q3	+219.819***	-0.569**	-6.271*	-28.874***
	(48.379)	(0.256)	(3.658)	(10.406)
FSM Q4	+380.495***	-0.962***	-8.261**	-32.493***
	(55.765)	(0.273)	(3.865)	(11.405)
FSM Q5 (most deprived)	+743.063***	-2.213***	-11.617***	-42.681***
	(59.079)	(0.268)	(3.920)	(9.439)
Welsh Medium	-56.265	-0.282	+1.189	+54.114***
	(43.299)	(0.233)	(1.178)	(9.107)
Sparsely populated area	-22.710	-0.078	-3.962***	+17.114*
	(53.183)	(0.216)	(0.741)	(9.650)

Sources and notes: Coefficients represent the estimated effect of each school characteristic on spending per learner and staff ratios after controlling for the following school characteristics: FSM quintile, pupil numbers

*(with inverse term), small school dummy variable, sparse area dummy variable and a Welsh-medium dummy variable. Robust standard errors are shown in parentheses. * indicates statistical significance at the 10% level, ** indicates statistical significance at the 5% level and *** indicates statistical significance at the 1% level. Spending figures taken from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Figures for Free School Meal Eligibility taken from Stats Wales, Provision of Meals and Milk. Teacher and other school staff numbers taken from Stats Wales, School Staff.*

Table 3.2 Effect of school characteristics on secondary school spending per learner and staff ratios after controlling for all characteristics, 2018–19

		Pupil: Staff Ratios		
	Spending per pupil	**Teachers**	**Teaching Assistants**	**Other Staff**
Average value	**£5,284**	**17.1**	**88.3**	**66.9**
FSM Quintiles				
FSM Q1 (least deprived)	[omitted]	[omitted]	[omitted]	[omitted]
FSM Q2	-67.255	-0.397	-3.672	+2.358
	(104.864)	(0.260)	(17.778)	(6.435)
FSM Q3	-33.843	-0.175	+11.144	+6.364
	(145.178)	(0.337)	(29.943)	(8.740)
FSM Q4	+244.501**	-0.125	-49.604***	+8.558
	(122.898)	(0.345)	(14.945)	(10.212)
FSM Q5 (most deprived)	+589.120***	-0.653	-61.767***	-9.756
	(159.343)	(0.473)	(13.584)	(6.872)
Welsh Medium	+78.296	-1.126***	-28.692	+40.103**
	(109.121)	(0.342)	(21.064)	(16.473)
Bilingual	+169.873	-0.335	-41.200*	+20.164**
	(203.102)	(0.396)	(21.748)	(11.948)
Sixth form provision	+262.193**	-0.695**	+24.093*	-10.350
	(107.016)	(0.285)	(12.600)	(6.432)
Sparsely populated area	-153.062	+0.245	-31.503*	-2.671
	(165.914)	(0.236)	(18.342)	(5.058)

*Sources and notes: Coefficients represent the estimated effect of each school characteristic on spending per learner and staff ratios after controlling for the following school characteristics: FSM quintile, pupil numbers (with inverse term), small school dummy variable, Welsh-medium dummy variable, Bilingual-medium dummy variable, sparse area dummy variable and sixth form provision dummy variable. Robust standard errors are shown in parentheses. * indicates statistical significance at the 10% level, ** indicates statistical significance at the 5% level and *** indicates statistical significance at the 1% level. Spending figures taken from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Figures for Free School Meal Eligibility taken from Stats Wales, Provision of Meals and Milk. Teacher and other school staff numbers taken from Stats Wales, School Staff.*

Deprivation funding and resources

Starting with the effects of deprivation, the estimated differences in spending per learner match quite closely with the raw differences. Spending per learner is around £750 higher for the most deprived primary schools and about £600 higher for the most deprived secondary schools. Differences across the other quintiles are relatively small.

This then translates into lower pupil:teacher ratios for the most deprived primary schools (about 2 fewer pupils per teacher), but not for the most deprived secondary schools. In both cases, there is much greater use of teaching assistants in the most deprived primary and secondary schools. There are 12 fewer learners for each teaching assistant in the most

deprived primary schools relative to the least deprived schools. This equates to a significant reduction given the average is 24 learners for each teaching assistant. For secondary schools, the reduction in the pupil:TA ratio is about 62. Although this is large, it comes from a high base, with around one TA for every 90 learners in secondary schools.

More deprived primary and secondary schools also make greater use of other non-teaching staff. For primary schools, this comes from a very high base with only one other staff member for every 185 learners, such that a reduction of 43 does not significantly change the staff mix. For secondary schools, the effect represents about a 25% increase in use of other non-teaching staff, which are already widely used across secondary schools.

In summary, the most deprived primary schools appear to use their extra funding on reduced pupil:teacher ratios and more teaching assistants. For secondary schools, there are much smaller reductions in pupil:teacher ratios, but greater use of teaching assistants and other non-teaching staff in the most deprived secondary schools.

Medium of education funding and resources

Table 3.1 and Table **3.2** also show the effects of medium of education on resources. After accounting for other learner and school characteristics, Welsh-medium primary schools experience slightly lower levels of spending per learner than English-medium schools, though the difference is not statistically significant. There is no difference in usage of teachers and teaching assistants, but Welsh-medium schools do make less use of other non-teaching staff.

Secondary schools are divided up more finely into Welsh-medium and bilingual schools. After accounting for other learner and school characteristics, including school size, Welsh-medium secondary schools experience slightly higher levels of spending per leaner (extra £80) and bilingual schools even higher levels (extra £170). Both effects are statistically insignificant, however. There is evidence of a small reduction in pupil:teacher ratios for Welsh-medium secondary schools and greater use of TAs for bilingual schools. As with Welsh-medium primary schools, Welsh-medium and bilingual secondary schools make less use of other non-teaching staff.

Other differences

The previous section showed that schools in sparely populated areas experience lower levels of spending per learner than similarly sized schools in other areas. Table 3.1 shows this difference is near zero for primary schools in sparse areas after accounting for all learner and school characteristics. Primary schools in sparse areas do, however, seem to make slightly different choices, with greater use of teaching assistants and less use of other non-teaching staff.

Table Table **3.2** shows that secondary schools in sparsely populated areas experience about £150 lower levels of spending per learner than other equivalent schools. This doesn't seem to translate into significantly lower use of different types of staff. Indeed, secondary schools in sparsely populated areas make greater use of teaching assistants. If there are any negative effects on funding and spending, it is more likely to be translated into lower levels of non-staff spending.

Finally, after accounting for learner and school characteristics, secondary schools with sixth forms experience just over £250 extra in spending per learner. This translates into a

relatively small reduction in pupil:teacher ratios across the whole school (just over 0.5 fewer learners per teacher). The relatively small reduction in the pupil:teacher ratio highlights potential concerns that schools with sixth forms might not experience sufficiently higher levels of funding to deliver high-quality provision across a range of A-level and other post-16 options that that tend to require relatively small class sizes.

Sixth form funding has been a source of challenge for secondary schools over the last 10 years. Funding per learner has fallen by about 4% in real-terms between 2009–10 and 2018–19. Whilst this is slightly less than the 6% real-terms fall in overall school spending per learner, the effects comprise a 25% drop in learner numbers and 17% cash-terms fall in total learner numbers[25]. Such a rapid change in the scale of sixth form provision and funding naturally creates resource challenges for schools, with smaller subjects becoming less financially viable. Further changes are expected in the other direction too, with expected growth of 12% in post-16 learner numbers in schools between 2019 and 2025[26].

Funding for sixth form students in Wales is also notably lower than that in England. The main base rate for a learner taking 3 A-levels in Wales was about £3,400 in 2018–19[27], compared with about £4,000 for a similar student in England[28]. Combined with all other elements of the funding system, this then translates into similar differences in overall levels of funding per learner, with Welsh government funding per learner in school sixth forms at around £4,200 in 2018–19 and about £5,000 per school sixth form student in England in 2018–19 (all in today's prices)[29].

In its recent report on school sixth forms, Estyn noted room for improvement in A-level outcomes, particularly amongst boys, and independent learning, amongst other factors[30]. Whilst there is a lack of good evidence linking funding levels and outcomes in post-16 settings, improvements in results are likely to be harder to deliver given the large swings in funding and learner numbers seen in recent years, and the lower levels of funding per learner than in England. However, recent improvements in A-level results are certainly a source of encouragement[31].

When considering sixth form funding, it is important to acknowledge that school sixth forms are just one component of the post-16 education system, which also includes sixth form colleges, further education colleges and the apprenticeship system. Whilst the wider post-16 education funding system falls outside the scope of this review, any changes to school sixth form funding should clearly be considered as part of the wider system to ensure appropriate funding across all routes.

---

[25] Figures calculated on the basis of Welsh Government allocations to local authorities for sixth form provision (£111m in 2009-10, £93m in 2018-19), numbers of post-16 learners recorded in the Wales School Census (31,000 in January 2010 and 23,000 in January 2019) and HM Treasury deflators.
[26] https://statswales.gov.wales/Catalogue/Education-and-Skills/Schools-and-Teachers/Schools-Census/Pupil-Projections
[27] https://gov.wales/post-16-planning-and-funding
[28] https://www.gov.uk/government/publications/16-to-19-funding-funding-for-academic-year-2018-to-2019
[29] https://www.ifs.org.uk/publications/14369
[30] https://www.estyn.gov.wales/thematic-reports/levels-sixth-forms-and-further-education-colleges
31 https://gov.wales/sites/default/files/statistics-and-research/2019-12/examination-results-september-2018-august-2019-080.pdf

Summary
The extra levels of spending for the most deprived primary and secondary schools remain after accounting for a wide array of learner and school characteristics. The most deprived primary schools seem to use this extra spending to reduce pupil:teacher ratios and employ extra teaching assistants, whilst the most deprived secondary schools make greater use of teaching assistants and other non-teaching staff.

After accounting for learner and school characteristics, Welsh-Medium schools don't experience significantly higher levels of spending per learner, though do seem to make less use of non-teaching staff. Bilingual secondary schools experience slightly higher levels of spending per learner, which does translate into greater use of teaching assistants.

Secondary schools with sixth forms experience over £250 extra in spending per learner. This does not, however, translate into large reductions in pupil:teacher ratios, raising obvious concerns as to whether this is sufficient to provide high-quality sixth form provision. Sixth form funding per learner is also over £500 lower than for learners in England.

3.3 Remaining differences in spending per learner

The previous sections have highlighted that differences in deprivation, school size and type of provision lead to differences in spending per learner across schools. What differences remain after accounting for these factors?

Figure 3.8 shows the share of learners in primary and secondary schools with spending per learner less than or equal to a given value (relative to the average or a specific prediction based on a school's characteristics).

The red line shows the raw differences relative to the national average for primary and secondary schools. Reading up from the -10% figure on the x-axis shows that there are 17% of learners in primary schools with spending per learner 10% or more below the national average and 14% of learners in secondary schools with 10% or more below the national average. Reading up from the +10% figure allows us to see that 35% (100% minus 65%) of learners are at primary schools with spending per learner more than 10% above the national average. The same applies to 21% of learners in secondary schools (100% minus 79%).

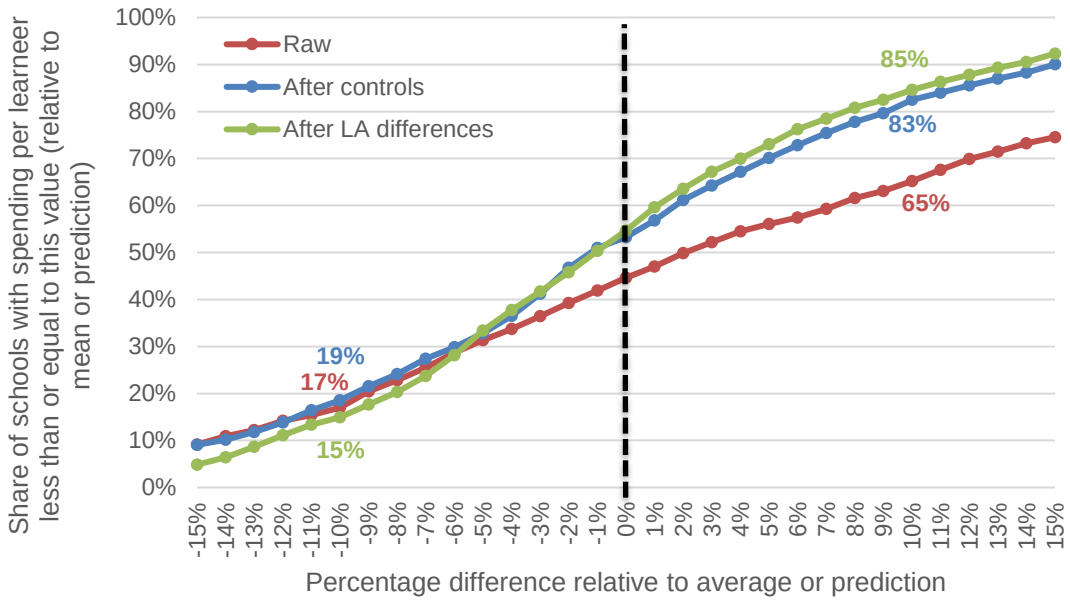
This is naturally a very wide dispersion in spending levels. The blue line therefore shows the same pattern after accounting for differences in deprivation, school size and type of provision. After accounting for these factors, about 19% of learners are in primary schools with spending per learner 10% or more below the national average – slightly more than the raw differences - and 17% in primary schools with spending per learner 10% or more above the national average. If one then allows for local authority differences in levels of funding per learner, this reduces slightly to 15% of learners in primary schools with spending per learner 10% below the national average and a similar share 10% or more above the national average.

The differences are slightly smaller for secondary schools after accounting for school and learner characteristics. About 7% of learners are in secondary schools with spending per learner 10% or more below the national average, and 14% in secondary schools with spending per learner 10% or more above the national average. When one accounts for differences in the average level of local authority funding, these figures then reduce slightly

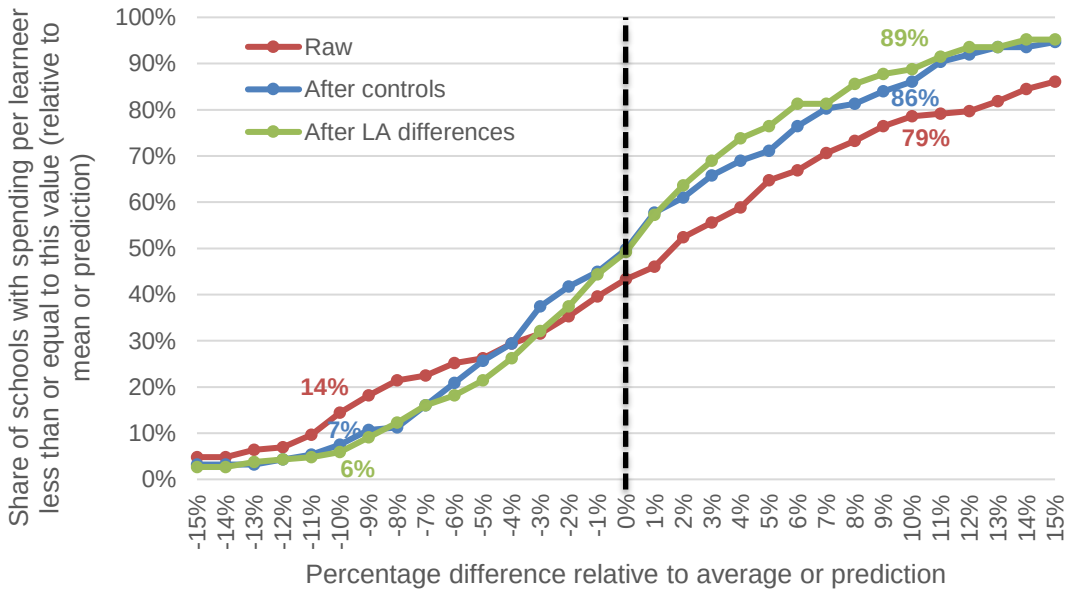
to 6% of learners in secondary schools with spending levels 10% or more below the national average and 11% in schools with spending 10% or more above the national average.

Figure 3.8 Cumulative share of schools with spending per learner at different levels relative to average and different reductions

a) Primary schools



b) Secondary schools



Sources and notes: Each line shows the share of learners in schools with spending per learner less than or equal to a given value (relative to the mean or a prediction). The raw differences are relative to the raw average. The "after controls" represents the difference relative to a regression prediction based on FSM quintile, pupil numbers (with inverse term), small school dummy variable, Welsh-medium dummy variable, Bilingual-medium dummy variable, sparse area dummy variable and sixth form provision dummy variable. The "after LA differences" specification additionally controls for differences in the average level of local authority spending per learner for primary and secondary schools. Spending figures taken from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Figures for Free School Meal Eligibility taken from Stats Wales, Provision of Meals and Milk.

In summary, there are wide differences in spending per learner across primary and secondary schools. A large proportion of these differences can be explained by deprivation, school size and other differences in provision. However, large differences of over 10% remain in many cases and can't be accounted for by differences in the average level of local authority funding.

What can account for these remaining differences? The two main potential explanations are other differences in school costs within local authorities and differences in local authority funding formulae. Differences in school costs within local authorities could include differences in costs associated with specific provision for additional learning needs. This is likely to account for a large part of the differences but is hard to ascertain in practice.

Variations in local authority funding formulae will then account for the remaining differences. These funding formulae are published as part of annual section 52 returns. A reading of these returns published by local authorities reveals several important issues. First, the funding formulae differ widely in their complexity, number and type of factors included. This makes it hard for schools to understand how their funding levels are calculated and for outsiders to scrutinise the underlying policy decisions. Second, this complexity makes it extremely hard to conduct any comparisons across local authorities.

To illustrate these points, Table 3.3 shows the distinct formula factors used in five example local authorities (three in South Wales, two in Mid, North and West Wales). These five funding formulae include a total of 56 distinct formula factors. Even focusing on basic pupil-led factors, these five local authorities chose to count pupils at different points in time, differ in use of actual vs estimates and some chose to estimate the number of required teachers/classes. A vast range of other formula factors were used to account for additional learning needs, social deprivation and curriculum, and often in very different ways. There is more consistency in site-specific factors, with a focus on square metres of the building and grounds, but a number of differences in ways of estimating energy spending. There were then a very large number of school-specific factors, with 20 different factors for these five local authorities. Although large in number, this still underplays the different ways in which these factors are used.

There can be benefits to such complexity. It can reflect local authority discretion to target extra funds to where there are genuinely higher costs, extra needs and where extra money can have the best effect. However, it comes at the cost of reduced transparency and differences in funding per learner across similar schools, as already documented in this section. There are also clear areas (such as pupil numbers, social deprivation and energy) where the case for such a large range of factors seems quite weak. There would thus be significant merit in the Welsh Government and local authorities working together to reduce the number of factors used and achieving greater consistency across areas and schools.

Table 3.3 List of school funding formula factors used in five local authorities

Pupil-led factors	Other pupil-led factors and additional learning needs	Site-specific factors	School-specific factors
Number of pupils of different ages on roll in September	Pupil numbers	Floor area (square metres)	Lump sums
Number of pupils of different ages on roll in November	Specific entitlements	Grounds area (square metres)	Small school lump sums
Number of pupils of different ages on roll in January	Number of SEN places	Rates bill	Number of teachers
Average number of estimated pupils in January, September and January	Pupils on school action plus	Premises insurance bill	Infant class lump sum
Number of pupils of different ages in April and September	ALN average over 3 years	Statutory testing bills	Split sites
Number of pupils of different ages on roll in January (head teacher estimates)	Percentage of pupils eligible for FSM	Buildings condition survey	Dual stream
Number of classes of 15, 25 and 30 pupils	Welsh Index of Multiple Deprivation	Caretakers house condition survey	All through factor
Number of required teachers	Pupil mobility	Average energy cost over 3 years	Amalgamation costs
Number of pupils in specialist teaching facilities	Prior attainment at Key Stage 2	Other actual energy costs	Swimming pool factor
	CAT test	Cost of hiring sports facilities	Dining hall split site factor
	Welsh Government Literacy test results	Exposure to energy costs	Breakfast costs
	Reading tests at Y2 and Y4	Type of fuel used	Welsh medium lump sum
	NFER test		Service-level agreements
	Pupils who are “functionally illiterate”		Employee insurance
			Free school meal entitlement and take-up
			Music tuition hours
			Contracted hours of learning support
			Curriculum protection
			Threshold pay for teachers
			EAL Costs

Sources and notes: Section 52 Budget returns for five local authorities.

3.4 Deprivation funding in context: comparisons and evidence

As shown in previous sections, differences in deprivation play a substantial role in explaining differences in spending per learner across schools. This section considers deprivation funding in the context of changes over time, comparative trends in England and empirical evidence on the effectiveness of deprivation funding.

Changes over time

To illustrate the changes over time in funding for more deprived schools, Figure 3.9 shows the level of primary (a) and secondary (b) school spending per learner in each quintile of eligibility for free school meals (FSM) in Wales in 2018–19 and 2009–10. For 2018–19, spending per learner is broken down into core spending and that explained by the Pupil Development Grant (PDG).

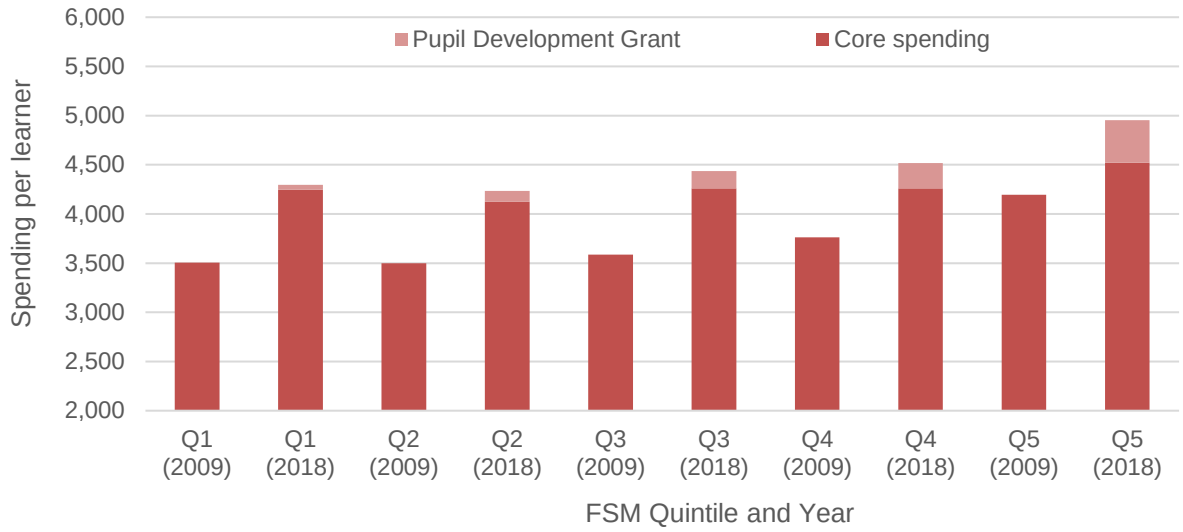
In 2009–10, the most deprived primary schools received about £4,200 per learner compared with about £3,500 for the least deprived primary schools. This equates to a difference of about £700 or 20%. In 2018–19, this spending premium had fallen to £650 or about 15% extra. The PDG explains about £400 of the spending premium in 2018–19. The deprivation spending premium would thus be significantly lower without the PDG. However, this also means that the deprivation spending premium in all other funding has fallen from £700 in 2009–10 to about £300 in 2018–19.

Amongst secondary schools, the cash difference between the most deprived and least deprived secondary schools has gone up from £550 in 2009–10 to £675 in 2018–19, leaving the relative difference unchanged at about 13%. This increase in the absolute difference is still below what one would expect given the introduction of the PDG, which can explain about £250 or about 40% of the deprivation spending premium in 2018–19. This means that the premium in all other core funding has fallen from £550 in 2009–10 to £400 in 2018–19.

All other things being equal, one would expect the introduction of the PDG to increase the extra amount of spending going to more deprived schools. However, all other things were not equal. For both primary and secondary schools, spending per pupil has grown much faster in cash-terms amongst less deprived schools after excluding the PDG. As a result, the extra amount of spending going to more deprived primary schools has not grown over time. It has gone up amongst secondary schools, but not by as much as one would predict given the introduction of the PDG.

