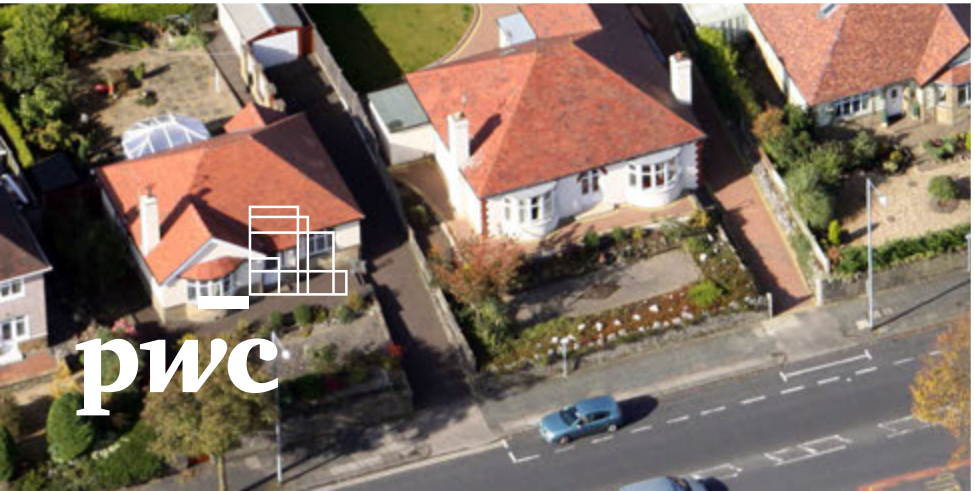
How does state school performance affect house prices in England?

October 2019

www.pwc.co.uk/economics



Key points

We have looked at the relationship between state school performance and house prices,[1] and found a strong relationship between good schools and higher house prices. This has implications for children's opportunities in later life and so social mobility, as poorer families may be locked out of the best education.

For England as a whole,[2] we have found that:

- House prices in the area around the top 10% of primary schools are on average £27,000 higher than in the wider area.
- House prices in the area immediately around the top 10% of secondary schools are on average £25,000 higher than in the wider area.