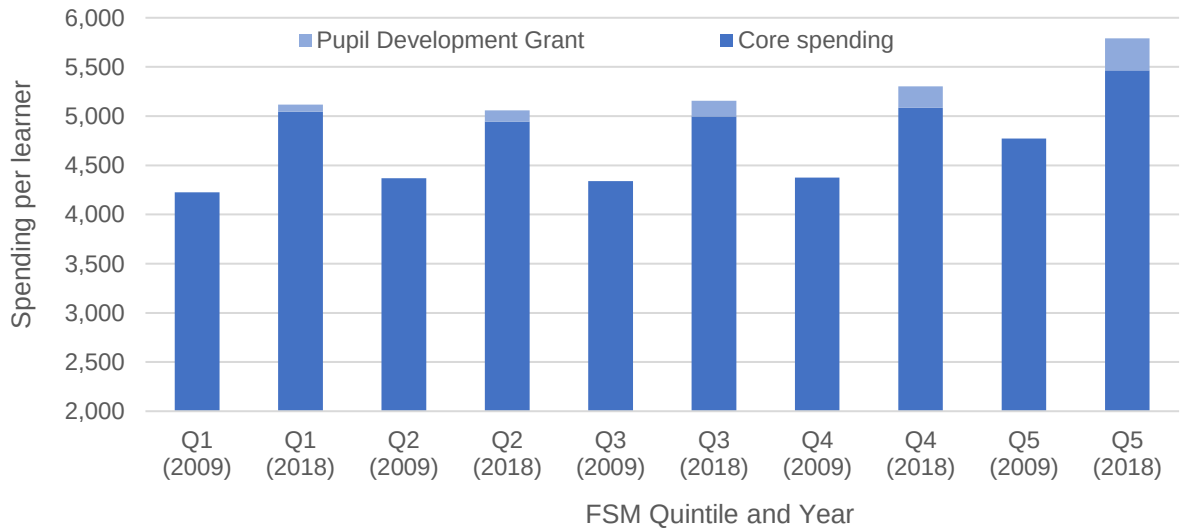
Figure 3.9 Spending per learner by quintile of deprivation, 2009-10 and 2018–19

a) Primary schools



Sources and notes: FSM quintiles defined by total number of full-time equivalent learners across all schools. Spending figures taken from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Figures for Free School Meal Eligibility taken from Stats Wales, Provision of Meals and Milk

(b) Secondary schools



Sources and notes: FSM quintiles defined by total number of full-time equivalent learners across all schools. Spending figures taken from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Figures for Free School Meal Eligibility taken from Stats Wales, Provision of Meals and Milk

There are a number of potential explanations for this surprising finding, which differ in terms of their plausibility:

- **Rising cost of small primary schools** – Small primary schools are more likely to be located in less deprived areas. If the cost of running these small schools has grown over time, this would lead to faster growth in spending per learner for less deprived schools. To help test this hypothesis, Appendix Figure C1 shows the change in

spending per learner between 2009–10 and 2018–19 by quintile of deprivation and how this compares with the level of PDG in 2018–19. Including all schools, spending per learner grew by about £30 more amongst less deprived schools than amongst more deprived schools. This is despite the fact that more deprived schools received about £400 more through the PDG. If we exclude small primary schools, spending per learner grew by about £30 extra amongst more deprived schools. This suggests that the rising cost of small schools explains a small amount, but certainly not all, of the faster rise in spending per learner for less deprived primary schools.

- **Rising cost of small secondary schools** – As shown in Figure C2, spending per learner grew by about £130 more for the most deprived secondary schools as compared with the least deprived ones between 2009–10 and 2018–19. This rises to about £200 if we exclude small secondary schools. This is much closer to what one would expect given that more deprived secondary schools receive about £250 extra through the PDG than the least deprived ones. A growing cost of small secondary schools thus seems a highly plausible explanation for why the deprivation spending premium for secondary schools has not grown by as much as one would expect.

- **School organisation –** There have been large changes to school organisation in recent years. This includes the creation of all-through or middle schools. The number of schools has also fallen by about 200, with many infant/junior amalgamations. Unfortunately, one cannot ascertain the precise effects of such reorganisations without calculating what schools would have received with no changes. This is extremely difficult to do in practice given the complexity of local funding formulae.

- **Higher levels of delegation –** As shown in Chapter 4, a greater level of spending has been delegated to schools over time. This could explain some of the greater growth in spending for less deprived schools if less deprived schools benefitted more from the greater delegation of school funding after 2012. Unfortunately, it would be hard to isolate the effects of greater delegation from other changes in funding.

- **Changes to Additional Learning Needs funding** – There have been significant changes to funding for Additional Learning Needs over time, including higher levels of delegation. To ascertain the potential effects of these changes, Appendix Figure C3 shows the notional special educational needs (SEN) budget delegated to individual schools by quintile in 2009–10 and 2018–19. This shows that deprived schools received higher notional SEN budgets in both 2009–10 and 2018–19. These budgets also grew significantly across all quintiles between 2009–10 and 2018–19, partly due to greater levels of delegation. The higher budgets for the most deprived primary schools fell very slightly over time (from £380 extra in 2009–10 to £350 in 2018–19), but grew for the most deprived secondary schools (from £210 extra in 2009–10 to £280 in 2018–19). This suggests that changes to SEN funding are unlikely to form a major explanation for faster growth in core funding for less deprived schools.

- **Reduced relative funding for deprivation in LA funding formulae –** If local authorities had reduced the level of funding for deprivation in their funding formulae, this would be a direct explanation for slower growth in core funding for more deprived schools. This could have happened if, for instance, local authorities focused any extra funding on non-deprivation factors, given the known increase in the PDG. In practice, the complexity and lack of transparency in local authority funding formulae mean that it is hard to rule such an explanation in or out.

- **Differential regional patterns** – Ideally, one would look at changes within individual local authorities to further understand the likely driving forces of slower growth in core spending per learner for more deprived schools. However, the number of primary and secondary schools in individual local authorities are often too small to derive reliable general findings. As a substitute, Figure C4 shows the difference in spending per learner between the most and least deprived schools in 2009–10 and 2018–19 by region. This is not intended to show the effect the regional consortia per se, but is a familiar grouping of often similar local authorities.

  This shows that the deprivation spending premium for primary schools has grown over time in the CSC and EAS regions in South Wales. The fall in the deprivation spending premium for primary schools has instead been driven by trends in local authorities in GwE and ERW, with the largest fall in the ERW region.

  Amongst secondary schools, the deprivation spending premium has grown significantly across almost all regions and largely in line with what one would expect given the PDG. The only exception is local authorities covered by ERW, where the deprivation spending premium has fallen by £400. Indeed, local authorities covered by ERW used to have the highest deprivation spending premium in 2009–10. By 2018–19, it had the lowest level.

In summary, the introduction of the PDG should have significantly increased the deprivation spending premium across both primary and secondary schools. However, core spending (excluding the PDG) grew faster amongst less deprived schools. This led to no net change in the extra amount of spending on the most deprived primary schools and a smaller change than would be expected for secondary schools.

For secondary schools, faster growth in core spending amongst less deprived schools can be almost entirely explained by the role of small secondary schools. Small primary schools play a lesser role in explaining faster growth in core spending amongst less deprived primary schools. However, for both primary and secondary schools, faster growth amongst less deprived schools is concentrated in more rural areas, particularly local authorities covered by ERW in Mid and West Wales. This underlines the likely important role played by sparsity and small school funding in explaining faster growth in core spending amongst less deprived schools. Unfortunately, the complexity and changing institutional structures precludes much in the way of further analysis.

The lack of growth in the deprivation spending premium over time also highlights the importance of greater transparency and consistency in the school funding system in Wales. If local school funding formulae were less complex and more consistent, it would be far simpler to work out what had driven this surprising result. Tracking simple differences in spending per learner by levels of deprivation would also quickly reveal if trends and differences in spending per learner align with policymakers' goals and intentions.

Comparison with England

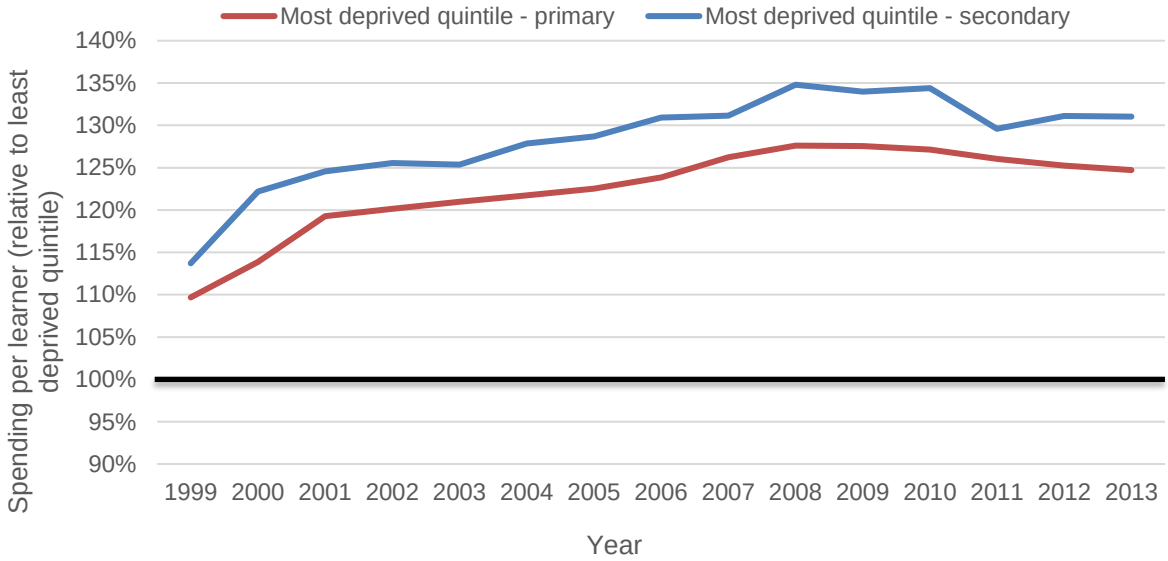
To provide further comparative context, **Error! Reference source not found.** shows the difference in spending per learner between the most and least deprived 20% of schools in England (also based on the share of learners eligible for FSM to maximise consistency). This goes further back in time to 1999–2000 and shows that the deprivation premium for the most deprived primary schools in England grew from just over 10% in 1999–2000 to reach

about 25% by 2013–14. In secondary schools in England, the deprivation premium doubled from 15% to 30% over the same time frame.

Most of this growth was driven by the introduction of various specific grants over the 2000s, including the School Standards Grant, School Development Grant, Ethnic Minority Achievement Grant, Standards Funds and various other smaller grants (Belfield and Sibieta, 2016). These specific grants were introduced by central government and had to be passed on by local authorities with very little room for changes. The Pupil Premium in England (introduced in 2010) continued this trend.

Due to data limitations and different data for Academies, this precise measure can't be extended to present day for England. However, the nature of school funding policy in England has been to maintain existing differentials, including as part of the recently introduced National Funding Formula[32].

Figure 3.10 Differences in spending per learner by quintile of eligibility for free school meals (FSM) in England, 2009–10 and 2018–19



Sources and notes: Belfield and Sibieta (2016)

The net result is that deprivation funding is likely to be significantly higher in England than in Wales, both for primary schools (15% extra in Wales compared with about 25% extra in England) and secondary schools (13% extra in Wales compared with over 30% extra in England).

Some of the deprivation premium in England will reflect extra funding for schools in London to pay higher teacher salaries. However, this won't have driven the growth of the deprivation premium in England over time as London weighting was largely unchanged over the 2000s.

Differences between the pupil premium in England and the PDG in Wales are likely to drive some of the difference in deprivation funding between England and Wales. At present, the Pupil Premium in England is £1,350 for pupils ever eligible for FSM in the past 6 years in primary schools and £935 in secondary schools. In comparison, the PDG in Wales is £1,135 for primary and secondary school pupils ever eligible for FSM in the past 2 years. The

[32] https://epi.org.uk/publications-and-research/implications-national-funding-formula-schools/

average value across phases for Wales is therefore close to the average for England, but the pupil premium will cover more pupils given the different years of eligibility.

In evidence to the inquiry on targeted funding by the Senedd Committee for Children, Young People and Education, the Welsh Government stated that extending eligibility to the PDG for pupils ever eligible for FSM in the past 6 years (rather than just 2 years) would cost about £40m in Wales. This difference will go some way to explaining the differences between England and Wales on deprivation funding. The rest of the difference will reflect the greater use of specific grants targeted at deprivation in England during the 2000s, which were then folded into the Dedicated Schools Grant in 2011.

Empirical evidence

The natural follow-on question is whether it would be desirable to increase the deprivation premium in Wales to a similar level in England. To answer this question, it is important to consider empirical evidence and ways to improve the effectiveness of deprivation funding.

As detailed in Chapter 2, the empirical evidence strongly suggests that school spending can lead to improvements in outcomes, particularly amongst learners from disadvantaged or deprived backgrounds. For example, Jackson et al (2015) find that the positive effects of increases in school spending are concentrated amongst children from low-income families, with a 10% increase in school spending throughout childhood enough to increase adult earnings by 10%, on average, and reduce incidence of poverty by 6 percentage points. They also show that a 25% increase in school spending throughout childhood for low-income families would be enough to eliminate the attainment gap in the US.

Such calculations can't be translated directly to a UK or Welsh context. However, they do indicate the potential long-term value of focusing school spending on more deprived or disadvantaged learners. Moreover, evidence for the other countries and contexts comes to similar conclusions.

Unfortunately, this evidence does not provide a guide to a 'right' level of deprivation funding or targeting. This will inevitably depend on policymakers.' There are, however, ways to improve the potential impact of deprivation funding.

Improving the ways in which teaching assistants are used is likely to improve the effectiveness of deprivation funding. As shown in section 3.3, one of the main ways in which deprivation funding is used is to employ extra teaching assistants. The existing evidence on the use of teaching assistants is not particularly positive. Pupils attached to teaching assistants seem to make little extra educational progress than other equivalent pupils and can even make less progress if time with the teaching assistant diverts from time with a more highly qualified teacher (Blatchford et al; 2011; Farrell et al. 2010).

Despite this, the 2017 evaluation of the Pupil Deprivation Grant (predecessor of the Pupil Development Grant) was relatively positive about how it was used, with schools reporting a focus on whole-school approaches, parental engagement, attendance and behaviour, socio-emotional skills and innovative uses of technology (Pye et al, 2017). In evidence to the inquiry on targeted funding by the Senedd Committee for Children, Young People and Education, Estyn also stated that it thought two thirds of schools were making good use of

the PDG[33]. The Welsh Government also maintains and updates advice to schools on good uses of the PDG, both for schools and the early years[34].

There is, however, always room for improvement. There are now numerous trials showing how teaching assistants can be used to deliver effective one-to-one catch-up programmes (e.g. Gorard et al. 2014; NFER, 2014). A recent campaign by the Education Endowment Foundation in England has further shown how schools can make better use of teaching assistants[35]. This guidance included recommendations to use TAs to deliver structured one-to-one catch up interventions, use them more in whole class teaching, ensure pupils are not diverted away from teachers and to provide better training.

It is also important to direct deprivation funding towards where it is most needed. At present, the PDG is targeted at learners who have ever been eligible for free school meals. This is well justified given such learners tend to have lower levels of educational attainment, on average. However, this is a binary measure of deprivation that could miss learners whose parents are in relatively low-paid work or who don't qualify for free school meals for other reasons. If the PDG were expanded, it would be desirable to consider including one or more other measures of deprivation.

It is beyond the scope of this report to make specific recommendation on which other measures of deprivation could be used. Indeed, the ideal way to make such judgements would be through a comprehensive examination of current differences in pupil attainment by various measures of deprivation likely to be highly correlated with educational disadvantage, such as the income, employment and education (adult qualifications only) of the Welsh Index of Multiple Deprivation or new data on deprivation that becomes available (such as through Universal Credit systems).

Finally, there are good arguments to focus any extra deprivation funding on younger age groups and to consider levels of early education and childcare alongside school funding. Evidence shows that earlier investments in education and skills are likely to be more productive than later investments, and that earlier investment will raise the productivity of later investments. This is confirmed by Johnson and Jackson (2019) who show that the effect of higher school spending is larger when preceded by high-quality pre-school (combining the effects of US school finance reforms and the introduction of Head Start). Nicoletti and Rabe (2018) have also shown that the effects of investments in secondary school are higher for those with greater levels of skills gained at primary school. For this reason, it would be worth considering a higher level of the PDG in the early years or primary school years.

3.5 Summary and recommendations

There are wide differences in spending per learner across primary and secondary schools across Wales. A large element of these differences can be explained by extra funding for more deprived schools, small schools and other differences in provision.

[33] https://www.assembly.wales/en/newhome/pages/newsitem.aspx?itemid=1874
[34] https://gov.wales/education-of-disadvantaged-children
[35] https://educationendowmentfoundation.org.uk/tools/guidance-reports/making-best-use-of-teaching-assistants/

Spending per learner is about £650 higher in the most deprived 20% of primary schools as compared with the least deprived ones. This equates to an extra 15% in spending per learner. This difference is about £700 or 13% for secondary schools. However, this extra funding seems to be mainly focused on the most deprived group of schools. There is little extra funding for schools with slightly above average levels of deprivation.

A large part of the funding for deprivation in Wales is driven by the Pupil Development Grant (PDG), which accounts for about 60% of the extra funding for more deprived primary schools and nearly 40% for secondary schools. Despite the introduction of the PDG, extra funding for more deprived primary schools has not grown over the last 10 years. Extra funding for more deprived secondary schools has grown over time, but not as much as one would predict given the introduction of the PDG. This is at least partly explained by the growing cost of small schools. However, the exact reason for this somewhat surprising result is unclear given changes to data, school organisation and highly complicated local school funding formulae. This underlines the importance of greater transparency and consistency in the school funding system in order to track whether school funding changes over time are in line with policymaker priorities.

The extra funding for deprived schools in Wales is also notably lower than in England where more deprived primary and secondary schools can receive about 25-30% extra funding per pupil than less deprived schools. This extra funding for more deprived schools in England grew at a fast pace over the 2000s due to greater use of specific grants.

This extra funding for deprivation in Wales is generally used to reduce pupil:teacher ratios in primary schools, and to increase teaching assistant numbers in both primary and secondary schools. The quality and how these staff are deployed will determine the effectiveness of this deprivation funding. There is much that can be learned from the work of the Education Endowment Foundation, especially on the best ways to deploy teaching assistants.

Small schools also experience higher levels of spending per learner, sometimes over £8,000 or £9,000. This reflects the higher per learner costs of running a small school. Looking at larger schools in sparsely populated, there appears to be no evidence of a significant funding advantage or disadvantage to being located in a sparsely populated area. Such schools have only slightly lower levels of spending per learner, on average, as compared with other equivalent schools in more densely populated areas.

Welsh-medium schools see slightly higher spending per learner than English-medium schools. However, this is almost entirely explained by the fact that such schools tend to be smaller, on average, and more likely to be located in rural areas. The difference in spending per learner between similar English and Welsh-medium schools is very small.

Secondary schools with sixth forms have slightly higher levels of spending per learner, about £250 extra as compared with equivalent secondary schools without sixth forms. However, secondary schools with sixth forms are only able to maintain a pupil:teacher ratio about 0.5 lower than other secondary schools. It is questionable whether this is sufficient to deliver a range of high-quality sixth form options. Funding per learner in sixth forms in Wales is more than £500 below that in England and there have also been very large swings in funding and learner numbers in recent years.

Finally, there appear to be large differences in spending per learner across schools even after accounting for differences in the characteristics of learners and schools, as well as the average funding levels of local authorities. This will reflect other differences in needs and

costs within local authorities. It will also reflect the fact that local authorities operate their own school funding formulae, which differ in their complexity, factors used and the weight attached to different factors. The complexity of these formulae makes it hard to produce comparisons of the choices made by local authorities and significantly reduces transparency in terms of how an individual school's funding is determined. It would be highly desirable to reduce the complexity of these formulae and make them more consistent across areas. This would increase transparency and reduce differences in funding across similar schools.

Recommendations

- **Recommendation 3**: **The Welsh Government should prioritise extra funding for more deprived schools**. There is a strong empirical evidence base showing that higher school spending has a larger, positive effect on learners from deprived backgrounds and can play a major role in reducing the attainment gap. Such extra funding would almost certainly need to be delivered through specific grants, such as an expanded Pupil Development Grant. If followed, the Welsh Government should also consult on using an expanded set of indicators, such as elements of the Welsh Index of Multiple Deprivation, to ensure that any extra funding targets multiple dimensions of deprivation. It should also consider a higher rate for younger learners given the evidence showing the benefits of early intervention. The Welsh Government should also track the amount of extra spending per learner in more deprived schools to ensure that changes in spending match policymaker priorities.

- **Recommendation 4**: **The Welsh Government should prioritise extra funding for schools with sixth forms.** The extra funding and resources available for school sixth forms are relatively small. This will make it harder for schools to offer a varied and high quality sixth form curriculum. Any extra funding for sixth forms should be considered as part of the wider post-16 funding settlement to ensure appropriate funding across all routes.

- **Recommendation 5**: **Local authority school funding formulae should be more consistent and transparent.** The Welsh Government and local authorities should work together to reduce the complexity and number of factors in school funding formulae. These should also be published in a way that allows schools to see how the funding of each school has been determined. This will make school funding more consistent across similar schools and allow for more transparency in how local authority choices affect school funding levels.

4. Spending by local authorities and regional consortia

Local authorities and the regional consortia play crucial roles in the school funding system in Wales. First, they distribute money and funding to schools. Second, they hold back some funding to provide some services themselves. In the case of local authorities, this relates to provision for learners with additional needs, school transport and a range of other central services. In the case of the regional consortia, this mainly relates to school improvement and professional development services for schools.

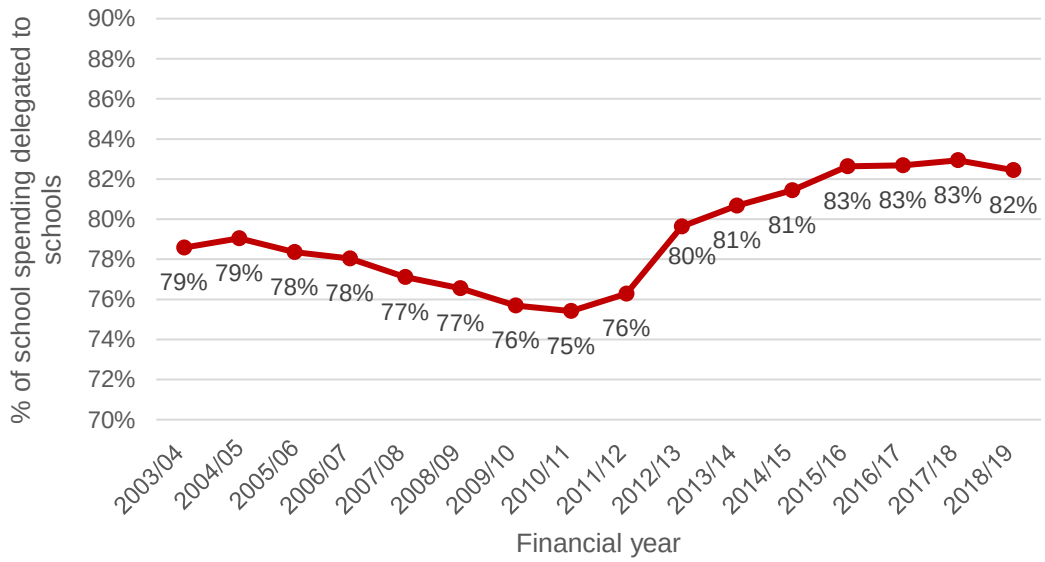
The previous chapter examined differences in local authority funding formulae. This chapter focuses on central services and total spending differences across areas. This starts in section 4.1 with a discussion of overall levels of central spending and delegation by local authorities, with section 4.2 discussing levels of spending on different areas of responsibility. Section 4.3 seeks to explain differences in school spending across local authorities and section 4.4 examines the consequences for staffing levels. Section 4.5 discusses the role of the regional consortia. Section 4.6 concludes with a summary and recommendations.

4.1 Differences in spending across local authorities

Of the £2.63bn spent on schools in Wales in 2018–19, local authorities spent about £460m on services provided centrally. This equates to about 17.5% of total school spending and leaves about 82.5% allocated or delegated to schools.

As Figure 4.1 shows, the share of total spending delegated to schools has risen significantly since 2010. This partly reflects local authorities' commitment to a Welsh Government target in 2012 to increase the share of spending delegated to schools to 85% by 2014–15. Whilst this hasn't been quite achieved, the share delegated to schools has clearly increased significantly. It is, however, worth noting that the increase in the delegation rate follows on from a decline during the 2000s. The current level of delegation of 82.5% is only slightly above the 79% seen in 2004–05.

Figure 4.1 Delegation rate over time



Sources and notes: Spending figures taken from Stats Wales, Education Revenue Expenditure.

Figure 4.2 shows how total school spending per learner varied across local authorities in Wales in 2018–19, as well as the different choices made in terms of levels of spending per learner delegated to schools and that retained for central services.

The highest levels of spending per learner are in Blaenau Gwent, Powys and Ceredigion, about £6,300 per learner, reflecting the effects of both sparsity and deprivation funding in the distribution of funding across local authorities. The lowest levels are in Newport and the Vale of Glamorgan, about £5,300 per learner, reflecting lower levels of deprivation and sparsity.

Because local authorities make different choices on how much to retain centrally, there is a slightly different ordering in terms of the level of *delegated* spending per learner. The average level of central spending is about £1,000 per learner. Some local authorities with high total spending and average levels of central spending still see high levels of delegated spending per learner (e.g. Blaenau Gwent and Denbighshire). Others with high total spending and high central spending, such as Powys and Ceredigion, have closer to average levels of delegated spending per learner. This will partly reflect that a portion of the higher funding for such local authorities reflects a need to provide more central services, such as transport.

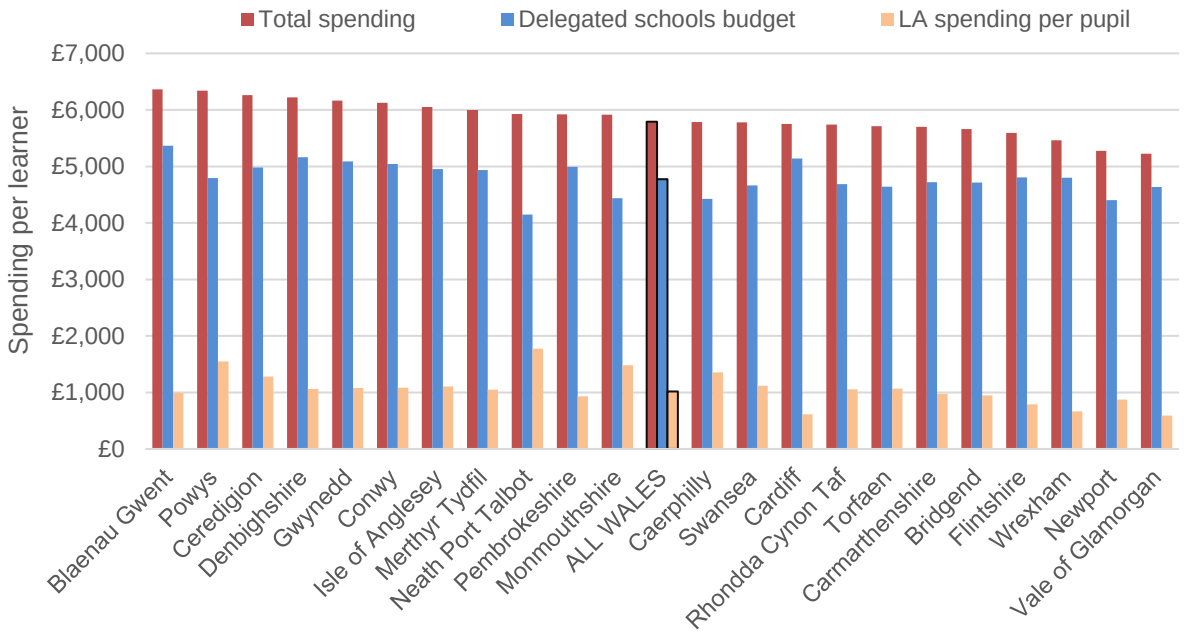
Several local authorities with low levels of total spending per learner have low levels of central spending too, e.g. Wrexham, Flintshire, Newport and Vale of Glamorgan. This means that delegated spending per learner for such local authorities is much closer to the Wales average. Cardiff is also a local authority with relatively low levels of central spending per leaner and, as a result, has an above average level of delegated spending per learner despite below average levels of total spending per learner.

Finally, there are some local authorities with relatively high *recorded* levels of central spending per learner that have relatively low levels of delegated spending per learner as a direct result. This includes Neath Port Talbot (£1,800 central spending per learner), Monmouthshire (£1,500) and Caerphilly (£1,400).

The precise amount recorded as being delegated to schools differs slightly by whether one looks at budget or outturn data. Figure 4.3 show that the share of spending delegated to schools is about 84% in budget data as opposed to 82.5% in the outturn data. In most local authorities, the difference between outturn and budget data is relatively small (less than 2%). However, in a small number of cases the differences are substantial. For example, the delegation rate for Neath Port Talbot is 70% in outturn data and 81% in budget data, a difference of over 10%. There is also a difference of 7% for Monmouthshire and 5% for Caerphilly, with much higher levels of delegation in the budget data than outturn data. This is likely to be a major driving factor of the low levels of delegation in these authorities in the outturn data.

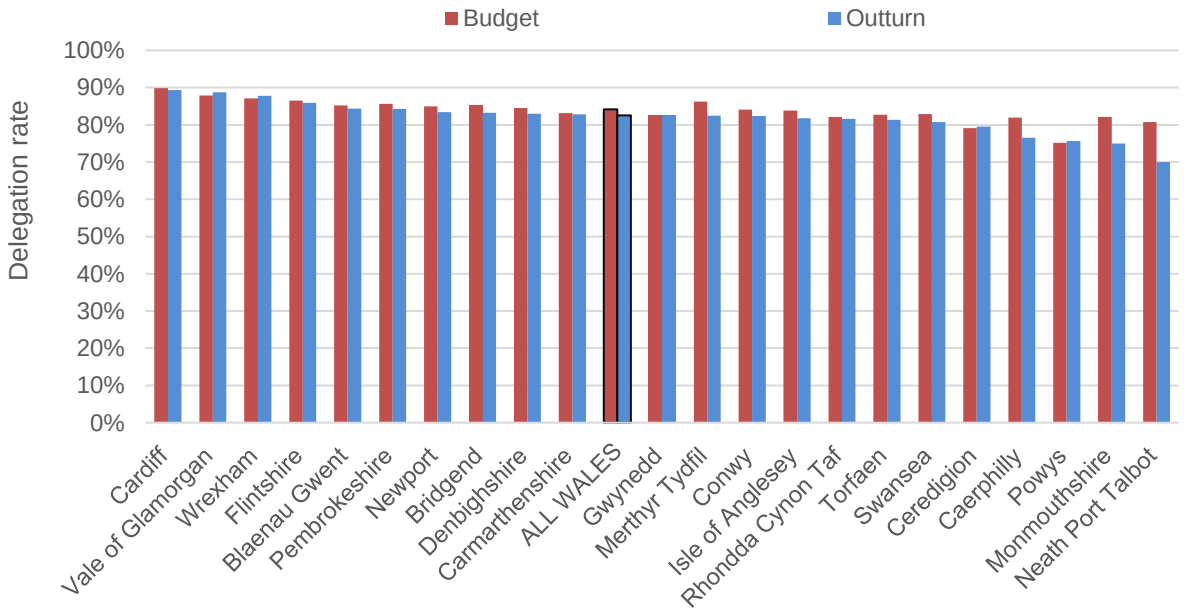
It is not clear why budget and outturn figures should give such a different picture in the case of these three local authorities for such an important feature of the school funding system. It would be highly desirable for budget and outturn figures to align with each other in future.

Figure 4.2 Spending per learner by local authority in 2018–19, total and delegated spending



Sources and notes: Spending figures taken from Stats Wales, Education revenue outturn expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers.

Figure 4.3 Delegation rates by local authority and data source, 2018–19



Sources and notes: Spending figures taken from Stats Wales, Education revenue outturn expenditure and Education revenue budget expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers.

4.2 Differences in central spending patterns by local authority

Central spending by local authorities covers a variety of different functions. Appendix D analyses the level of spending on different areas across local authorities in detail and what we can learn from these differences. This section summarises the main conclusions of this analysis.

Central spending can be broken down into the following broad categories:

- **Additional learning needs** – provision for learners with additional needs.
- **School transport** - all home to school transport
- **Access to education** – including education outside of school, school place planning, admissions and pupil support grants
- **School Improvement** – including contributions to the regional consortia
- **Strategic Management –** including central staffing budgets, as well as legacy pension and redundancy costs
- **Other** – including other staffing, capital expenditure from revenue account, inter-authority recoupment and other expenditure

Appendix D illustrates that there are big differences in central spending on these areas across local authorities. Some of these differences will reflect differences in needs and costs. For example, rural and sparsely populated areas, such as Powys and Ceredigion, have higher levels of transport spending, and relatively deprived local authorities, such as Merthyr Tydfil and Swansea, have higher levels of spending on additional learning needs. Spending per learner is also heavily influenced by local authority strategic choices, such as maintaining a smaller number of largely full schools that require higher transport spending (Monmouthshire) or delegating a high amount of funding for additional learning needs to schools themselves (e.g. Cardiff and Denbighshire). However, recorded spending levels also seem likely to reflect different recording practices across local authorities and time.

Spending on additional learning needs and school transport represent the two largest areas of spending, together accounting for nearly half of all local authority central spending. Spending on additional learning needs represents over £200 per learner across Wales, whilst school transport represents about £250 per learner. These also represent the two areas seeing substantial budget pressures.

Central spending on additional learning needs only represents one quarter of all reported spending on additional learning needs, with the other 75% delegated to mainstream and special schools. There are also large differences across local authorities in terms of how much is delegated to school and how much is spent centrally Some local authorities delegate around 85% or more of spending to special or mainstream schools, such as Cardiff, Wrexham and Denbighshire, with less than 15% spent centrally. Other local authorities spend 35% or more centrally at the local authority level, such as Caerphilly, Flintshire, Merthyr Tydfil, Rhondda Cynon Taf and Swansea.

School transport spending is the area to have seen the largest growth in spending across local authorities. Spending per learner has growth by 7% in cash-terms since 2013–14, on average, across Wales and now represents over one quarter of central spending by local authorities. In rural areas, such as Powys, Carmarthenshire, Pembrokeshire and Ceredigion, spending on school transport accounts for over one third of local authority spending. It is therefore important to review school transport spending and how costs can be contained.

There are also big differences in other areas of local authority spending, such as access to education, school improvement and strategic management. However, differences across data sources and potential different recording practices across local authorities make it hard to draw firm conclusions. Future data should separate out legacy costs (such as pension and redundancy payments) and local authority contributions to the regional consortia. Other categories could potentially also be reworked to ensure it is clear how much relates to the

management / central functions of local authorities and how much they spend on school improvement over and above the regional consortia.

Finally, one factor that appears to be missing from local authority spending figures is the level of spending related to service-level agreements. These represent services that schools buy-back from local authorities, such as human resources, finance, IT support and employment services. In some areas, all schools buy these services, in other areas, schools can opt in or out to this offer. However, the exact picture across local authorities is hard to discern from official statistics, which count service-level agreements as spending delegated to schools. This is strictly speaking the correct picture. However, in the interests of transparency, it would be highly desirable for future statistics to detail the exact levels of spending returned to local authorities via service-level agreements.

4.3 Explaining spending differences across local authorities

Different levels of delegation and central spending by local authorities will affect the level of funding to schools and, as a result, the resources that learners have access to across areas. Differences in funding and spending across areas will also be driven by differences in local authority characteristics, such as levels of deprivation and sparsity. This section examines differences in spending per learner across local authorities and the extent to which they can be explained by levels of delegation and area characteristics. The next section examines the consequences for actual resources in terms of staffing levels.

The red bars in Figure 4.4 show how (delegated) spending per learner varies between local authorities relative to the average across Wales, both for primary (panel (a)) and secondary schools (panel (b)). As can be seen, there are substantial differences, from over £400 above average spending per learner to £400 below average spending per learner.

In some cases, local authorities with high levels of spending per learner are similar across primary and secondary schools (e.g. Conwy and Ceredigion) or have low levels for both phases (e.g. Newport and Neath Port Talbot[36]).

In other local authorities, the picture for primary and secondary schools can be contrasting. For example, primary school spending per learner is close to average in Denbighshire, Monmouthshire and the Vale of Glamorgan, but secondary school spending per learner is £450 above average in secondary schools in Denbighshire and significantly below average in both Monmouthshire (£350 below average) and the Vale of Glamorgan (£750 below average). These differences seem likely to reflect differing weights given to primary and secondary schools in their respective school funding formulae, with a greater focus on secondary schools in Denbighshire and a greater focus on primary schools in Monmouthshire and the Vale of Glamorgan.

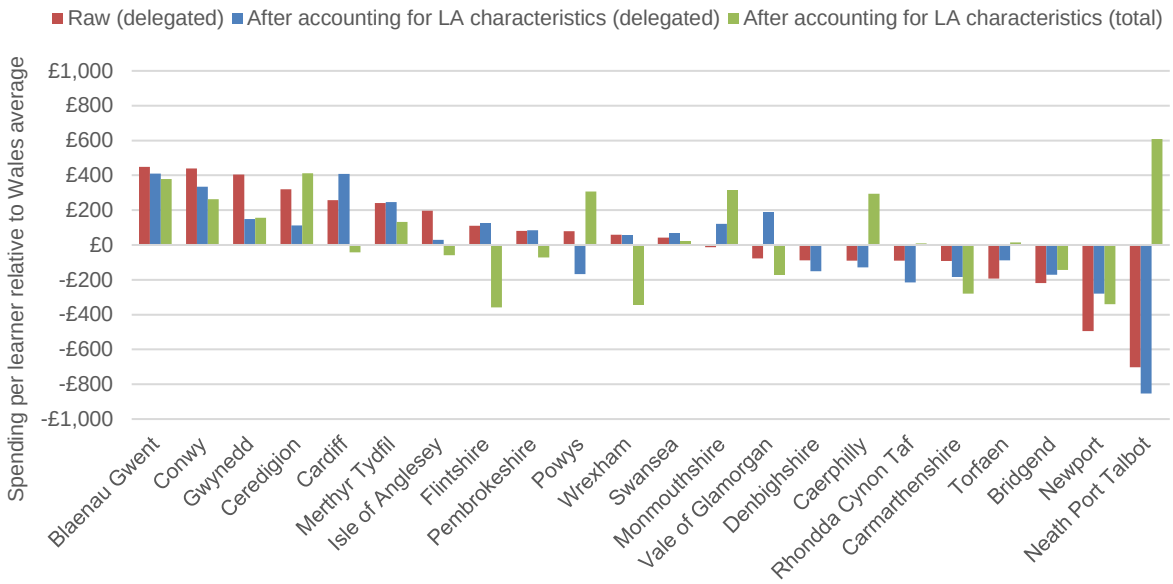
The blue bars in Figure 4.4 show the differences in delegated spending per learner after accounting for learner and school characteristics. In particular, these represent the local authority differences after accounting for a detailed set of regression controls, including: the share of pupils eligible for FSM; a flexible function of school size (including an indicator for being a small school and higher order terms in learner numbers); medium of education; sixth form provision (secondary schools only); and, whether the school is located in a sparsely populated area. The remaining differences across local authorities can then be

[36] The low levels of spending per learner seem likely to be at least partly explained by the low reported levels of delegation in outturn data as compared with budget data (see Appendix D for further details).

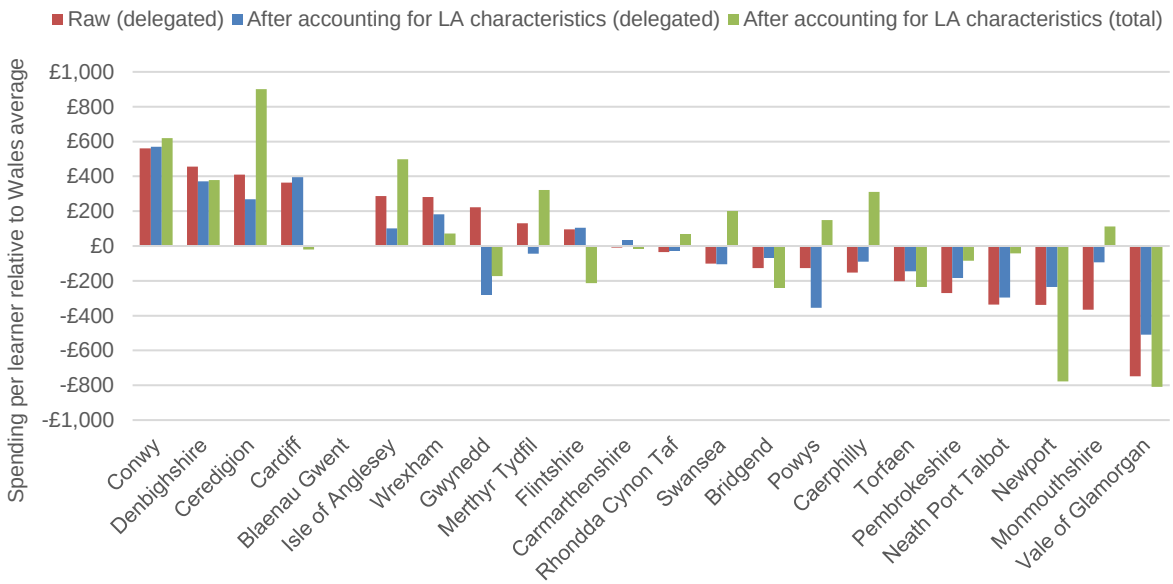
interpreted as the expected differences across areas for a school of similar size, deprivation, medium of education and sixth form provision.

Figure 4.4 Differences in local authority spending per learner under various models, 2018–19

a) Primary schools



b) Secondary schools



Sources and notes: Each bar shows the level of primary or secondary school spending per learner relative to the Wales average. The red bars show the raw differences in delegated spending per learner. The blue bars show the differences after accounting for learners and school characteristics (% of learners eligible for FSM (including non-linear terms), pupil numbers (with inverse and non-linear terms to allow for a flexible relationship between school size and spending), small school dummy variable, Welsh-medium dummy variable, Bilingual-medium dummy variable, sparse area dummy variable and sixth form provision dummy variable. The green bars show the differences in total spending per learner (after including central spending by local authorities) after accounting for all characteristics (as per the specification for the blue bars). Spending figures taken from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Figures for Free School Meal Eligibility taken from Stats Wales, Provision of Meals and Milk.

Whilst accounting for these factors generally narrows the differences in spending per learner across local authorities, substantial differences remain. Spending per learner is £300-£400 above the national average in primary schools in Blaenau Gwent, Conway and Cardiff, and about £300 or more below the national average in Newport and Neath Port Talbot. In secondary schools, spending per learner is £400 or more higher than the national average in Conwy, Denbighshire and Cardiff and about £300 or more below the national average in the Vale of Glamorgan, Powys, Gwynedd and Neath Port Talbot.

In some individual cases, the differences narrow substantially. For example, high levels of delegated spending per learner in Ceredigion, Gwynedd and Anglesey can be mostly explained by learner and school characteristics.

The green bars then add central spending per learner for each local authority to take account of the fact that local authorities differ in terms of whether some services are provided centrally or delegated to individual schools (e.g. large differences in the degree to which provision for additional learning needs is delegated). These estimates also control for learner and school characteristics, such as deprivation and the size of schools.

In most cases, the ordering in spending per learner across local authorities does not change significantly after accounting for differences in central spending. After accounting for local authority characteristics, total spending per learner is around £300-400 higher than average in primary schools in Conwy, Ceredigion and Blaenau Gwent, and over £500 higher in secondary schools in Conwy and Ceredigion[37]. Total spending per learner is around £300 below average in primary schools in Wrexham, Carmarthenshire, Flintshire and Newport, and about £700-£800 below average in secondary schools in Newport and the Vale of Glamorgan.

There are, however, also some quite dramatic changes as a result of different choices on delegation. For instance, whilst delegated spending per learner is above the national average in Cardiff, total spending per learner is close to the national average as a result of high levels of delegation. A similar pattern happens in Flintshire, with delegated spending per learner close to the national average, but total spending per learner well below the national average. Delegated secondary school spending per learner was already relatively low in Newport and the Vale of Glamorgan, but these differences become even greater after accounting for their high levels of delegation.

In other cases, high levels of central spending mean that total spending per learner is high relative to the national average, including many rural local authorities such as Ceredigion, Powys and Anglesey. In the case of Ceredigion, this may be partially explained by the fact that there are no special schools in this authority and delegated spending to mainstream schools for additional learning needs is higher than any other local authority as a result. The picture for Neath Port Talbot also changes significantly, reflecting the differences between the budget and outturn data in terms of which spending is counted as delegated or central spending. In the case of Caerphilly, a high level of central spending means that total spending per learner is above the national average for both primary and secondary schools.

It is important to examine both differences in total and delegated spending per learner across local authorities. Some of the differences will reflect choices around levels of delegation, particularly additional learning needs provision, but other differences will reflect

[37] Figures for secondary schools in Blaenau Gwent are not shown due to the low number of 11-16 or 11-18 secondary schools. Many schools in this local authority have become middle or all-through schools.

underlying differences in needs and costs, e.g. school transport. One cannot look at just one measure in isolation.

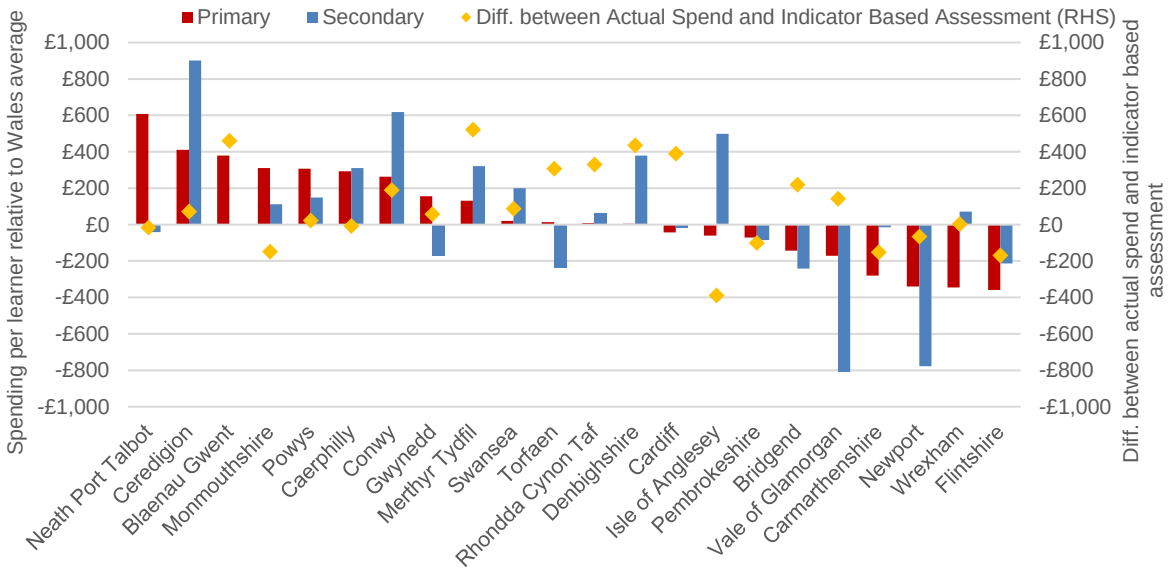
Error! Reference source not found. further summarises the differences across areas by showing the differences in total spending per learner for primary and secondary schools alongside one another after accounting for learner and school characteristics. This graph focuses on total spending per learner to enable a comparison with calculated spending needs.

In general, the picture is similar across phases, local authorities with high primary school spending per learner also tend to have high levels of secondary school spending per learner. For example, spending per learner in primary and secondary schools is around £300 above the national average in Ceredigion, Conwy, Caerphilly and Blaenau Gwent. It is around £200 or more below the national average in primary and secondary schools in Newport, the Vale of Glamorgan and Flintshire.

However, local authorities can and do make different choices on how much funding to provide to secondary and primary schools in some cases. Spending per learner is higher in secondary schools in Ceredigion and Anglesey as compared with the difference for primary schools in these areas. This is likely to reflect an above average secondary/primary school funding ratio in these areas. In contrast, there appears to be a bigger spending deficit for secondary schools in Newport and the Vale of Glamorgan suggesting a lower secondary/primary school funding ratio and thus a greater focus on primary schools.

To help isolate the likely source of spending differences across local authorities, **Error! Reference source not found.** also shows how much each local authority spends on education relative to the indicator based assessment (IBA) of education spending needs. These IBAs form a component of the local government funding settlement and seek to measure relative need to spend. They are not intended as a target or recommended level. However, the pattern of differences across local authorities can be informative about what is driving spending differences. In particular, whether high spending levels in some areas are driven by a choice or a need to spend more than their IBA.

Figure 4.5 Differences in total primary and secondary school spending per learner after controlling for learner and school characteristics, 2018–19



Sources and notes: See Figure 4.4. Local Authority Budgeted Expenditure on Schools, 2018-19.

On average, local authorities report spending about £100 per learner more than their IBA for education. There are also clearly differences across LAs in terms of spending relative to their education IBAs. However, these differences are not correlated with high or low school spending per learner after accounting for learner and school characteristics. Local authorities with low levels of school spending per school don't spend significantly less than their IBA, and those with high spending per learner don't spend significantly more

As a result, it seems much more likely that differences across LAs are driven by underlying differences in total available budgets determined through the local government settlement. The conclusion returns to this issue and makes several recommendations

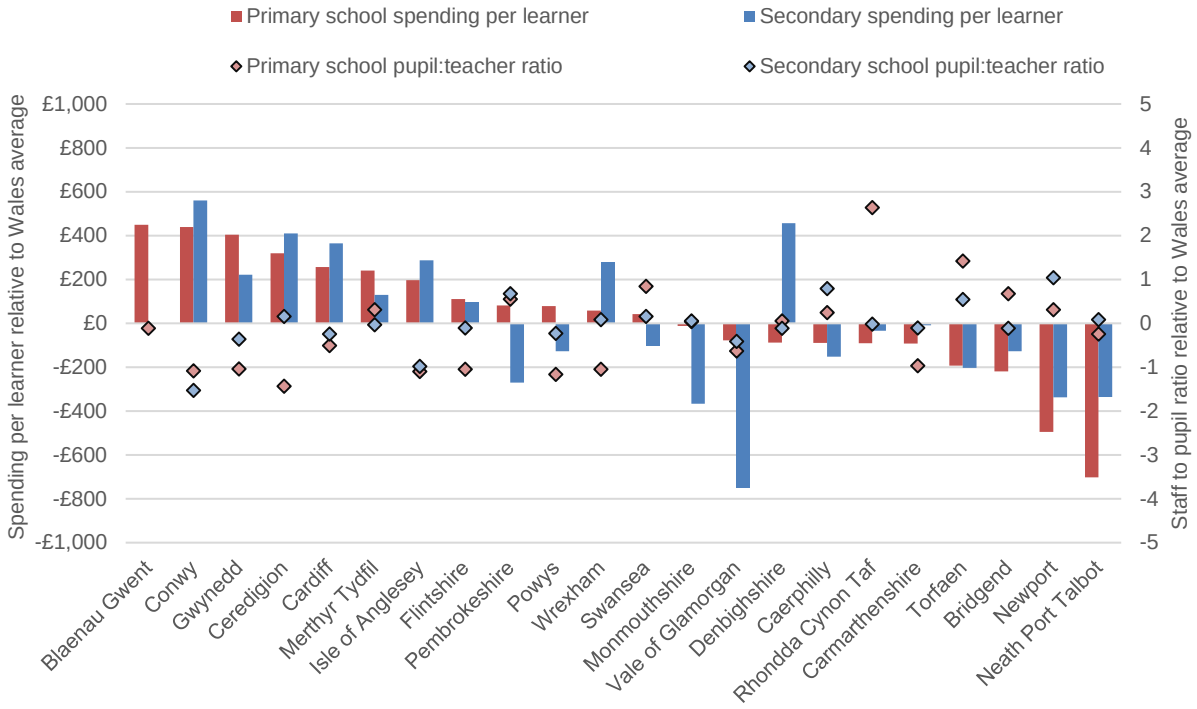
In summary, there are large differences in spending per learner across local authorities in Wales. Some of these differences can be accounted for by differences in delegation, learner and school characteristics and choices in their school funding formulae (e.g. the secondary / primary funding ratio). However, large differences remain even after accounting for all these factors.

4.4 The effects on the offer to learners in schools across areas

How do funding differences translate into actual resources across local authorities? To help answer this question, Figure 4.6 shows the level of delegated primary and secondary school spending per learner across each local authority, relative to the Wales average (red and blue bars for primary and secondary schools, respectively). In addition, it shows the pupil:teacher ratio in primary and secondary schools in each local authority relative to the Wales average (red and blue diamond shapes). This graph focuses on delegated spending as this represents the budget available to individual schools.

This shows that higher spending per learner does seem to translate into lower pupil: teacher ratios. There are some local authorities with high spending and below average pupil:teacher ratios (e.g. Conwy, Gwynedd, Ceredigion and Anglesey), and some with low spending and above average pupil:teacher ratios (e.g. Newport, Torfaen and Caerphilly). However, the relationship is far from linear or perfect. There are plenty of exceptions. For example, spending per learner is above average in Blaenau Gwent and Merthyr Tydfil, but the pupil:teacher ratio is close to average in both cases.

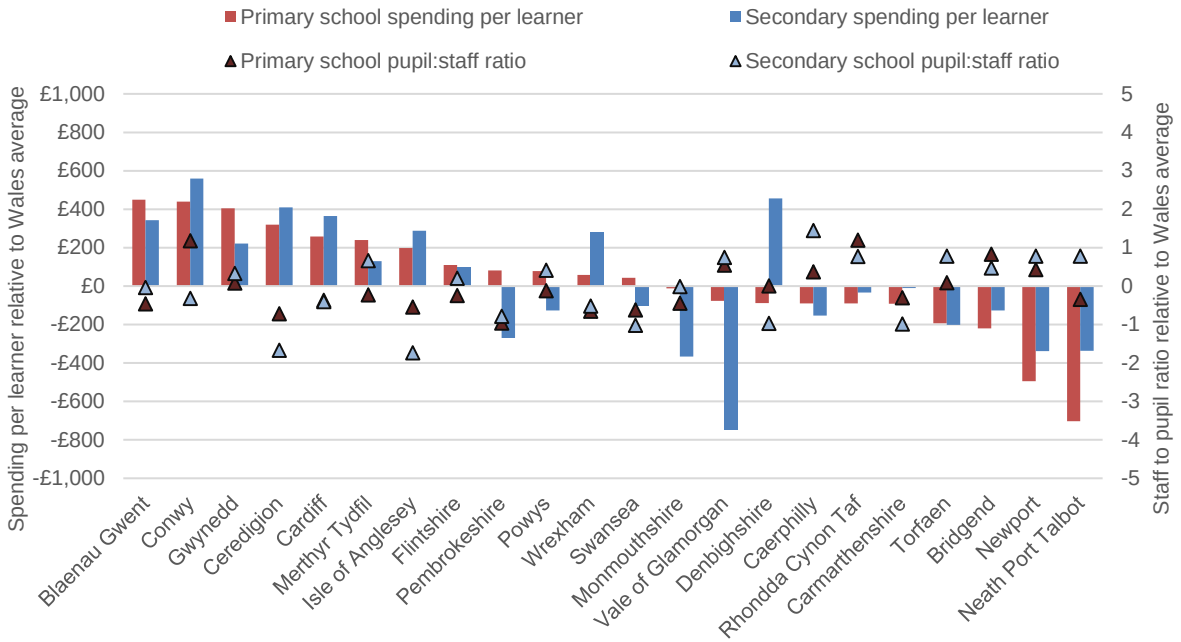
Figure 4.6 Differences in primary and secondary school spending per learner and pupil:teacher ratios by local authority, 2018–19



Sources and notes: Each bar shows the level delegated primary or secondary school spending per learner relative to the Wales average. The diamond shapes show the level of the pupil:teacher ratio in primary and secondary schools relative to the Wales average. Spending figures taken from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Staff numbers are full-time equivalent and taken from Stats Wales, School Staff.

Figure 4.7 shows the pupil to total staff ratios across local authorities relative to the Wales average. In general, there is much less variation across local authorities as compared with pupil:teacher ratios. There is also only a very weak relationship with differences in delegated spending per learner. This suggests that where there are spending differences, they are more likely to translate into differences in pupil:teacher ratios.

Figure 4.7 Differences in primary and secondary school spending per learner and pupil: staff ratios by local authority, 2018–19



Sources and notes: Each bar shows the level delegated primary or secondary school spending per learner relative to the Wales average. The diamond shapes show the level of the pupil:teacher ratio in primary and secondary schools relative to the Wales average. Spending figures taken from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Staff numbers are full-time equivalent and taken from Stats Wales, School Staff.

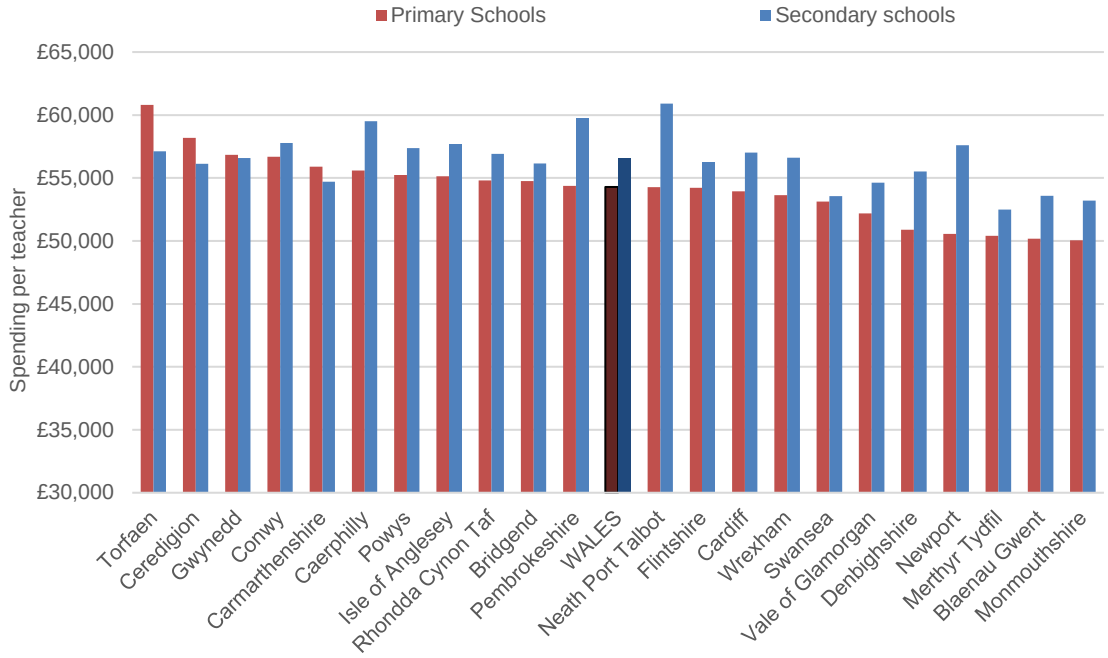
One of the reasons why there is not a strong relationship between spending per learner and staffing ratios across local authorities is that the average cost of staff members differs across local authorities. Figure 4.8 illustrates this by showing the average cost or spending per teacher across primary and secondary schools in different local authorities.

Average spending per teacher is about £54,000 in primary schools and around £57,000 in secondary schools. This includes 'on-costs' such as employer national insurance and pension contributions. It also includes pay levels of school leaders. There is then significant variation across local authorities. In primary schools, spending per teacher varies from close to £60,000 in Torfaen and Ceredigion to around £50,000 in Blaenau Gwent, Merthyr Tydfil and Monmouthshire. In secondary schools, there is equally large variation from around £60,000 per teacher in Caerphilly, Neath Port Talbot and Pembrokeshire down to about £53,000 in Blaenau Gwent, Merthyr Tydfil and Monmouthshire.

Given the nature of teacher pay scales, such differences will reflect differences in the average age and experience of the teaching workforce across areas, with higher salaries in areas where teachers are more experienced, on average.

Such differences also highlight the potential pitfalls of using a national minimum cost level to determine funding levels across local authorities. The cost of teachers varies significantly across local authorities and the cost of delivering a given pupil:teacher ratio will vary in equal terms.

Figure 4.8 Differences in spending per teacher across local authorities, 2018–19



Sources and notes: Each bar shows the level delegated primary or secondary school spending per learner relative to the Wales average. The diamond shapes show the level of the pupil:teacher ratio in primary and secondary schools relative to the Wales average. Spending figures taken from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Staff numbers are full-time equivalent and taken from Stats Wales, School Staff.

In summary, differences in spending per learner across local authorities translate into differences in staffing ratios, particularly the pupil:teacher ratio. However, this is far from a perfect relationship. One of the reasons is that the cost of teachers varies significantly across local authorities, reflecting the different experience profiles of teachers across areas.

4.5 Role of regional consortia

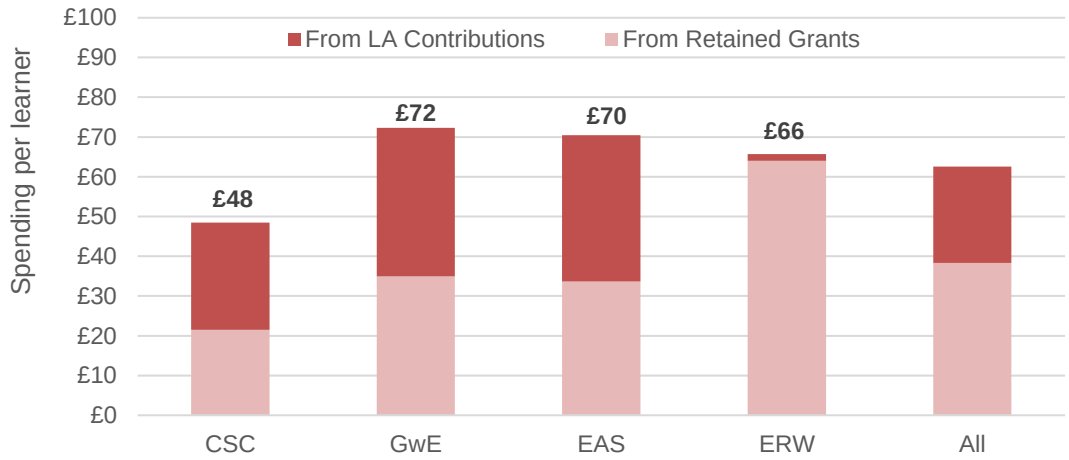
This section considers the role and functions of the regional consortia within the school funding system. This includes their level of spending, how they distribute funding to schools and their centrally retained functions.

The four regional consortia were established in 2012 to strengthen school improvement efforts and collaboration between local authorities. GwE covers North Wales (Gwynedd, Anglesey, Conwy, Flintshire, Denbighshire and Wrexham), ERW covers West and Mid Wales (Ceredigion, Pembrokeshire, Carmarthenshire, Swansea, Powys and Neath Port Talbot (till 2020)), CSC covers Central and South Wales (Rhondda Cynon Taf, Bridgend, Vale of Glamorgan, Cardiff and Merthyr Tydfil) and EAS covers South East Wales (Torfaen, Blaenau Gwent, Newport, Monmouthshire and Caerphilly).

Their main role in the school funding system is to distribute specific grants made available by the Welsh Government. This includes the Regional Consortia School Improvement Grant (RCSIG), £157m in 2018–19, and the Pupil Development Grant (PDG), £94m in 2018–19. Each consortium operates their own funding formula, but these are all relatively simple and transparent, e.g. basic per pupil allocations for the RCSIG and PDG rates.

Regional consortia can retain up to 20% of the RCSIG to support their own functions and services, though most retain substantially less than this. Almost all the PDG must be delegated to schools (see below for further details). In total, the regional consortia retained about £17m of these grants in 2018–19. In addition to this, they receive income through contributions from individual local authorities. These contributions amounted to about £11m in 2018–19 and came via local authority school improvement budgets. Combining the two sources gives a total central spend of £28m for the regional consortia in 2018–19.

Figure 4.9 Spending per learner by regional consortia and source in 2018–19



Sources and notes: Grant Letters to Regional Consortia; Evidence submitted to the Senedd Children, Young People and Education Committee Inquiry on School Funding; Full-time equivalent learner numbers from Stats Wales, Pupil numbers.

As shown in Figure 4.9, this £28m in total spend by the regional consortia amounted to about £63 per learner in 2018–19, equivalent to about 6% of central spending by local authorities or 1% of total spending on schools.

Spending per learner is similar across GwE, EAS and ERW at about £65-70 per learner. However, it is lower at £50 per learner in CSC. In most cases, about 45-50% of spending is financed through retained grants. However, in the case of ERW, this is 97% as local authority contributions are relatively small.

This provides for a range of services and activities, including school improvement, professional development, challenge advisors, data analysis and various leadership / coordination roles within the system. Central spending also includes the Looked After Children component of the PDG. The non-maintained settings element is distributed to local authorities to use either centrally for training or directly allocated to settings, with each local authority differing in their approach.

Whilst the overall role and function of the regional consortia are relatively clear, this understates some of the complexities and uncertainties within the system.

First, the reporting of spending on different functions is spread out across a range of different publications and documents, such as business plans, value-for-money reports and submissions to the Welsh Government. They are also often reported in slightly different ways that makes it hard to compare across consortia. This reduces transparency to schools and makes it hard to understand what the regional consortia provide.

Ideally, the Welsh Government would simplify its returns and require the consortia to report spending levels each year against a relatively small number of spending headings (e.g. school improvement, professional development, curriculum support, PDG LAC, other). This would then allow the Welsh Government to provide an annual picture of regional consortia spending levels within existing statistics and publications, e.g. the annual publication of local authority budgeted expenditure on education. This would provide schools and other stakeholders with a clear and transparent account of spending by the regional consortia.

Second, the number and complexity of grants received by the regional consortia has grown significantly over time, from less than 10 grants or initiatives in 2013 up to nearly 60 by 2018. These specific grants and initiatives allow the Welsh Government to enable specific actions and programmes, but also significantly increases complexity and reduces the discretion of the regional consortia. It is not clear that having such a highly complex system for a small part of the school funding system is desirable. It is therefore welcome that the regional consortia and Welsh Government are working together to reduce the number of such grants / initiatives.

4.6 Summary and recommendations

Local authorities spend about £1,000 per learner on services provided centrally. Provision for additional learning needs and home-to-school transport represents about 45% of central spending by local authorities, with home-to-school transport seeing the largest growth over the last five years.

There is significant variation in central spending across local authorities, which can vary from about £600 to over £1,500 per learner. In some instances, this reflects differences in needs and costs, such as higher transport spending in rural local authorities and higher spending on additional learning needs in more deprived local authorities. However, it also reflects choices made by local authorities. For example, local authorities differ markedly in terms of how much provision for additional learning needs is provided centrally and how much is delegated to individual schools.

Comparing central spending by local authorities is fraught with difficulties, however. This is partly because of different choices on what responsibilities to delegate to schools, but also because of data inconsistency. Local authorities tend to record spending in slightly different ways across time, functions and the specific data returns. Data headings can also be less than transparent, with strategic management including both management costs and legacy costs associated with pensions and redundancies. Spending on service-level agreements is not detailed within current data releases.

Inconsistent data reduces the transparency in the school funding system, making it hard for schools to understand local authority spending choices, responsibilities and how this affects them. More detailed and transparent data would be a necessary first step to open conversations between schools and local authorities on what responsibilities should and shouldn’t be delegated to schools. Inconsistent data also makes it hard to draw lessons from comparisons across local authorities. There is much that could be learned here. This includes the relative benefits and costs of delegating significant levels of additional learning provision to individual schools and how to contain growing school transport costs.

There are significant differences in spending per learner across local authorities even after accounting for differences in learner and school characteristics, such as deprivation and sparsity. For example, total spending per learner in primary and secondary schools is

around £300 above the national average in Ceredigion, Conwy, Caerphilly and Blaenau Gwent. It is around £200 or more below the national average in primary and secondary schools in Newport, the Vale of Glamorgan and Flintshire.

Local authorities set their education budgets themselves and they differ in terms of the extent to which they prioritise education spending. However, relative differences in spending per learner after accounting for learner and school characteristics can't be accounted for by differences in local authorities spending more or less than their spending needs assessment within the local government settlement. Instead, such differences are much more likely to reflect underlying differences in grants as part of the local government settlement.

Moreover, deprivation has become more multifaceted and complex over time. Bourquin et al (2019) show that working households now comprise 58% of households in poverty across the UK as compared with 37% in the early 1990s. The main measure of deprivation used to determine school spending needs in the local government settlement is based on eligibility for free school meals, which largely relates to out-of-work households. Additional measures might therefore be required to capture the rising phenomenon of in-work poverty.

Finally, the regional consortia play a crucial role in the school funding system, distributing various specific grants to schools and providing services themselves, such as school improvement and professional development. However, central spending by the regional consortia is only about £60 per learner or 1% of total school spending in Wales. Despite this, the system of grants and reporting is highly complex. It is welcome that the regional consortia and Welsh Government are seeking to reduce this complexity.

Recommendations

- **Recommendation 6: The Welsh Government and local authorities should continue to review the operation of the local government funding formula to ensure it contains an accurate assessment of relative of needs and costs.** Even after accounting for delegation decisions and a range of learner and school characteristics, there are large differences in spending per learner across similar local authorities. There is therefore a clear risk that the present system is not providing an accurate assessment of differences in all needs and costs. The Welsh Government and local authorities should review the merits of including extra measures of deprivation, such as those capturing the rising phenomenon of in-work poverty (e.g. specific measures within the Welsh Index of Multiple Deprivation, such as the share of adults with low or no qualifications, and additional data on income levels emerging from the new universal credit system). This is likely to include analysing the relationship between such measures and levels of educational attainment, and the effects of including them in the local government funding settlement. Given the rising cost of small schools, it is also important to review whether measures of need relating to sparsity can be improved.

- **Recommendation 7**: **Local authorities and the Welsh Government should work together to improve the transparency, coverage and description of data on local authority spending**. Consistent data and information are fundamental to fostering clear understanding about local authority spending and responsibilities, and the potential advantages and disadvantages of changes. The consistency and transparency of local authority spending data could be improved through clearer

guidance and descriptions of spending on different functions (e.g. separating out management functions from spending on “Access to Education,” separating out pension and redundancy costs from “Strategic Management,” detailing contributions to the regional consortia separately and detailing service-level spending). The Welsh Government could then use this information to provide a clear and consistent picture of local authority spending through its existing publications.

- **Recommendation 8**: **Schools and local authorities should use improved data as a basis for regular local reviews on funding and responsibilities**. Improved data should provide all stakeholders with a clear understanding of what local authorities provide for schools and the wider education system. This should then be used as a basis for local reviews on the advantages and disadvantages of shifting responsibilities and funding from local authorities to schools. The exact format and process is less important than the ultimate result. Delegation discussions should be jointly owned by local authorities and schools. If the vast majority of schools think more funding **and** responsibilities should be delegated, then it should happen.

- **Recommendation 9: The Welsh Government should draw more lessons from comparisons of spending, models of spending and outcomes across local authorities, particularly on ALN and school transport.** This would only be possible with more consistent and detailed data, but there are a number of opportunities. Local authorities differ markedly in terms of how much ALN spending and provision is delegated to schools and how much is retained centrally. The Welsh Government and local authorities should seek to draw more lessons on the impact on outcomes from these different approaches. More lessons could also be learnt about means to control growing school transport costs.

- **Recommendation 10: Grants to and data reported by the regional consortia should be clear, consistent and commensurate with their role in the school funding system.** Grants provided to the regional consortia are highly complex, with up to 60 initiatives and grants. This creates unnecessary complexity and reduces transparency of the system. It is welcome that the regional consortia and Welsh Government are working together to reduce this complexity. Central spending by the regional consortia represents about 1% of total school spending in Wales. However, spending on different functions by the regional consortia is currently reported across a series of different publications and documents. This again increases complexity and reduces transparency. Reporting by the regional consortia should be streamlined and simplified to enable the Welsh Government to provide a clear and simple account of spending per learner by the regional consortia in existing publications.

5. Future Cost Pressures

The main focus of this report has been existing or past levels of school spending in Wales. This chapter looks to the future in terms of how cost pressures are likely to develop over both the short-run and long-run. This excludes any cost and resource implications as a result of the ongoing Coronavirus pandemic.

The main driver of school costs in the short run is likely to be any changes in teacher pay, given that spending on teachers represents over 50% of school spending. Policymakers in England have already announced a commitment to increase teacher starting salaries to £30,000 by September 2022, an increase of 23% or nearly £6,000 compared with today, and smaller increases in pay for other teachers. The extent to which policymakers in Wales chose to follow this policy will have a major bearing on the evolution of schools' costs going forwards. Section 5.1 therefore estimates the potential increases in schools' costs over the next three years if policymakers did follow this example under several hypothetical examples. As well as providing an assessment of the specific cost pressures for the next three years, this also provides a potential model for assessing future cost pressures.

Looking further into the future, a range of general pressures on school costs and spending are likely to emerge in the next few years. A major transformation of the Additional Learning Needs (ALN) system is set to take effect from September 2021. Section 5.2 therefore examines the potential pressures on school spending and costs from this new ALN system. Looking even further into the future, demographic change is likely to create added pressures on the school spending system. Declining pupil populations are likely to increase the already significant cost of running small schools in rural areas. Ageing populations will increase needs for spending on adult social care and create potential competition for resources within local authority budgets. Section 5.3 therefore discusses the general pressures from demographic change. Considering these pressures, section 5.4 concludes by discussing the potential policy options for protecting school budgets over the long run.

5.1 Teacher Pay

One of the main factors likely to drive growth in schools' costs in Wales over the next few years is teacher pay, which represents over half of school spending.

Policymakers in England have already committed to increase starting salaries for teachers to £30,000 by September 2022, an increase of 23% or nearly £6,000 as compared with current levels for the 2019–20 academic year. In addition, policymakers in England have also committed to deliver a pay rise to all teachers, though this will be less than the promised rise for new teachers. As a result, the salary schedule for teachers in England 2022 is likely to be flatter than it is at present, with a much higher rate at the start of the scale and then rising more slowly with experience than at present.

As of 2019, teacher pay is now a devolved matter in Wales. The new independent pay review body published its first report and recommendations in July 2019[38]. This included a recommendation to increase starting salaries at the bottom of the main pay range for teachers by 5% and most other salary points by 2.4%. In response, the Welsh Government

[38] https://gov.wales/sites/default/files/publications/2019-07/independent-welsh-pay-review-body-first-report-2019.pdf

followed the advice for starting salaries and chose to implement a slightly higher increase of 2.75% for most other teachers[39].

Although teacher pay is now devolved, changes to teacher pay in England clearly have implications for policymakers in Wales. This is partly because of the significant cross-border movements of teachers between England and Wales. Not following a similar approach to England would clearly run risks for recruitment and retention of early career teachers Furthermore, there is clear empirical evidence showing that higher starting salaries and a flatter salary schedule are likely to lead to significant improvements in teacher retention (Hendricks, 2014), given that teachers have a high propensity to leave the profession during their first few years.

The Welsh Government has already made steps in this direction, with an 8.48% increase in starting salaries proposed for 2020–21, and between 2.75% and 3.75% for other teachers[40].

What would be the effect on school costs if policymakers did follow a similar approach to England? Figure 5.1 seeks to quantify this by showing several relevant, though hypothetical, scenarios for the growth in school costs between 2019–20 and 2022–23.

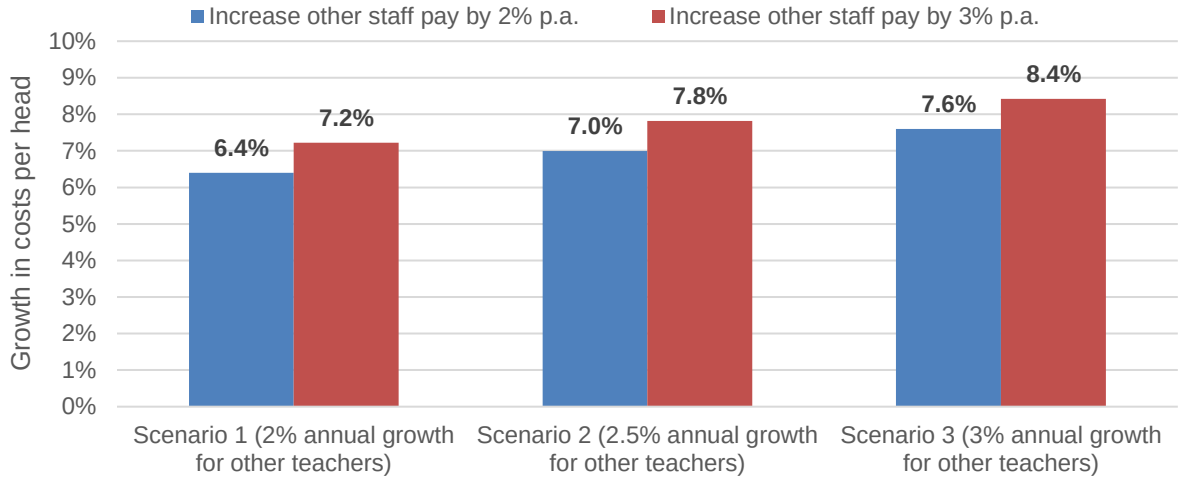
This modelling follows a similar approach to that undertaken by the Department for Education in its submission to the School Teachers Pay Review Body in England for 2020[41]. Full details of the assumptions and data are contained in Appendix E. In summary:

- **Teachers (main pay range):** all scenarios assume that starting salaries are increased to £30,000 in September, with 14% total growth in starting salaries across the main pay range.
- **Teacher (other):** three scenarios are shown for growth in salaries for other teachers (2%, 2.5% and 3% annual growth)
- **Other staff**: two scenarios are shown, growth of 2% and 3% per year in cost per staff member
- **Non-staff costs**: assumed to grow by 2% per year
- All scenarios assume that funding for increased employer pension contributions is continued in future years.

Under these assumptions, the growth in school costs between 2019–20 and 2022–23 varies from 6.4% to 8.4%. These figures represent the expected growth in costs per learner or the minimum extra funding required to maintain the current offer of resources. At the one extreme, costs per learner would grow by about 6.4% between 2019–20 and 2022–23 with higher starting salaries and 2% growth in salaries for more experienced teachers and other staff. At the other extreme, costs per learner would grow by about 8.4% if pay rises more experienced teachers and other staff increased to 3% per year.

[39] https://gov.wales/newly-qualified-teachers-receive-5-percent-pay-rise-teacher-pay-devolved-wales-first-time
[40] https://gov.wales/education-minister-proposes-31-overall-pay-award-teachers
[41] *Department for Education, Evidence to the STRB: 2020 pay award for school staff.*

Figure 5.1 Potential growth in school costs per learner under various scenarios for teacher pay, 2019–20 to 2022–23



Sources and notes: Author's calculations using expenditure shares taken from Stats Wales, Education Revenue Outturn Expenditure for 2018-19; Welsh Government's Evidence to the Independent Welsh Pay Review Body: The 2019 teachers' pay award; Department for Education, Evidence to the STRB: 2020 pay award for school staff. For further details, see Appendix E.

These figures are hypothetical and do not represent recommendations or predictions for the path of teacher pay or school spending. They illustrate the likely growth in school costs if policymakers in Wales adopt a similar approach to that proposed for England.

One of the most frequent complaints of schools, local authority and other stakeholders in recent years has been uncertainty over future funding levels and costs. The underlying cause of this problem is uncertainty in the overall level of the block grant to the Welsh Government. It is clearly very difficult to provide long-term settlements to individual service areas if the total budget is itself uncertain. Whilst the Welsh Government cannot provide guarantees of future funding, if it were to produce annual indicative assessments of expected future growth in school costs for the medium term (e.g. over a three-year time horizon and similar to those shown above), schools and local authorities might be better able to make more long-term plans. It would also provide a means for all stakeholders to judge whether actual funding increases provided by the Welsh Government and local authorities equate to real terms increases or decreases. This would make it transparent to schools when they are being asked to increase resources or staffing, and when they are being asked to make reductions.

The figures above all represent average figures for schools across wales. Appendix E shows the potential variation in cost growth across local authorities. This variation is relatively small as the analysis is only able to account for differences in the share of spending on teachers and other staff.

A more significant source of variation is likely to be differences in levels of teacher experience across schools and areas. If policymakers in Wales do chose to adopt higher increases in starting salaries, then cost rises are likely to be more significant for schools that employ a greater share of new or inexperienced teachers.

Data on the experience profile of teachers across schools in Wales is currently being collected as part of the new School Workforce Annual Census (SWAC). It will be crucial for policymakers to use such data to better understand the potential cost implications of any differentiation in future teacher pay awards. International evidence suggests new or

inexperienced teachers are much more likely to teach in more deprived and urban schools. It seems reasonable to expect a similar picture in Wales and that a differentiated pay award would likely result in faster cost growth in urban and more deprived schools.

If such a pattern is repeated in Wales, then a differentiated teacher pay award would create further challenges for the funding system. Given the nature of the local government settlement, any extra funding targeted at schools likely to experience the largest cost increases in the future would need to be delivered via specific grants. This could naturally add to the complexity of the school funding system.

A natural option would be to base any specific grant on the experience levels of teachers across schools. However, doing so would change financial incentives and could change the nature of the funding system to one that funds individual teachers rather than learners. A more attractive long-term option would be to use pupil-led factors associated with increased number of new or inexperienced teachers, such as deprivation levels.

5.2 Additional Learning Needs

From September 2021, a new system for supporting Additional Learning Needs (ALN) will begin to take effect in Wales. This represents a major transformation of the system and it will be phased in over a number of years[42]. The new ALN system aims to:

- Create a single, unified system for supporting ALN from ages 0 to 25
- Identify needs earlier in order to provide better support and improve outcomes
- Reduce conflict and improve collaboration

In terms of the financial implications, the Welsh Government expects the new system to be effectively revenue-neutral and not add to long-term costs in net terms, with higher costs of support effectively cancelled out by reduced costs of dispute and conflict in the system[43].

Additional funding has been provided for the costs of transition and implementation. In particular, the Welsh announced £20m in February 2017 to cover the costs of implementation/ transition support (£12m), workforce development (£7m), awareness raising (£0.6m) and supporting policy (£0.2m) over three years. An additional £8m for ALN was also provided for 2020–21.

These ambitious reforms in Wales follow a major reform of the system for supporting children and young people with special educational needs and disabilities in England from 2015. These reforms in England aimed to improve early identification, integrate health and social care and ensure support to remains in place up to the age of 25 where appropriate. There are obvious apparent similarities between these reforms in England with those planned for Wales from 2021, including having a single system for ages 0 to 25 and improving early identification. The English reforms were, however, more focused on integrating healthcare needs with educational needs under a single plan.

Following these reforms in England, the number of pupils with statements of special educational needs or education and healthcare plans rose from 260,000 in January 2016 to

[42] https://gov.wales/additional-learning-needs-transformation-programme
[43] https://business.senedd.wales/mgIssueHistoryHome.aspx?IId=16496

350,000 in January 2019, or a rise of 33% over just three years[44]. Almost all this growth can be accounted for by growing numbers of individuals aged 16-25 with identified needs. The National Audit Office assessed the new system in England in 2019, finding evidence of significant growth in numbers, poor planning, over-spending by local authorities and increasing costs from an 80% increase in cases taken to tribunals. This and other evidence led the National Audit office to conclude that:

> *"The system [in England] for supporting pupils with SEND is not, on current trends, financially sustainable. Many local authorities are failing to live within their high-needs budgets and meet the demand for support. …. The Department needs to act urgently to secure the improvements in quality and sustainability that are needed to achieve value for money[45]."*

Such evidence leads to a natural concern that the new ALN system in Wales might not prove to be revenue-neutral in practice. Fortunately, the Welsh Government has been able to learn some of the lessons from the English experience. Various mitigating actions have been taken to reduce the risk of a similar spiral in numbers and costs, with the Welsh regulations allowing for a reasonable time period for the continuation of support for post-16 learners (no such provision exists in the English system) and the reforms introduced gradually over three years (rather in a single year).

These mitigating actions reduce the risk that the new system of ALN support could increase net costs. Nevertheless, the scale of the expected change in the ALN system in Wales and nature of the English experience suggests a need for caution. The Welsh Government should therefore work closely with local authorities and other stakeholders to keep the new system under continual review as it is rolled out. If clear evidence emerges that the new system is increasing costs and numbers beyond what was expected under the old system, additional resources may well be required.

5.3 Demographic Change

The potential long-run costs and challenges posed by demographic change and an ageing society are widely recognised. Assuming unchanged policy, the Office for Budget Responsibility (OBR) estimates that age-related spending across the UK will increase by around 10% of national income over the next 50 years, from 20.5% of national income in 2017–18 to 29.2% in 2066–67[46]. Most of this increase is driven by increases in health and pension spending. However, adult social care spending is also expected to increase by around 60%, from 1.2% of GDP in 2017–18 to 1.9% in 2066–67. This is likely to place major pressure on local government finances, given that social care spending represents a significant share of local government spending.

If anything, these pressures could be more acute in Wales. The OBR shows that, as with Scotland and Northern Ireland, but unlike England, the share of the population under age 60 in Wales is set to decrease over the next forty years.

---

[44] Institute for Fiscal Studies, 2019 Annual Report on Education Spending in England (https://www.ifs.org.uk/publications/14369)
[45] https://www.nao.org.uk/report/support-for-pupils-with-special-educational-needs-and-disabilities/
[46] Office for Budget Responsibility, Fiscal Sustainability Report, July 2018, (https://obr.uk/fsr/fiscal-sustainability-report-july-2018/)

The Holtham independent report for the Welsh Government sets out the challenges in more detail and estimates that demand for social care will rise by 85% by 2035 as compared with current levels[47]. Without significant additional funding, this would undoubtedly place significant strain on local authority finances in Wales, given that social service spending represents about 30% of net spending by local authorities in Wales[48]. The Holtham report proposes a hypothecated age-related tax or levy of 1-3% to help address these pressures. The Welsh Government has not yet decided whether to implement these proposals.

This section sets out some of the long-term challenges resulting from demographic change for school spending, both directly in terms of the cost of small schools in rural areas and indirect challenges from pressures on social care spending. The next section then sets out the potential advantages and disadvantages of policy responses.

Figure 5.2 shows the population in each local authority aged over 65 relative to the population aged under 16 over time. This is shown both for the period to date since 1991 (panel (a)) and projections through to 2039 (panel (b))[49].

During most of the 1990s and 2000s, there were more children aged under 16 across Wales than there were older people aged 65 or over. This has gradually reversed over time. In 1991, the size of the population aged 65 or over was about 16% smaller than the population aged under 16. By 2018, there were 16% more people aged 65 or over than children aged under 16.

The picture also looks quite different across local authorities, both in terms of the level and changes over time. In most urban local authorities, the population aged 65 or over remains smaller than the number of children aged under 16, and there has been less evidence of a significant change in the age structure of the population. For example, in Cardiff and Newport, the share of the population aged 65 or over is around 20% smaller than the number of children aged under 16.

In contrast, there has been a significant change in the age structure of the population in many rural local authorities. For example, the population aged 65 or over is now about 60-70% larger than the population of children aged 16 or under in Powys, Conwy and Ceredigion, and about 50% larger in Monmouthshire, Pembrokeshire and Anglesey. Apart from Conwy, this compares with a near 1:1 ratio in the early 1990s. The population has become significantly older over time across most rural local authorities in Wales.

These trends look set to continue over next 20 years. Across Wales, the share of the population aged 65 or over is set grow relative to the number of children aged under 16, from being 16% larger in 2018 to 60% larger by 2039. This represents a very significant change in the age structure of the Welsh population.

As with previous changes, this change in the age structure looks set to be more heavily concentrated in rural local authorities. By 2039, there are projected to be 2 or more individuals aged 65 or over relative to the number of children aged under 16 in Conwy, Powys, Pembrokeshire, Anglesey and Monmouthshire. As shown in In contrast, the age structure of the population is not set to change in such a dramatic way in most urban areas.

---

[47] https://gov.wales/sites/default/files/publications/2018-11/paying-for-social-care.pdf
[48] https://www.cardiff.ac.uk/__data/assets/pdf_file/0003/1709904/Local_Government_Briefing_Oct19.pdf
[49] 2014-based projections are used due to an error in the production of 2018-based projections, which meant that they were unavailable at the time of writing.

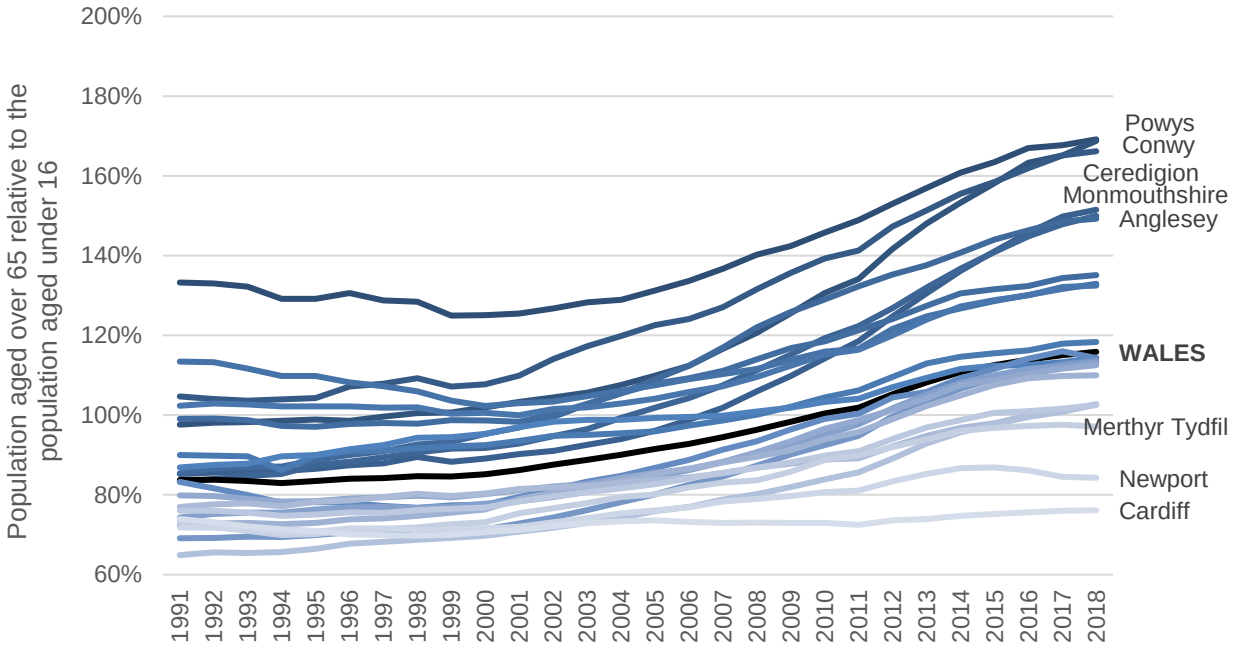
For example, the population aged 65 or over is set to grow faster than the number of children in both Cardiff and Newport, but the numbers of children and older people are still expected to be about equal in 2039 in both cases. In most urban areas, the number of children is either expected to remain stable (e.g. Swansea, Newport, Wrexham, Bridgend and Rhondda Cynon Taf) or rise (as in the case of Cardiff).

These changes in the age structure of the population will place both direct and indirect pressures on school spending in Wales, particularly in rural local authorities. There are, however, exceptions to this rural-urban divide. For example, the child population in Merthyr Tydfil and Blaenau Gwent is project to fall by more than 10% between 2018 and 2039, which could raise the per learner cost of running schools in these areas.

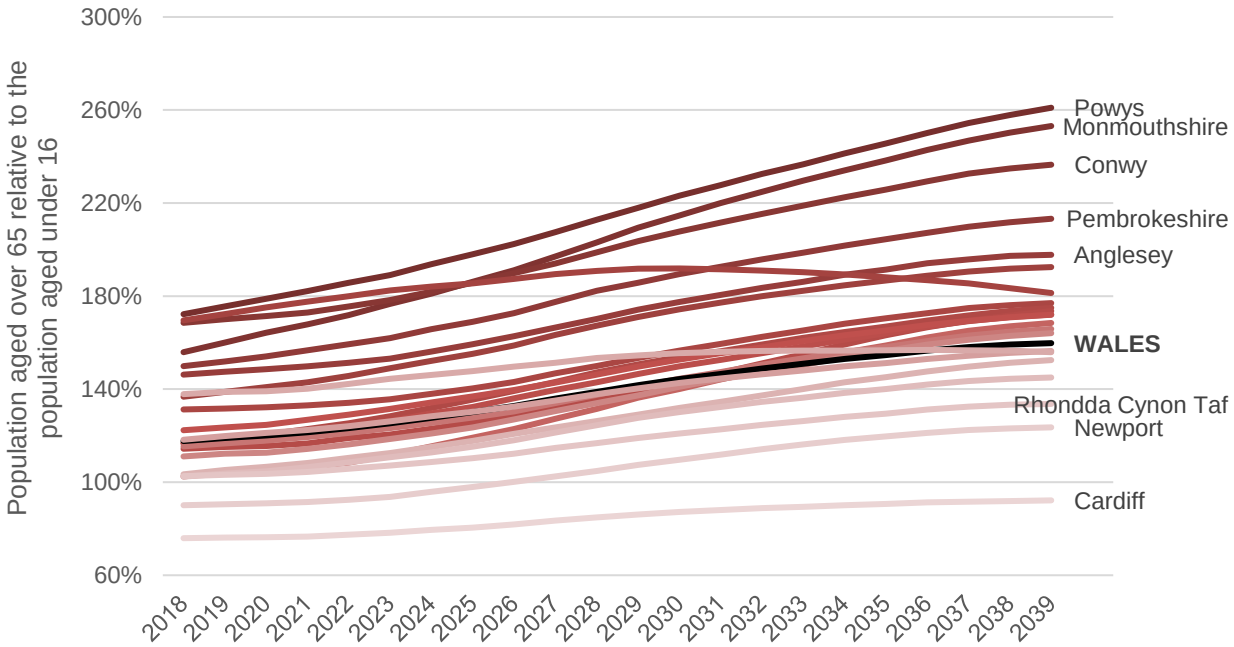
Figure 5.3, this change in the age structure of the population is driven by a combination of 5-15% projected falls in the number of children and rises in the number of people aged 65 or over of 25-30% (or a 45% rise in the case of Monmouthshire).

Figure 5.2 Population aged over 65 relative to the population aged under 16 over time by local authority

a) Trends to date: 1991 to 2018



b) Projections: 2018 to 2039

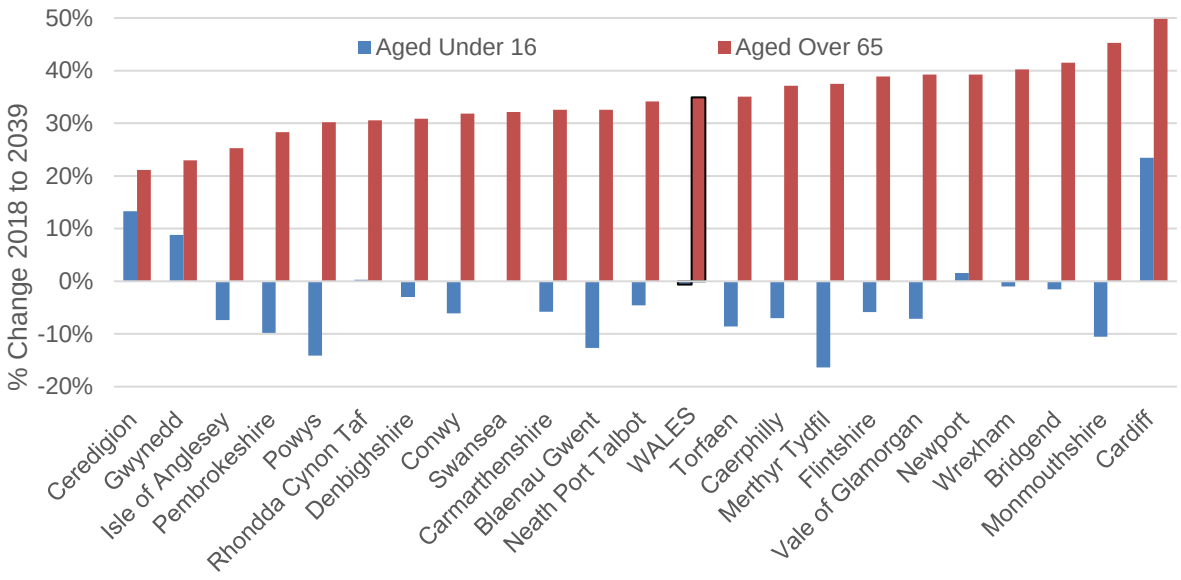


Sources and notes: Stats Wales, Population Estimates and 2014-based population projections.

In contrast, the age structure of the population is not set to change in such a dramatic way in most urban areas. For example, the population aged 65 or over is set to grow faster than the number of children in both Cardiff and Newport, but the numbers of children and older people are still expected to be about equal in 2039 in both cases. In most urban areas, the number of children is either expected to remain stable (e.g. Swansea, Newport, Wrexham, Bridgend and Rhondda Cynon Taf) or rise (as in the case of Cardiff).

These changes in the age structure of the population will place both direct and indirect pressures on school spending in Wales, particularly in rural local authorities. There are, however, exceptions to this rural-urban divide. For example, the child population in Merthyr Tydfil and Blaenau Gwent is project to fall by more than 10% between 2018 and 2039, which could raise the per learner cost of running schools in these areas.

Figure 5.3 Projected population changes by age group between 2018 and 2039 by local authority

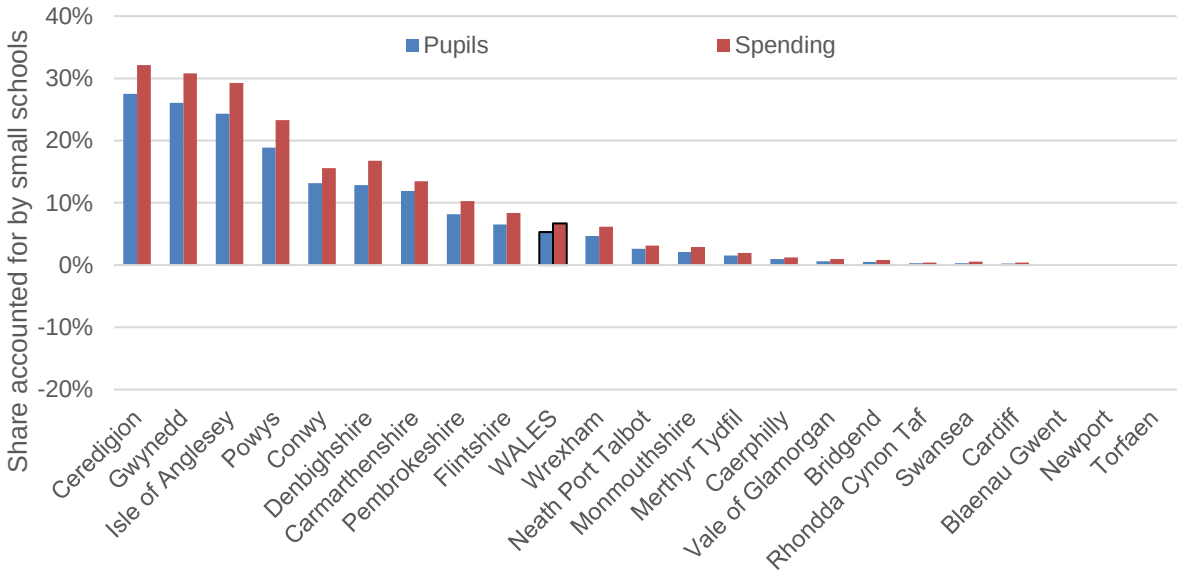


Sources and notes: See Figure 5.2

A stable child population across Wales should keep the overall demand for schooling and spending needs relatively constant, on average. However, falls in the pupil population in many rural local authorities will create significant pressures in those local authorities. Many learners in these local authorities are taught in small schools and the total cost of running these schools is unlikely to decline at the same rate as the decline in the child population. This will push up the per pupil cost of running these smaller schools and the whole system as a result.

As shown in Figure 5.4, the share of primary school pupils in small schools is about 5% across Wales and accounts for about 7% of total spending on primary school pupils. However, this rises to about 30% of spending in Ceredigion, Anglesey and Gwynedd, and nearly 25% in Powys. Declines in the size of the child population will mean that these figures are likely to rise significantly over time across most rural local authorities.

Figure 5.4 Share of primary school pupils and spending accounted for by small schools across local authorities, 2018–19



Sources and notes: Spending figures take from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers.

Demographic change also poses indirect pressure on school spending through competing budgetary priorities. Spending on social services already represents 30% of net council spending. The independent Holtham report on social care spending estimated that demand for adult social care spending would rise by 85% as compared with current levels. Without significant extra funding over the next 20 years, council budgets will come under heavy pressure from the demand for adult social care. These needs are well-recognised, and the Welsh Government is yet to decide whether to implement recommendations from the Holtham report to introduce additional, age-related taxes to help meet these pressures.

Under the Well-being of Future Generations Act, local authorities have an obligation to consider the impact of their decisions on future generations. However, there is an obvious risk that school spending might lose out incrementally over time as the demands for adult social care grow over time. The demands for adult social care and potential consequences are immediate and sometimes follow from statutory eligibility. Whilst the potential benefits from extra school spending are significant, they are likely to be realised decades into the future when children enter the labour market. They are also likely to be dispersed right across Wales and the rest of the UK, rather than individual local authorities.

Looking at recent trends in spending, Ifan and Sion (2019) show that comparable social service (net) spending by councils across Wales rose by 6% in real-terms between 2009–10 and 2017–18, despite a 10% real-terms fall in total council (net) spending per head over the same period. As a result, spending on social services has been relatively protected as compared with other areas of council spending and has risen from 24% as a share of total spending in 2009–10 to 30% in 2017–18. Education spending has fallen by just under 6% in real terms over the same period, leaving education spending largely constant as a share of total council spending (about 43-44%). Despite falls, this still leaves education spending relatively protected as compared with other areas of council spending, which have seen real terms falls of over 30% (such as “Roads and transport”, “Libraries, culture, heritage, sport and recreation”, and “Planning and development”).

In summary, demographic change and an ageing population will create significant challenges for school spending. These will be felt most in rural local authorities given the faster rises in the number of older people and greater falls in the number of children expected in these areas. Declining child populations will likely push up the cost of running small schools and could make some schools extremely expensive to maintain. An ageing population will also increase demand for adult social care, with the Holtham report estimating an 85% increase in demand by 2035 as compared with current levels. Without significant extra funding, there is an obvious risk that school spending could lose out incrementally over time, particularly given the long-term and dispersed nature of the benefits of school spending.

Most of these problems could be eased by higher levels spending across all areas. However, the overall fiscal climate seems likely to remain tight over the next few years, even before one considers the potential impact of the ongoing pandemic. Furthermore, potential changes in government mean that no policymaker can commit to spending levels decades into the future. The scale of the challenge and risks to school spending therefore create an interest in the extent to which mechanisms and rules can be used to protect school spending. The next section considers the merits of two potential mechanisms: hypothecating school funding; benchmarking actual changes against estimated cost changes over time.

5.4 Protecting school spending

This sub-section considers the potential advantages and disadvantages of mechanisms to protect school spending over the long run.

Ring-fenced schools grant

One natural option to consider is the creation of a ring-fenced schools grant. This would ensure no local authority spent less than a given amount on schools. This would be similar to the Dedicated Schools Grant in England, which was introduced in 2006. It would also match the approach proposed in a discussion paper on the future of education for the Wales Future Generations Commissioner (Jones, 2019).

Under the current approach, the local government settlement in Wales is determined by spending needs calculated across a range of service areas. Spending needs are calculated based on various indicators and how past local authority spending levels have changed in response to changes in these indicators. This leads to a series of indicator-based assessments (IBA) of spending needs across service areas, which includes a modelled contribution from local revenues (e.g. council tax). These IBAs are not recommended spending levels or targets, but are intended to be a component of overall spending needs across a range of service areas. This approach has advantages in giving local authorities discretion and flexibility to target local spending levels to reflect local needs and priorities.

A hypothecated grant would change this approach. There would be a separate schools grant outside the main local government settlement. Local authorities would be required to spend at least the level of the schools grant towards their schools budget, but would still be free to spend more if they chose to do so.

The source of financing for schools and education would also change as a result. Under the current system, some spending is effectively financed through council tax revenues. Under a ring-fenced approach, the vast majority would be funded through grants from central government, with only top-ups financed through local revenues. This would consequently

increase the share of other spending financed through local revenues. This would therefore be a major reform to local government funding and spending. It is therefore important to consider the potential advantages and disadvantages of such a change,

The current approach effectively prevents policymakers from directly adapting the schools component within the local government settlement to reflect expected future costs or new activities. As a result, policymakers in Wales have increasingly used or created new specific grants for these purposes. This is understandable, but naturally creates additional complexity and uncertainty. A ring-fenced schools grant would allow policymakers to adjust the main schools grant to directly reflect future cost pressures and additional activities. It could also allow the current system to be streamlined and simplified, with specific grants folded into one main grant.

Another potential advantage of a ring-fenced schools grant is clarifying accountability for school spending in the current system. At the moment, responsibility and accountability for spending levels is highly dispersed, reflecting decisions by the UK government, Welsh Government, local authorities and regional consortia. Ring-fencing the schools grant would make the Welsh Government fully accountable for overall school spending across Wales, given the block grant from the UK government. Local authorities would then be largely responsible for the value-for-money in their area and potentially committing to go beyond the level of any hypothecated grant.

Related to accountability, the current system makes it difficult for both central and local government politicians to make clear spending commitments on schools and education spending over the medium run. The Welsh Government cannot enforce its own commitments on school spending without new regulations/rules. Local politicians cannot make very specific funding commitments given they don't know their budgets far in advance. Ring-fencing the schools grant would allow the Welsh Government to make clear and specific commitments on schools spending and be held accountable for these decisions.

Over the long run, ring-fencing the schools grant would also protect school spending levels by preventing local authorities from spending less than a given amount. This might be an advantage in the long run, particularly given the significant pressures on social care spending. However, in the short run, this effect might be relatively small.

A hypothecated schools grant would probably be structured differently to the IBA for education within the current local government settlement, which only seeks to measure relative need to spend and is not intended as a target or recommended level. Indeed, one advantage of a hypothecated schools grant would be in seeking to directly and exclusively measure school spending needs. However, comparisons of current spending with the IBA for education represent a natural point of reference for understanding potential local authority choices under a fully hypothecated schools grant.

As shown in Figure 5.5, most local authorities currently spend more than their Education IBA. On average, local authorities spend 2.6% more than their IBA, with some local authorities spending significantly more. For example, Merthyr Tydfil, Blaenau Gwent, Bridgend, Cardiff and Denbighshire all spend about 8% or more than their IBA for education spending. Where they spend less than their IBA, this difference is typically small (around 3% or less relative to their IBA). Interestingly, most local authorities have also increased

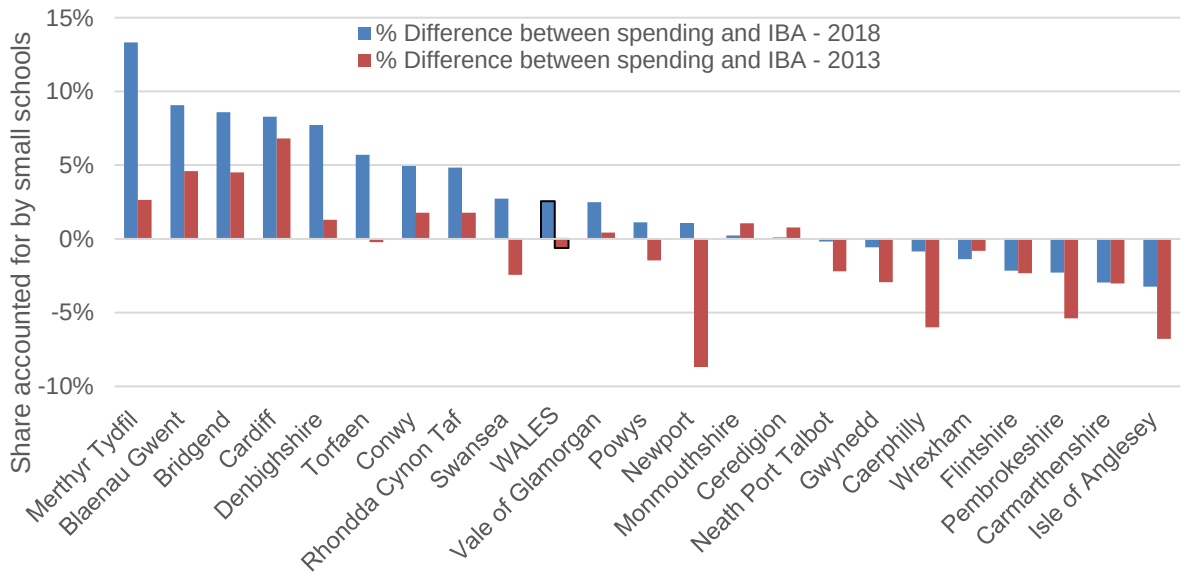
spending relative to their IBA over the past 5 years. In 2013–14, local authorities spent around 0.6% less than on education as compared with their IBA.

These figures also highlight a potential drawback of ring-fencing. It could lead to a levelling down of local authority school spending towards the level of any hypothecated schools grant, particularly if something close to current IBA levels were used. This would have the effect of reducing school spending. Partly for this reason, the Dedicated Schools Grant in England was introduced in 2006 based on actual spending levels rather than grant levels. This brought grants up to the level local authorities were spending and prevented any levelling down. However, it is an expensive approach and more difficult in the current fiscal climate.

Furthermore, where local authorities are currently spending less than their IBA on education, they will typically be using this difference to fund other service areas. Hypothecating the schools grant could therefore reduce spending on other service areas, particularly if current IBA levels were used to determine grant levels.

Under the current flexible system, spending relevant to education could be recorded in other categories (e.g. spending on children's social care or general spending). Under a hypothecated system, local authorities would be incentivised to record more as education spending in order to meet new hypothecation requirements. Hypothecation could therefore lead to changes in *recorded* spending levels, without any actual real changes in spending.

Figure 5.5 Actual local authority spending on education relative to indicator based assessments of spending needs, , 2013–14 and 2018–19



Sources and notes: Stats Wales, Local Authority Budgeted Revenue Expenditure on Education, 2018-19 and 2013-14; Stats Wales, SSA breakdown, 2018-19 and 2013-14. Total spending on education represents net revenue expenditure (i.e. net current expenditure less specific grants).

Under a hypothecated system, schools spending would end up being treated quite separately within local authority budgets. A ring-fenced schools grant might discourage local authorities from drawing connections or links between spending across different service areas. For example, there are potentially strong connections between spending on children's social care and education spending. Spending programmes aimed at reducing or mitigating socio-economic disadvantages could naturally impact on spending demands

within school and education system. The current flexible approach encourages local authorities to make these links explicitly and encourages early interventions to prevent later problems from emerging. To take a specific example, higher spending on Flying Start could end up reducing spending demands through the Additional Learner Needs system later in a child's life. Under a ring-fenced approach, local authorities would still be expected to make these links and connections under the Well-being of Future Generations Act. However, separated budgets and less flexibility would naturally make this more difficult.

In summary, creating a ring-fenced schools grant would represent a major change in local government funding. It would allow the Welsh Government to link the levels of the schools grant to expected cost pressures, potentially simplify the existing set of specific grants, clarify accountability within the current system and could potentially protect school spending levels over the long run. However, it also comes with potential drawbacks if high-spending local authorities level down school spending. Ring-fencing the schools grant could also reduce spending on other service areas. It would also reduce local authority flexibility to respond to local needs and draw links between spending on different service areas. More generally, it would represent a major change to local government finance, with the rest of local government spending financed to a greater extent through council tax revenues.

Benchmarking cost increases

An alternative approach to ring-fencing the schools grant would be producing regular assessments of school cost pressures.

These could follow a similar approach to that taken in section 5.1 above, with expected increases in cost per head calculated on the basis of known policy commitments on teacher and other staff pay and wider remuneration, and overall inflationary pressures. Where these are not known, these could be based on a range of neutral long-term assumptions, such as forecasts for average earnings or inflation. They could also account for any extra activities or services schools are expected to perform. The methodology for these calculations would be publicly available to enable scrutiny. Sensitivity analysis would almost certainly be required to show the potential impact of different assumptions, particularly with regards to future years.

The timing of such assessments would ideally follow the Welsh Government's annual response to the Welsh Independent Pay Review Body in order to account for these actual decisions. They would ideally cover at least three years each time in order to give a sense of cost pressures over the medium term. Future years are much more likely to be indicative ranges, but would still be valuable to schools in making long-term financial plans.

These would ideally be complemented by consistent information from the Welsh Government on total funding for schools each year, both through the main local government settlement and through specific grants. This would enable all stakeholders to judge whether the Welsh Government is providing more or less than its estimates of school cost growth. Where it is more, it will be clear to all stakeholders that the Welsh Government is providing extra funding to allow for more resources. Where it is providing less, it will be clear the Welsh Government is expecting schools and local authorities to make savings.

These cost growth estimates could also be compared against funding provided to individual local authorities and their actual spending decisions. This would allow stakeholders to hold local authorities to account for their decisions. It would be transparent whether local

authorities are providing more or less than expected cost pressures and the extent to which this reflects funding provided by the Welsh Government.

Schools and local authorities have consistently requested longer term settlements for schools and education spending. Whilst uncertainty over the levels of the block grant means the Welsh Government cannot provide guarantees of future funding, if it were to produce annual indicative assessments of expected future growth in school costs for the medium term (e.g. over a three-year time horizon and similar to those shown above), schools and local authorities might be better able to make more long-term plans.

It would also create a focus for discussions between the Welsh Government, local authorities and other stakeholders on the likely path of future cost increases. The methodology would need to be developed in consultation with all stakeholders to ensure confidence. It is likely to be highly complementary to the work of the local government funding formula distribution sub-group on estimating current and future school costs.

This approach would be less dramatic than ring-fencing the schools grant. However, it could achieve many of the same advantages and minimise the drawbacks. It would improve accountability and potentially help ensure changes in school spending levels match expected cost pressures going forwards. There would also be little risk of local authorities levelling down education spending as the benchmarking would relate to changes over time rather than the level of spending. It would also maintain the existing flexibilities and the discretion of local authorities to focus spending on local needs and priorities, and local authorities would still be encouraged to draw links across service areas.

One drawback is that it would still not necessarily be possible to directly reflect expected future cost pressures in the main local government settlement. However, if growth in assessed spending needs consistently fell below or above expected cost pressures, this is valuable information for assessing the local government settlement and could create a momentum for changes to the settlement.

5.5 Summary and recommendations

This chapter has analysed the main drivers and pressures on school costs over both the short and long run. In the short run, the main likely driver of school costs will be the level of teacher pay, particularly the extent to which policymakers in Wales chose to follow the commitment in England to increase teacher starting salaries to £30,000 by 2022. It is beyond the scope of this report to consider to teacher pay policy, but it does note that the approach is well aligned with the empirical evidence on how to improve teacher retention.

If policymakers did follow a similar approach to England on teacher pay, school costs would be expected to grow by 7.2%-8.4% per learner between 2019–20 and 2022–23 (assuming other staff pay grows at 3% per year) or 6.4%-7.6% (assuming other staff pay grows at 2% per year). This provides an indication of the likely amount that school funding per learner in Wales will need to grow by to prevent real-terms cuts to resources.

The new Additional Learning Needs system represents a major change to the system from 2021 onwards. With the exception of transitional support, the Welsh Government expects this to be cost-neutral. A large transformation of the special educational needs took place in England from 2015 onwards. This led to rapid increases in numbers and costs, particularly the number of post-16 learners. The Welsh Government has taken a number of mitigating actions to reduce the risks of a similar situation in Wales, particularly with regards to post-16

learners. However, the scale of the expected transformation combined with the English experience suggests a need to work with local authorities and other stakeholders to keep new system and level of resources under continual review.

Looking further into the long run, an ageing population will also pose significant challenges for school spending. A declining child population in rural areas will increase the per learner cost of running small schools. An ageing population will also rapidly increase the demand for adult social care rapidly over time. Without significant additional overall funding, there is a risk that school spending could lose out incrementally to the demands of adult social care, particularly given the long-run and dispersed nature of the benefits to school spending.

This creates significant interest in the extent to which new rules or mechanisms can be used to help protect school spending. One potential approach would be to create a ring-fenced schools grant, with local authorities obliged to spend this amount or more on schools. Such an approach would certainly clarify accountability within the current system and allow the Welsh Government to ensure grant levels directly follow expected cost pressures. However, most local authorities already spend more than relative education spending needs within the current local government settlement. A ring-fenced grant would run the risk of some areas levelling down spending and may prevent local authorities from drawing links across spending areas and responding to local priorities.

An alternative approach would be for the Welsh Government to publish rolling assessments of future cost pressures on schools. This could achieve many of the same advantages as ring-fencing and minimise the drawbacks. It would improve accountability by creating a high-profile comparison to judge whether the Welsh Government is providing more or less than its own assessment of cost pressures. Stakeholders could also hold local authorities to account for their decisions, given that it would be transparent whether local authorities are providing more or less than expected cost pressures and the extent to which this reflects funding provided by the Welsh Government. There would also be little risk of local authorities levelling down education spending as the benchmarking would relate to changes over time rather than the level of spending. It would also maintain the existing flexibilities of local authorities to focus spending on local needs and priorities.

- **Recommendation 11: The Welsh Government should publish rolling multi-year assessments of the likely growth in school costs per learner and annual growth in total funding per learner from all central government sources.** They would cover at least three years and be based on a clear and transparent methodology. These would be published shortly after the annual decisions on teacher pay in order to provide a firm estimate for the year ahead. Estimates for future years would likely be ranges based on any long-run commitments or neutral assumptions (e.g. inflation, average earnings). Whilst such estimates could never be a guarantee of future funding growth, they would improve accountability by providing a high-profile benchmark against which to judge the funding decisions made by all layers of government (UK government, Welsh Government and Local Authorities). It would also provide a focus for debate on how policy decisions affect cost growth and provide a firmer basis for schools and local authorities to make long-term plans. This would ensure a clear long-term link between cost expectations and funding decisions.

- **Recommendation 12: The Welsh Government should work with local authorities and other stakeholders to keep the new Additional Learning System under continual review to ensure it is implemented as intended**. The new system represents a major transformation of support for Additional Learning Needs. Many mitigating actions have already been taken to reduce the risk of fast growth in costs and numbers, as occurred with the new system in England. However, the scale of the transformation in Wales suggests a need for caution. If clear evidence emerges that the new system is increasing costs and numbers beyond what was expected under the old system, additional resources may well be required.

6. Conclusions and recommendations

The Welsh Government has made improving education in Wales a national mission, with a major focus placed on both improving overall school standards and reducing inequalities. The school funding system represents a crucial component for achieving these goals. It delivers the funding schools and local authorities need to provide a high-quality education. It also represents a means to combat inequalities through providing extra funding and resources to schools with more learners from disadvantaged backgrounds.

School funding has become an increasingly topical policy issue in Wales and the rest of the UK in recent years, both in terms of the overall level of spending and differences across schools and areas. This review of school funding in Wales was commissioned to offer analysis and recommendations as to how the school funding system can be adapted to best support policy goals and ambitions in Wales.

A number of key conclusions emerge from the analysis on how resources have changed and how they are distributed across schools and areas:

- **Spending per learner has fallen by 6% in real-terms** – This largely tracks falls in the block grant and has been accompanied by slight rises in class sizes.

- **There is room and evidence for higher levels of deprivation funding** – The most deprived schools see higher levels of spending, but deprivation funding is relatively small outside these highly deprived schools and deprivation funding in Wales is about half that in England. There is now strong evidence showing that higher spending has a bigger impact on deprived learners and can be a valuable tool for reducing inequalities.

- **Similar schools experience different levels of funding** – Schools with similar levels of deprivation often see differences of about £1,500 or 35% in spending per learner.

- **Large differences in spending across similar areas –** Even after accounting for learner and school characteristics, many local authorities spend up to £300 per learner more or less than the national average.

- **Expected future cost pressures –** In the short-run, schools costs are likely to grow if policymakers in Wales introduce starting salaries of £30,000 in order to be on a par with England. Over the next few years, demographic change is likely to increase the already high cost of running small schools in rural areas. Demand for adult social care is likely to grow significantly, placing pressure on overall local government budgets.

In order to help address some of these issues and challenges, this review makes recommendations spanning four key themes:

1. **Spending decisions based on empirical evidence**
2. **Fairness and transparency in funding across schools and areas**
3. **Effective scrutiny enabled by consistent and transparent data**
4. **Clear expectations on future costs throughout the system**

1. Spending decisions based on empirical evidence

- **Recommendation 1**: **The Welsh Government should not adopt a single minimum cost approach for use in funding or spending decisions**. There is insufficient evidence to allow policymakers to determine the 'right' level of spending and provision for each type of resource. Instead, the Welsh Government should provide more figures and data on the likely cost of specific changes to the current offer to learners. This will allow stakeholders to argue for fully costed changes to the current offer. Whilst it is not possible to generate a single minimum cost per learner across the system, it is possible to estimate how costs could change over time (see recommendation 11).

- **Recommendation 2**: **Policymakers at all layers of government should make decisions on the basis of the latest evidence on the effects of school spending**. The latest empirical evidence shows that higher spending on schools can improve learner outcomes, particularly amongst disadvantaged learners. The actual effects of spending changes will always depend on how such money is used and the benefits of extra school spending will need to be balanced out against the likely benefits of spending more on other areas.

- **Recommendation 3**: **The Welsh Government should prioritise extra funding for more deprived schools**. There is a strong empirical evidence base showing that higher school spending has a larger, positive effect on learners from deprived backgrounds and can play a major role in reducing the attainment gap. Such extra funding would almost certainly need to be delivered through specific grants, such as an expanded Pupil Development Grant. If followed, the Welsh Government should also consult on using an expanded set of indicators, such as elements of the Welsh Index of Multiple Deprivation, to ensure that any extra funding targets multiple dimensions of deprivation. It should also consider a higher rate for younger learners given the evidence showing the benefits of early intervention. The Welsh Government should also track the amount of extra spending per learner in more deprived schools to ensure that changes in spending match policymaker priorities.

- **Recommendation 4**: **The Welsh Government should prioritise extra funding for schools with sixth forms.** The extra funding and resources available for school sixth forms are relatively small. This will make it harder for schools to offer a varied and high quality sixth form curriculum. Any extra funding for sixth forms should be considered as part of the wider post-16 funding settlement to ensure appropriate funding across all routes.

2. Fairness and transparency in funding across schools and areas

- **Recommendation 5**: **Local authority school funding formulae should be more consistent and transparent.** The Welsh Government and local authorities should work together to reduce the complexity and number of factors in school funding formulae. These should also be published in a way that allows schools to see how the funding of each school has been determined. This will make school funding more consistent across similar schools and allow for more transparency in how local authority choices affect school funding levels.

- **Recommendation 6: The Welsh Government and local authorities should continue to review the operation of the local government funding formula to ensure it contains an accurate assessment of relative of needs and costs.** Even after accounting for delegation decisions and a range of learner and school characteristics, there are large differences in spending per learner across similar local authorities. There is therefore a clear risk that the present system is not providing an accurate assessment of differences in all needs and costs. The Welsh Government and local authorities should review the merits of including extra measures of deprivation, such as those capturing the rising phenomenon of in-work poverty (e.g. specific measures within the Welsh Index of Multiple Deprivation, such as the share of adults with low or no qualifications, and additional data on income levels emerging from the new universal credit system). This is likely to include analysing the relationship between such measures and levels of educational attainment, and the effects of including them in the local government funding settlement. Given the rising cost of small schools, it is also important to review whether measures of need relating to sparsity can be improved.

3. Effective scrutiny enabled by transparent and consistent data

- **Recommendation 7**: **Local authorities and the Welsh Government should work together to improve the transparency, coverage and description of data on local authority spending**. Consistent data and information are fundamental to fostering clear understanding about local authority spending and responsibilities, and the potential advantages and disadvantages of changes. The consistency and transparency of local authority spending data could be improved through clearer guidance and descriptions of spending on different functions (e.g. separating out management functions from spending on “Access to Education,” separating out pension and redundancy costs from “Strategic Management,” detailing contributions to the regional consortia separately and detailing service-level spending). The Welsh Government could then use this information to provide a clear and consistent picture of local authority spending through its existing publications.

- **Recommendation 8**: **Schools and local authorities should use improved data as a basis for regular local reviews on funding and responsibilities**. Improved data should provide all stakeholders with a clear understanding of what local authorities provide for schools and the wider education system. This should then be used as a basis for local reviews on the advantages and disadvantages of shifting responsibilities and funding from local authorities to schools. The exact format and process is less important than the ultimate result. Delegation discussions should be jointly owned by local authorities and schools. If the vast majority of schools think more funding **and** responsibilities should be delegated, then it should happen.

- **Recommendation 9: The Welsh Government should draw more lessons from comparisons of spending, models of spending and outcomes across local authorities, particularly on ALN and school transport.** This would only be possible with more consistent and detailed data, but there are a number of opportunities. Local authorities differ markedly in terms of how much ALN spending and provision is delegated to schools and how much is retained centrally. The Welsh Government and local authorities should seek to draw more lessons on the impact on

outcomes from these different approaches. More lessons could also be learnt about means to control growing school transport costs.

- **Recommendation 10: Grants to and data reported by the regional consortia should be clear, consistent and commensurate with their role in the school funding system.** Grants provided to the regional consortia are highly complex, with up to 60 initiatives and grants. This creates unnecessary complexity and reduces the transparency of the system. It is welcome that the regional consortia and Welsh Government are working together to reduce this complexity. Central spending by the regional consortia represents about 1% of total school spending in Wales. However, spending on different functions by the regional consortia is currently reported across a series of different publications and documents. This again increases complexity and reduces transparency. Reporting by the regional consortia should be streamlined and simplified to enable the Welsh Government to provide a clear and simple account of spending per learner by the regional consortia in existing publications.

4. Clear expectations on future costs throughout the system

- **Recommendation 11: The Welsh Government should publish rolling multi-year assessments of the likely growth in school costs per learner and annual growth in total funding per learner from all central government sources.** They would cover at least three years and be based on a clear and transparent methodology. These would be published shortly after the annual decisions on teacher pay in order to provide a firm estimate for the year ahead. Estimates for future years would likely be ranges based on any long-run commitments or neutral assumptions (e.g. inflation, average earnings). Whilst such estimates could never be a guarantee of future funding growth, they would improve accountability by providing a high-profile benchmark against which to judge the funding decisions made by all layers of government (UK government, Welsh Government and local authorities). It would also provide a focus for debate on how policy decisions affect cost growth and provide a firmer basis for schools and local authorities to make long-term plans. This would ensure a clear long-term link between cost expectations and funding decisions.

- **Recommendation 12: The Welsh Government should work with local authorities and other stakeholders to keep the new Additional Learning System under continual review to ensure it is implemented as intended**. The new system represents a major transformation of support for Additional Learning Needs. Many mitigating actions have already been taken to reduce the risk of fast growth in costs and numbers, as occurred with the new system in England. However, the scale of the transformation in Wales suggests a need for caution. If clear evidence emerges that the new system is increasing costs and numbers beyond what was expected under the old system, additional resources may well be required.

References

Angrist, Joshua and Lavy, Victor, (1999): “Using Maimonides' Rule to Estimate the Effect of Class Size on Scholastic Achievement”, *The Quarterly Journal of Economics*, 114, issue 2, p. 533-575.

Baker, R. B. (2019): “School resources and labor market outcomes: Evidence from early twentieth-century Georgia,” *Economics of Education Review*, vol. 70, 35 – 47.

Becker, G. S. and B. R. Chiswick (1966): “Education and the Distribution of Earnings,” *American Economic Review*, vol. 56(1/2), 358–369.

Belfield, C. and Sibieta, L. (2016), Long-Run Trends in School Spending in England, Report no. R115, Institute for Fiscal Studies, (https://www.ifs.org.uk/publications/8236)

Blatchford, P., P. Bassett, P. Brown, C. Martin, A. Russell, and R. Webster (2011): “The impact of support staff on pupils’ positive approaches to learning and their academic progress,” *British Educational Research Journal*, vol. 37(3), 443–464.

Bourquin, P., Cribb, J., Waters, T. and X. Xu (2019): “Why has in-work poverty risen in Britain?” IFS Working Paper W19/12 (https://www.ifs.org.uk/publications/14154).

Britton, J. and C. Propper (2016a): “Teacher pay and school productivity: Exploiting wage regulation,” *Journal of Public Economics*, vol. 133, 75–89.

Card, D. and A. B. Krueger (1992): “Does School Quality Matter? Returns to Education and the Characteristics of Public Schools in the United States,” *Journal of Political Economy*, vol. 100(1), 1–40.

Chetty, R. and N. Hendren (2018): “The Impacts of Neighborhoods on Intergenerational Mobility II: County-Level Estimates,” *Quarterly Journal of Economics*, vol. 133(3), 1163–1228.

Cunha, F., J. J. Heckman, and S. M. Schennach (2010): “Estimating the Technology of Cognitive and Noncognitive Skill Formation,” *Econometrica*, vol. 78(3), 883–931.

Farrell, P., A. Alborz, A. Howes, and D. Pearson (2010): “The impact of teaching assistants on improving pupils’ academic achievement in mainstream schools: a review of the literature,” *Educational Review*, vol. 62(4), 435–448.

Fletcher-Ward, H. and J. Zuccollo (2020): “The effects of high-quality professional development on teachers and students,” Education Policy Institute (https://epi.org.uk/publications-and-research/effects-high-quality-professional-development/)

Fredriksson, P., Öckert, B. and H. Oosterbeek (2013: “Long-Term Effects of Class Size”, *Quarterly Journal of Economics*, 128, 1, p. 249-285.

Gibbons, S., S. McNally, and M. Viarengo (2018): “Does Additional Spending Help Urban Schools? An Evaluation Using Boundary Discontinuities,” *Journal of the European Economic Association*, vol. 16(5),1618–1668.

Gorard, S., B. H. See, and N. Siddiqui (2014): “Switch on Reading,” Education Endowment Foundation.

Hægeland, T., Raaum, O. and K. Salvanes (2012): “Pennies from heaven? Using exogenous tax variation to identify effects of school resources on pupil achievement”, *Economics of Education Review*, 31, issue 5, p. 601-614.
Hanushek, E. A. (2003): “The Failure of Input-Based Schooling Policies,” *Economic Journal*, vol. 113(485), 64–98.

Hendricks, M. D. (2014): “Does it pay to pay teachers more? Evidence from Texas,” *Journal of Public Economics*, vol. 109(C), 50–63.

Holmlund, H., McNally, S. and M.Viarengo (2010): "Does money matter for schools?," E*conomics of Education Review*, Elsevier, vol. 29(6), pages 1154-1164, December.

Hyman, J. (2017): “Does Money Matter in the Long Run? Effects of School Spending on Educational Attainment,” *American Economic Journal: Economic Policy*, vol. 9(4), 256–80.

Ifan, G. and C. Sion (2019): “Cut to the bone? An analysis of Local Government finances in Wales, 2009-10 to 2017-18 and the outlook to 2023-24, Wales Governance Centre (https://www.cardiff.ac.uk/__data/assets/pdf_file/0010/1448920/local_government_finance_report_Feb19_final.pdf).

Jackson, C. K., R. C. Johnson, and C. Persico (2016): “The Effects of School Spending on Educational and Economic Outcomes: Evidence from School Finance Reforms,” *Quarterly Journal of Economics*, vol. 131(1), 157–218.

Jackson, C. K. (2018): “Does School Spending Matter? The New Literature on an Old Question,” Working Paper 25368, National Bureau of Economic Research.

Johnson, R. C. and C. K. Jackson (2019): “Reducing Inequality through Dynamic Complementarity: Evidence from Head Start and Public School Spending,” *American Economic Journal: Economic Policy*, vol. 11(4), 310–49.

Jones. C (2019): “Education Fit for the Future in Wales,” Report, Future Generations Commissioner for Wales, (https://futuregenerations.wales/resources_posts/education-fit-for-the-future-in-wales-report/).

Krueger, A.B. (2003): "Economic Considerations and Class Size," *Economic Journal*, Royal Economic Society, vol. 113(485), pages 34-63, February.

Lafortune, J., J. Rothstein, and D. W. Schanzenbach (2018): “School Finance Reform and the Distribution of Student Achievement,” *American Economic Journal: Applied Economics*, vol. 10(2), 1–26.

Leigh, A. (2012): “Teacher pay and teacher aptitude,” *Economics of Education Review*, vol. 31(3), 41–53.

Loeb, S. and M. E. Page (2000): “Examining the Link Between Teacher Wages and Student Outcomes: The Importance of Alternative Labor Market Opportunities and Non-Pecuniary Variation,” *The Review of Economics and Statistics*, vol. 82(3), 393–408.

Machin, S., McNally, S. and C. Meghir (2010): "Resources and Standards in Urban Schools," *Journal of Human Capital*, University of Chicago Press, vol. 4(4), pages 365-393.

NFER (2014): “Catch Up Numeracy,” Education Endowment Foundation.
Nicoletti, C. and B. Rabe (2018): “The effect of school spending on student achievement: addressing biases in value added models,” *Journal of the Royal Statistical Society Series A*, vol. 181(2), 487–515.

Psacharopoulos, G. and H. A. Patrinos (2018): “Returns to investment in education: a decennial review of the global literature,” *Education Economics*, vol. 26(5), 445–458.

Pye, J., Taylor, C. and Huxley, K. (2017): Evaluation of the Pupil Deprivation Grant: final report, Social Research Number 77/2017, Cardiff: Welsh Government.

Appendix A – Data

In order to conduct the main empirical analysis for this review, the following sets of data were linked together:

- Learner and school characteristics
- Spending by schools and local authorities
- Staffing levels

Most analysis was conducted for a single year (2018–19), the most recent year for which all data items are available. All analysis was conducted separately for primary and secondary schools, given differences in costs and funding. Special schools and middle schools were also analysed where sample sizes allowed.

The data sources and definitions used are described in the sections below.

Learner and School Characteristics
Total learner numbers represented full-time equivalent (FTE) number downloaded from Stats Wales[50]. This includes learners in schools from nursery through to sixth-form age pupils (i.e. ages 3 to 19).

The number of learners eligible for free school meals was downloaded from Stats Wales data on eligibility for free school meals from Stats Wales[51]. Whilst this is not a perfect indicator of deprivation at the individual level, the proportion of pupils eligible for free school meals at the school is likely to be a good indicator as to whether the school has high or low levels of deprivation.

Data on medium of education from Stats Wales was downloaded from Stats Wales[52]. Schools are classed as being Welsh Medium if 100% of pupils are taught in Welsh, Transitional, Dual or Bilingual categories. This gives about 454 Welsh Medium schools. An additional category of Bilingual schools is also used in the analysis for secondary schools.

Small schools are defined as primary schools with less than 91 learners and secondary schools with less than 601 pupils. This follows the definition used in the allocation of the small and rural schools grant from the Welsh Government.

School and local authority spending data
Data on school spending levels is based on delegated school outturn data downloaded from Stats Wales[53]. The main measure of spending used is “Total School Expenditure.” This will include spending on nursery-age and sixth-form ages pupils, as well as use of reserves.

[50] https://statswales.gov.wales/Catalogue/Education-and-Skills/Schools-and-Teachers/Schools-Census/Pupil-Level-Annual-School-Census/Pupils/pupils-by-school-sex
[51] https://statswales.gov.wales/Catalogue/Education-and-Skills/Schools-and-Teachers/Schools-Census/Pupil-Level-Annual-School-Census/Provision-of-Meals-and-Milk/pupilseligibleforfreeschoolmeals-by-school-year
[52] https://statswales.gov.wales/Catalogue/Education-and-Skills/Schools-and-Teachers/Schools-Census/Pupil-Level-Annual-School-Census/Welsh-Language/pupils-by-school-welshmediumtype
[53] https://statswales.gov.wales/Catalogue/Local-Government/Finance/Revenue/Delegated-School-Outturn/delegatedschooloutturnexpenditure-by-school

Data on central spending by local authorities is based on outturn data downloaded from Stats Wales[54]. Data is further split into the following categories based on the following data headings available in the outturn data:

- Additional Learning Needs (both LA and schools elements)
- School Improvement
- Access to education
- Transport
- Strategic Management
- Other (Inter-Authority Recoupment, Capital Expenditure from Revenue Account, Staffing, Other schools, Other LA spending)

Staffing Levels

Staffing data is downloaded from Stats Wales both for Full-Time Equivalent Teachers and Support Staff[55]. Staff are divided into the following categories:

- Teachers (including leadership roles)
- Teaching Assistants (including higher-level teaching assistants, SEN support staff and Modern Foreign Language support staff)
- All other staff (including pastoral support, care staff, technicians, administrative staff and school-business managers)

Sample selection and definitions

A total of 1,493 schools across Wales with staffing, funding and learner characteristics were linked together. These were split by phase of education as follows in Table A1:

Table A.1 Number of schools by phase in 2018–19

	Number of schools
Nursery	9
Primary	1,238
Middle	18
Secondary	187
Special	41
Total	1,493

Although one cannot separate out early years funding for primary schools, nursery schools were removed from the sample as these relate to a different policy domain. Middle and special schools were treated as separate individual groups.

Primary and secondary schools are further classified by the level of socio-economic deprivation. In particular, primary and secondary school were divided into five equally sized quintiles of primary and secondary schools according to the proportion of pupils eligible for free school meals (FSM). These are equally sized in terms of the number of pupils in each group, rather than the number of schools, to ensure the groups aren't biased by large numbers of small schools.

[54] https://statswales.gov.wales/Catalogue/Local-Government/Finance/Revenue/Education/educationrevenueexpenditure-by-authority-service

[55] https://statswales.gov.wales/Catalogue/Education-and-Skills/Schools-and-Teachers/teachers-and-support-staff/School-Staff

The number of primary and secondary schools in each proposed group are shown below, together with the cut-off values for the proportion of pupils eligible for free school meals in each group. There is a greater variation across primary schools in terms of the percentage of pupils eligible for free school meals.

Table A.2 Number of schools by FSM quintile

a) Primary Schools

	Number of Schools	% FSM range
Least Deprived	305	0-7%
Q2	236	7-12%
Q3	255	12-18%
Q4	216	18-27%
Most Deprived	226	27%-

b) Secondary Schools

	Number of Schools	% FSM range
Least Deprived	35	0-8%
Q2	37	8-12%
Q3	37	12-16%
Q4	35	16-22%
Most Deprived	43	22%-

Appendix B – Spending by middle schools and special schools

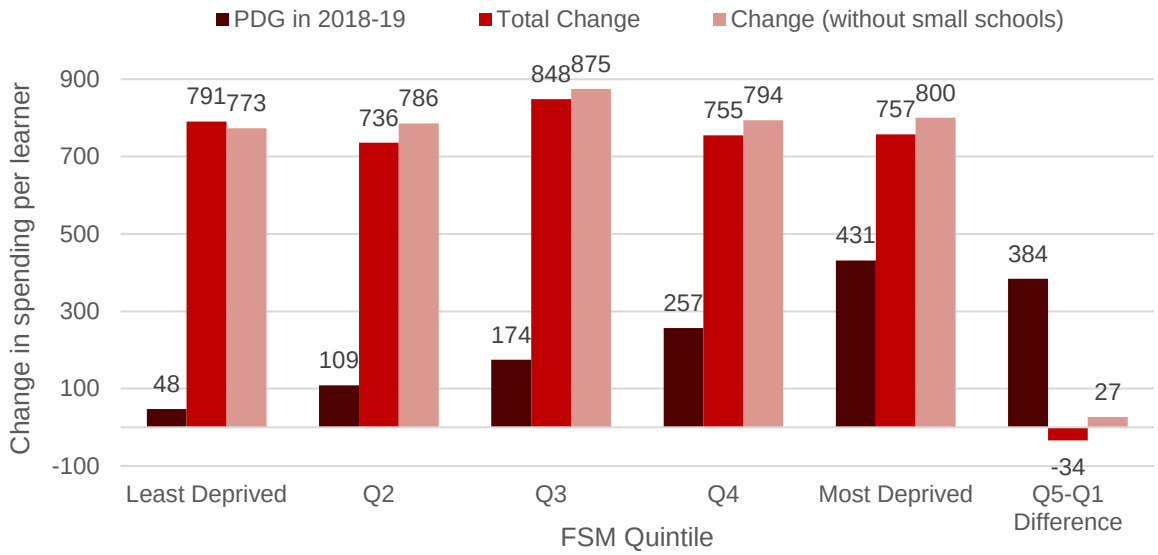
Table B.1 Overview of inputs and spending across middle and special schools, 2018–19

	Staff Numbers	Ratio of Pupils to Staff	Cost per staff member (£)	Total spending (£m)	As % of Gross Spending
Middle Schools - 17,339 learners					
Teachers	**981**	**17.7**	**£48,137**	**47**	**58%**
Other staff	**778**	**22.3**	**£20,692**	**16**	**20%**
Non-staff costs	**n/a**	**n/a**	**n/a**	**18**	**22%**
Of Which:					
Indirect employee costs				1	2%
Repairs & Maintenance				1	2%
Premises				5	6%
Education Equipment				2	3%
Catering				2	3%
Other				4	5%
Adjustment for reserves				1	1%
Total Gross Spending (£m)				**81**	
Income from fee, charges, donations (£m)				6	
Total Net Spending (£m)				**75**	
Gross spending per learner (£)				**£4,679**	
Net spending per learner (£)				**£4,312**	
Special Schools - 4,969 learners					
Teachers	**741**	**6.7**	**£58,135**	**43**	**38%**
Other staff	**2,277**	**2.2**	**£22,417**	**51**	**45%**
Non-staff costs	**n/a**	**n/a**	**n/a**	**17**	**16%**
Of Which:					
Indirect employee costs				2	2%
Repairs & Maintenance				2	2%
Premises				3	4%
Education Equipment				3	4%
Catering				1	1%
Other				6	7%
Adjustment for reserves				1	1%
Total Gross Spending (£m)				**113**	
Income from fee, charges, donations (£m)				8	
Total Net Spending (£m)				**104**	
Gross spending per learner (£)				**£22,659**	
Net spending per learner (£)				**£21,022**	

Sources and notes: Spending figures taken from Stats Wales, Education Revenue Outturn Expenditure. Full-time equivalent learner numbers Welsh Government, Wales School Census Results 2019. Staff numbers are full-time equivalent and taken from Stats Wales, School Staff.

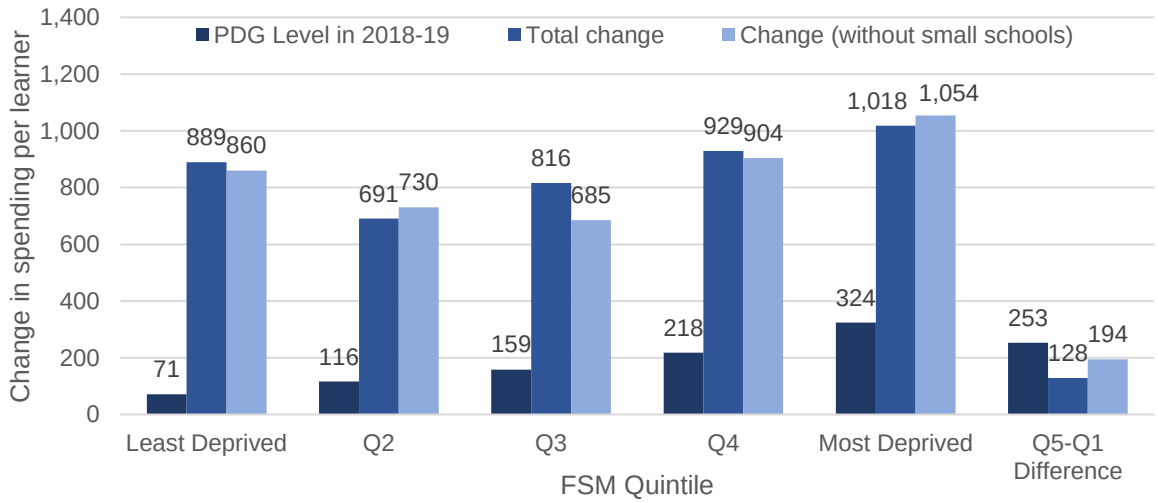
Appendix C – Deprivation spending over time

Figure C.1 Change in primary school spending per learner by quintile of deprivation between 2009-10 and 2018–19



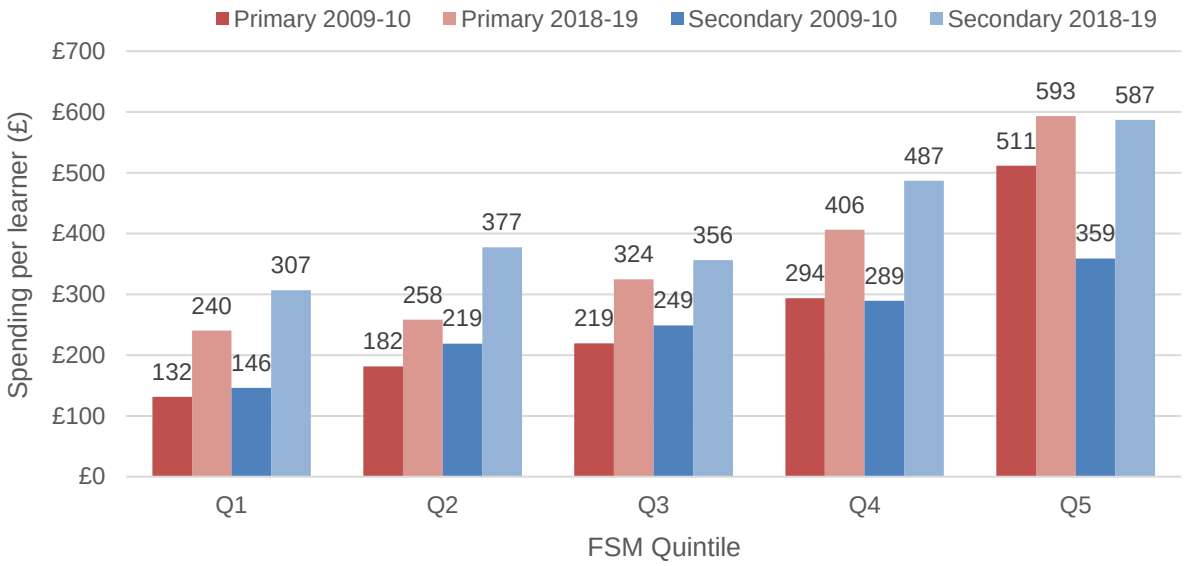
Sources and notes: FSM quintiles defined by total number of full-time equivalent learners across all schools. Spending figures taken from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Figures for Free School Meal Eligibility taken from Stats Wales, Provision of Meals and Milk

Figure C.2 Change in secondary school spending per learner by quintile of deprivation between 2009-10 and 2018–19



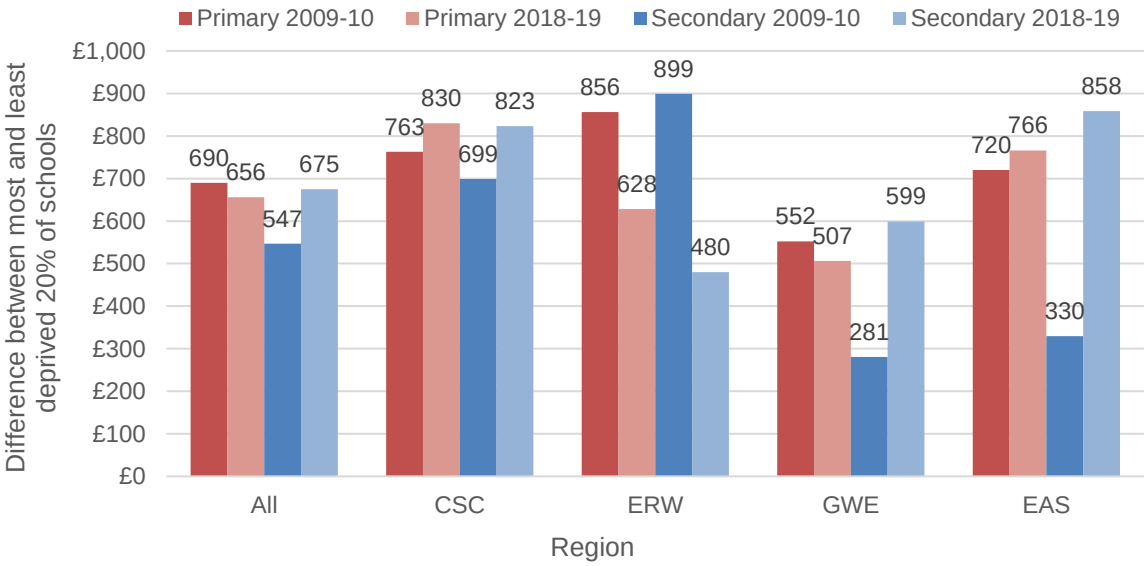
Sources and notes: FSM quintiles defined by total number of full-time equivalent learners across all schools. Spending figures taken from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Figures for Free School Meal Eligibility taken from Stats Wales, Provision of Meals and Milk

Figure C.3 Notional SEN Budget per learner in 2009-10 and 2018-19 by quintile of deprivation between 2009-10 and 2018–19



Sources and notes: FSM quintiles defined by total number of full-time equivalent learners across all schools. Spending figures taken from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Figures for Free School Meal Eligibility taken from Stats Wales, Provision of Meals and Milk.

Figure C.4 Difference in spending per learner between most and least deprived 20% of schools by region in 2009-10 and 2018-19



Sources and notes: FSM quintiles defined by total number of full-time equivalent learners across all schools. Spending figures taken from Stats Wales, Delegated School Outturn Expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Figures for Free School Meal Eligibility taken from Stats Wales, Provision of Meals and Milk. GwE covers North Wales (Gwynedd, Anglesey, Conwy, Flintshire, Denbighshire and Wrexham), ERW covers West and Central Wales (Ceredigion, Pembrokeshire, Carmarthenshire, Swansea, Powys and Neath Port Talbot), CSC covers Central and South Wales (Rhondda Cynon Taf, Bridgend, Vale of Glamorgan, Cardiff and Merthyr Tydfil) and EAS covers South East Wales (Torfaen, Blaenau Gwent, Newport, Monmouthshire and Caerphilly).

Appendix D – Extra analysis of local authority spending

Central spending by local authorities covers a variety of different functions. This appendix analyses the level of spending on different areas across local authorities and what we can learn from these differences.

Figure D.1 shows the level of spending per learner across the following spending functions according to the budget and outturn data in 2018–19[56]:

- **Additional learning needs** – both schools and LA components
- **School transport** - all home to school transport
- **Access to education** – including education outside of school, school place planning, admissions and pupil support grants
- **School Improvement** – including contributions to the regional consortia
- **Strategic Management –** including central staffing budgets, as well as legacy pension and redundancy costs
- **Other** – including other staffing, capital expenditure from revenue account, inter-authority recoupment and other expenditure

Catering spending is only shown separately in the outturn figures and is therefore likely to result in other spending being slightly higher in the budget figures as compared with the outturn.

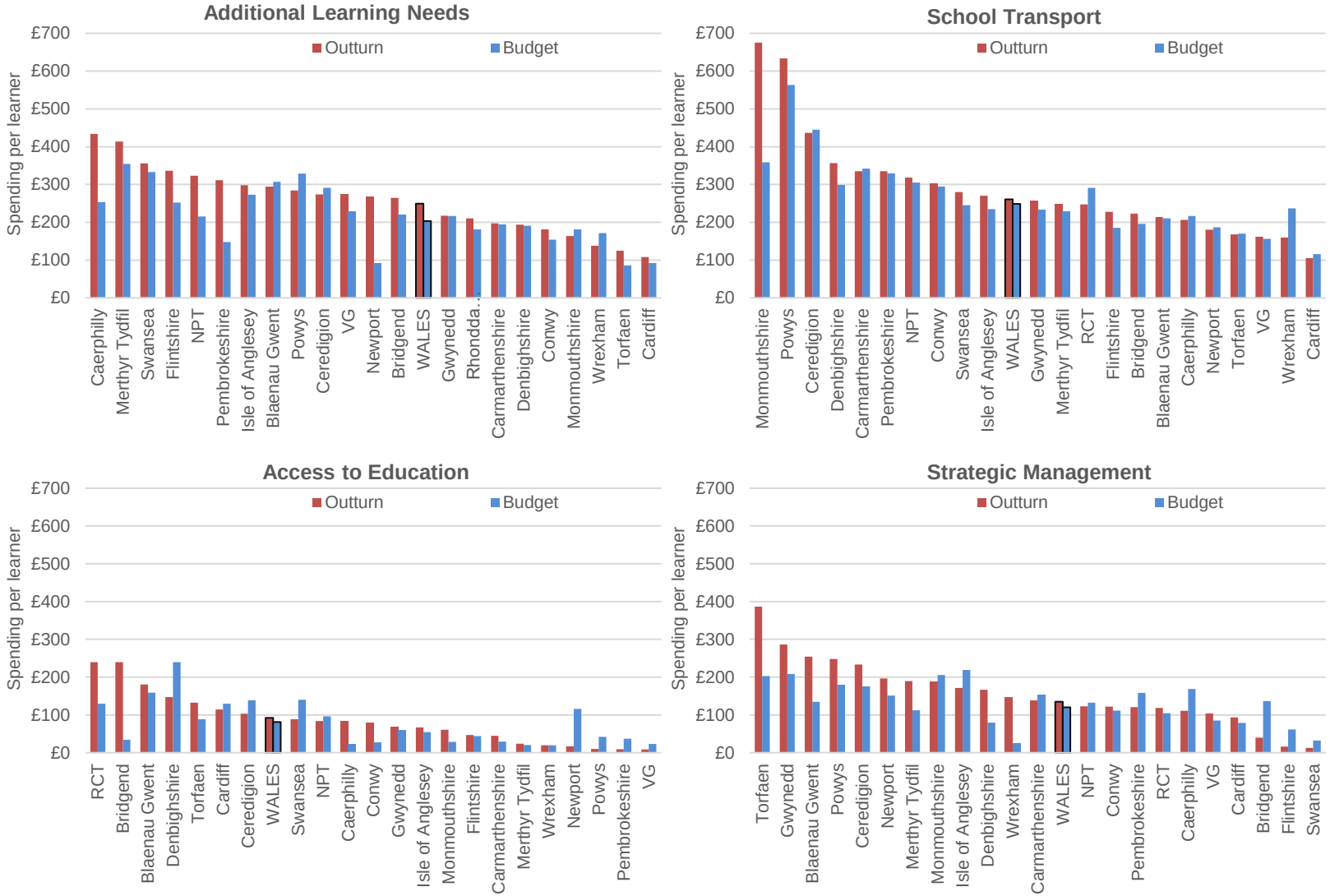
The level of spending on each function will reflect several drivers. First, higher levels of spending will often reflect higher spending needs and costs, such as a need to provide greater provision for learners with additional needs or higher transport spending for rural, sparsely populated areas. Second, it could reflect budgetary models and spending priorities. Some local authorities will have chosen to give schools the funding and responsibility to deliver some services themselves, whilst others will continue to provide them at the local authority level. Local authorities will also have made different choices in terms of which spending functions to prioritise since spending cuts began to take effect from 2010 onwards. Third, recorded spending levels could reflect different recording practices across local authorities and over time, with different local authorities recording spending elements in different categories. The available guidance should reduce this effect, but there is still potential for different recording practices where there is uncertainty as to where some types of spending belong. For this third reason, Figure D.1 shows both budget and outturn spending patterns. For additional context,

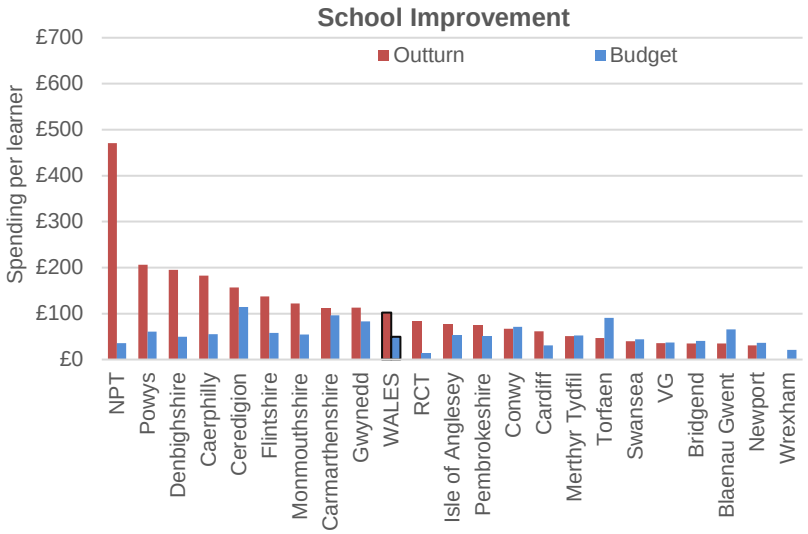
[56] Catering spending is excluded

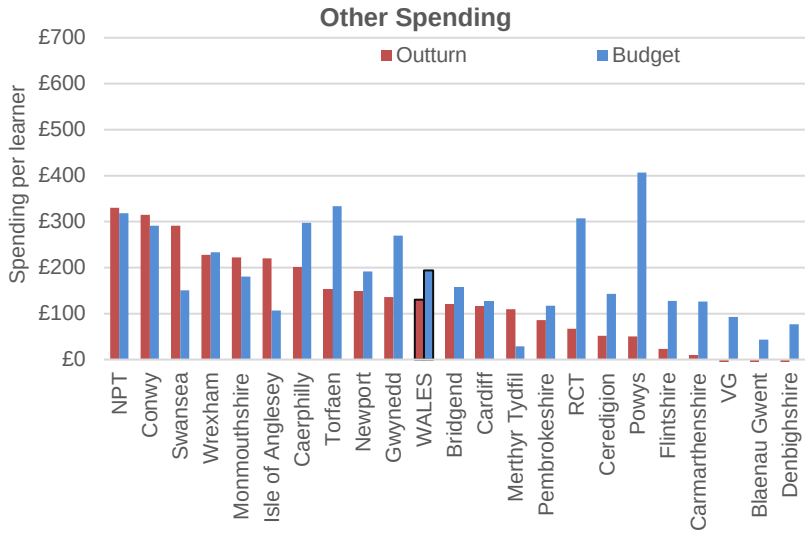
Figure D**.2** shows the level of spending per learner in 2013–14 and 2018–19 in the outturn data.

Before examining each spending area in turn, it is important to note that there are a number of recurring conclusions that are common across almost all spending areas. First, there is substantial variation across local authorities, both in terms of the level of spending and the changes over time. Second, there are several cases where the budget and outturn data give quite different levels of spending per learner, making it hard to discern how much of the variation across local authorities is driven by choices and how much by recording practices.

Figure D.1 Central spending on different functions by local authority and data source, 2018–19

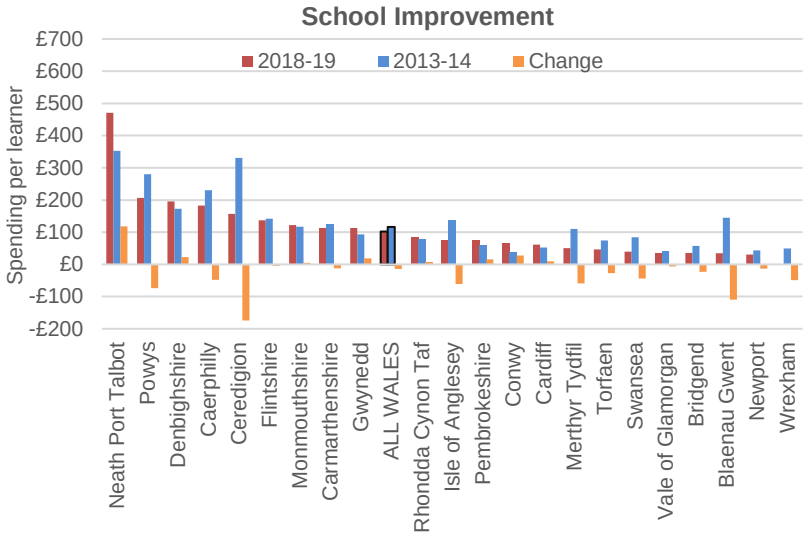


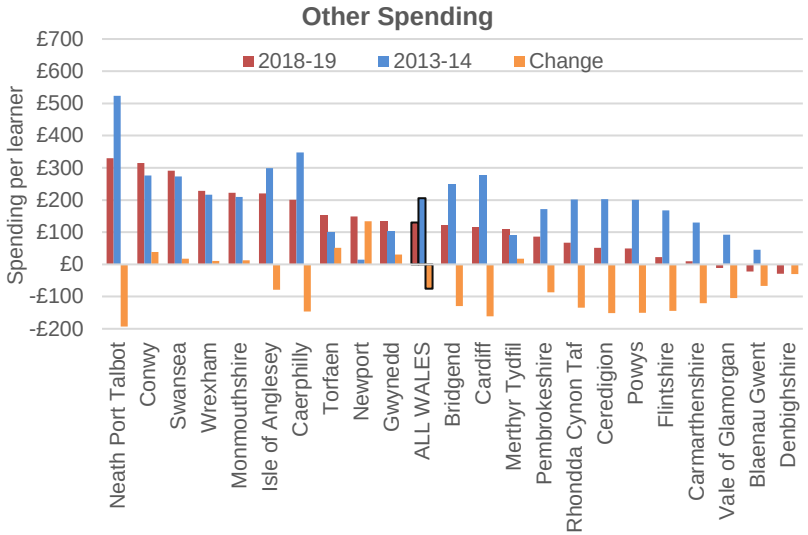




Sources and notes: Spending figures taken from Stats Wales, Education revenue outturn expenditure and Education revenue budget expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers.

Figure D.2 Central spending on different functions by local authority in 2018–19 and 2013–14





Sources and notes: Spending figures taken from Stats Wales, Education revenue outturn expenditure. Full-time equivalent learner numbers from Stats Wales, Pupil numbers.

Additional Learning Needs

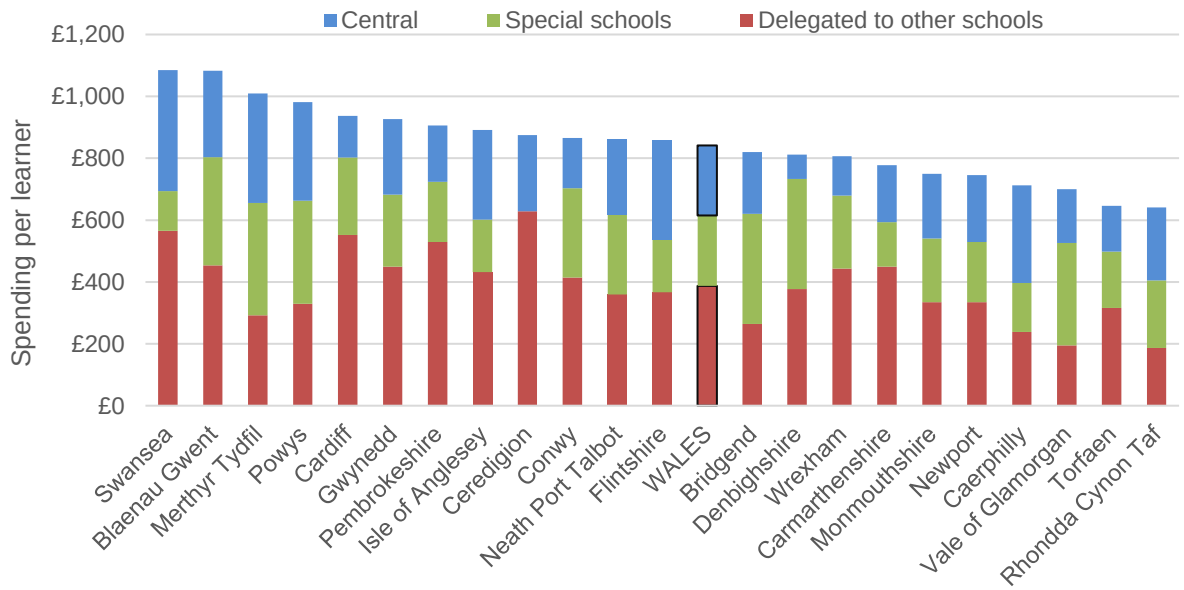
Reported spending by local authorities on provision for additional learning needs was about £250 per learner in 2018–19, slightly above the £200 per learner in the budget data. Looking across local authorities, there are substantial differences in the level of spending per learner, from over £400 per learner in Caerphilly and Merthyr Tydfil to around £100 per learner in Cardiff and Torfaen in the outturn data. The budget data generally gives a similar picture, though there are some notable differences with spending per learner over £100 lower in the budget data for Caerphilly, Neath Port Talbot, Pembrokeshire and Newport.

In terms of changes over time, spending per learner in additional needs provision has grown by about £20 or 8% in cash-terms since 2013–14, with some local authorities seeing growth of over £100 per learner (Merthyr Tydfil, Swansea, Neath Port Talbot).

Differences in spending on additional learning needs will reflect a wide range of factors, including underlying levels of needs and local authority spending choices. It will also reflect the degree to which spending choices are delegated to individual schools. To investigate the role of this last factor, Figure D.3 shows total budgeted expenditure on special educational needs per learner across local authorities in Wales. This includes the amount spent centrally by local authorities, spending delegated to special schools and an estimate of the amount delegated for provision in other schools. Spending on special schools is shown as spending per learner for all learners in the local authority. As shown in Chapter 3, spending per learner in special schools is much higher, which is over £20,000 on average.

As can be seen, special schools and mainstream schools are responsible for about 73% of total spending on special educational needs, which represents about £840 per learner when considering both school and local authority spending. There remains, however, substantial variation across local authorities, with total spending of about £1,100 per learner in Blaenau Gwent and Swansea, as compared with around £600-700 in the Vale of Glamorgan, Torfaen and Rhondda Cynon Taf.

Figure D.3 Budgeted special educational needs spending per learner by local authority and where the money is spent, 2018–19



Sources and notes: Spending figures taken from Stats Wales, Delegated School Budgets Full-time equivalent learner numbers from Stats Wales, Pupil numbers. Central spending includes additional learning needs spending in the schools and LA budget, as well as inter-authority recoupment.

There are also large differences across local authorities in terms of how much is delegated to schools. Some local authorities devolve around 85% or more of spending to special or mainstream schools, such as Cardiff, Wrexham and Denbighshire, with less than 15% spent centrally. Other local authorities spend 35% or more centrally at the local authority level, such as Caerphilly, Flintshire, Merthyr Tydfil, Rhondda Cynon Taf and Swansea.

Given the scale of the differences in the degree to which spending is delegated to schools or spent centrally, it would seem crucial to better understand the extent to which these different models affect the quantity and quality of additional learning needs provision. Central provision might be able to benefit from economies of scale and built-up expertise, whilst school-level provision could be better directed towards the specific needs of learners.

School Transport

Home-to-school transport represented about £260 per learner in 2018–19 according to outturn data, which is about £16 or 7% higher than in 2013–14. This covers home-to-school transport for mainstream learners, as well as learners with additional needs.

Spending per learner varies significantly across local authorities, with a generally good match across both budget and outturn data. Unsurprisingly, spending is highest in many rural and sparsely populated areas, with spending per learner in excess of £400 in Powys and Ceredigion, and over £300 per learner in Pembrokeshire, Carmarthenshire and Denbighshire, Neath Port Talbot and Conwy. In Monmouthshire, spending per learner is clearly high, but differs markedly across the budget (£360) and outturn data (£680). Spending is lowest in mostly urban and more densely populated areas, e.g. Newport, Torfaen, Cardiff and the Vale of Glamorgan.

As well as population sparsity, spending on school transport will be influenced by school organisation. For example, Monmouthshire maintains a relatively small number of mostly full schools that require high levels of transport. Whilst Gwynedd maintains a high number of schools and spends close to the Wales average on school transport.

The consistent growth in school transport spending makes this area one of the biggest pressures on local authority budgets. This reflects demand pressures, with ever growing parental expectations and a need to provide appropriate and safe transport for learners with additional needs. It also reflects supply constraints, with the numbers of potential providers relatively limited in some rural local authorities.

Access to education

Spending on access to education was just under £100 per learner in both outturn and budget data for 2018–19. This is about £8 or 8% lower than in 2013–14. Looking across local authorities, there is a high degree of similarity across the outturn and budget data. Spending per learner is highest in Rhondda Cynon Taf, Blaenau Gwent and Denbighshire (over £150 per learner in the outturn data), and lowest in Powys, Pembrokeshire and the Vale of Glamorgan (under £40 per learner in both data sources). In a few cases, there are substantial differences across the data sources, with the outturn data showing much higher spending per learner in Bridgend than in the budget data and the reverse in Newport.

It is, however, quite hard to understand the forces driving spending differences across local authorities and over time in this area. “Access to education” covers a relatively wide range of different functions, including education outside of school, planning for school places and pupil support grants. It would desirable if future data were able to separately detail spending

on education outside of schools and more strategic management functions, potentially combining the latter with the existing strategic management category.

Strategic Management
Spending on strategic management represented about £135 per learner in 2018–19, which is about £13 or 8% lower in cash-terms than in 2013–14. There is substantial variation in spending in the outturn data, from about £10 to £400 per learner. Whilst there is less variation in the budget data, there are considerable differences between the data sources for spending per learner across local authorities. This makes it very hard to reach any conclusions regarding the spending patterns across local authorities.

One potential reason for this is that, like the access to education category, strategic management covers a vast range of functions, from central staffing of local authorities to legacy costs associated with redundancy and pension costs. It would be desirable if future data releases could distinguish between these very different types of costs. There would ideally be more alignment between the budget and outturn categories.

School Improvement
School improvement spending by local authorities represented about £100 per learner in 2018–19. This covers school improvement services provided by local authorities, as well as local authority contributions to the regional consortia and the school improvement services local authorities provide themselves. Spending per learner is about £14 or 12% lower in cash-terms than in 2013–14, making it the single area to see the largest falls over time.

Unfortunately, there are substantial discrepancies between the budget and outturn data, with the average figure about £50 per learner or 50% lower in the budget data. There are also some very large differences for individual local authorities. For example, the outturn data implies spending per learner of £470 in Neath Port Talbot, whilst the budget data implies £35 spending per learner. This difference alone is enough to explain the relatively high level of central spending per learning in the outturn data as compared with the budget data. The only clear finding is that there are number of local authorities with consistently low levels of spending on school improvement services (e.g. Wrexham, Newport, Bridgend, Swansea and Vale of Glamorgan).

Given the crucial role that school improvement services play in the system, it is unfortunate that it is hard to understand how much local authorities spend. It would be highly desirable if future data releases could ensure the guidance in this area is clear and if local authority contributions to regional consortia could be detailed separately. This latter point would make it much easier to analyse what school improvement services local authorities are providing on top of those provided by the regional consortia.

Other Spending
Finally, other spending represented about £130 per learner in the outturn data in 2018–19 and has fallen by about £75 or 37% in cash-terms since 2013–14. This covers a wide set of functions, including staffing cover, inter-authority recoupment, some capital expenditure and other spending not captured elsewhere, with the latter representing 75% of other spending.

Unfortunately, the budget data gives quite a different figure of £200 per learner for 2018–19. This may be because the budget data includes catering spending here. Spending is clearly highest in Neath Port Talbot and Conwy (around £300 per learner) and lowest in Blaenau Gwent, Denbighshire and the Vale of Glamorgan. However, the uncertain coverage of this category and the differences across data sources precludes further analysis.

Appendix E – Calculating potential growth in school costs

This appendix describes the detailed method for calculating potential growth in school costs under various assumptions and scenarios for teacher and other staff pay. It follows a very similar method to that employed by the Department for Education (DfE) in its evidence to the School Teachers Review Body for England[57].

The expected change in school costs per learner are calculated at the local authority level using the below formula:

$$\begin{aligned} &\%\ school\ costs_a \\ &\quad = (\%\ teacher\ pay\ x\ teacher\ pay\ share_a) \\ &\quad + (\%\ other\ staff\ pay\ x\ other\ staff\ pay\ share_a) \\ &\quad + (\%\ non-staff\ costs\ x\ non\ staff\ costs_a) \end{aligned}$$

The percentage change in school costs for local authority (a) represents the expected growth in teacher pay, other staff pay and non-staff pay multiplied by the share of delegated gross school expenditure taken up by each factor at the local authority level.

The expenditure shares are calculated at the local-authority level using data from 2018–19[58]. Expected growth in teacher pay, non-staff pay and non-staff costs are assumed to be constant across local authorities. The is a necessary assumption given a lack of data on the share of teachers on each pay range at the local authority level.

Teacher pay
Teacher pay is assumed to follow a number of different scenarios, matching modelling for England published by the Department for Education (DfE).

Under all scenarios, starting salaries for teachers are assumed to reach £30,000 in September 2022. This represents growth of 23% or nearly £6,000 as compared with September 2019. In line with DfE's modelling for 2022, other pay points on the main pay range are assumed to grow by progressively less (from 23% for M1 and 6% for M6). On average, teacher salaries on the main pay range are assumed to grow by a total of 14% between September 2019 and September 2022.

Chapter 5 then shows three scenarios for growth in pay for other teachers, including teachers on the upper pay range, leadership scales and unqualified teachers:

- Scenario 1: 2% annual growth in other teacher pay per head
- Scenario 2: 2.5% annual growth in other teacher pay per head
- Scenario 3: 3% annual growth in other teacher pay per head

The share of the teacher paybill accounted for by the main pay range is assumed to be 20% throughout the analysis. This is based on evidence from the Welsh Government showing that 25% of teachers in Wales are on the main pay range[59]. This is scaled by 80% to calculate the share of the total teacher paybill accounted for by the main pay range (80%

[57] *Department for Education, Evidence to the STRB: 2020 pay award for school staff.*
[58] Stats Wales, *Education Revenue Outturn Expenditure for 2018-19*
[59] *Welsh Government's Evidence to the Independent Welsh Pay Review Body: The 2019 teachers' pay award*

represents the ratio between the share of the paybill accounted for by the main pay range in England and the share of teachers on the main pay range in England).

Average teacher pay per head is then calculated as the expected growth in average teacher pay head on the main pay range (14% for all scenarios) multiplied by the share of the paybill accounted for by the main range (20% for all scenarios), plus the value for the growth in other teacher pay per head under the above scenarios multiplied by the share of the paybill accounted for by other teachers (80%). This is further scaled by 31/36 as any future teacher pay award will only apply from September 2020, 5 months into the financial year.

Other staff and non-staff costs

Two different assumptions are used for other staff pay. The first assumption is that other staff pay grows in line with future growth in the GDP deflator of 2% per year[60]. The second is that other staff pay grows at the higher rate of 3% per year, which would represent 1% real-terms growth in other staff pay. Both scenarios are shown in Figure 5.1.

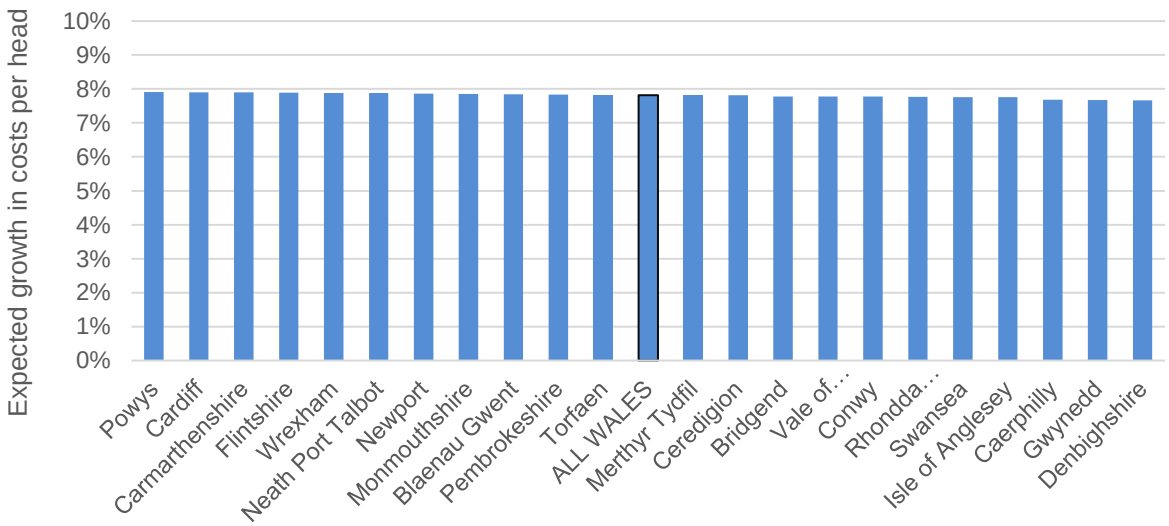
Non-staff costs are assumed to grow by 2% per year, in line with the GDP deflator[61].

Variation across local authorities

Figure E.1 shows the variation in expected school costs per head under the assumptions set out above for the main pay range for teachers, 2.5% annual growth in pay per head for other teachers and 3% annual growth in other staff pay levels.

As can be seen, there is very little variation across local authorities. This is largely because the growth in costs per staff member are assumed to be constant across areas, with any variation driven by the share of expenditure accounted for by teachers.

Figure E.1 Variation in potential growth in school costs across local authorities, 2019–20 to 2022–23



Sources and notes: Author's calculations using expenditure shares taken from Stats Wales, Education Revenue Outturn Expenditure for 2018-19; Welsh Government's Evidence to the Independent Welsh Pay Review Body: The 2019 teachers' pay award; Department for Education, Evidence to the STRB: 2020 pay award for school staff.

[60] Office for Budget Responsibility, Economic and Fiscal Outlook, March 2020 (https://obr.uk/efo/economic-and-fiscal-outlook-march-2020/)
[61] ibid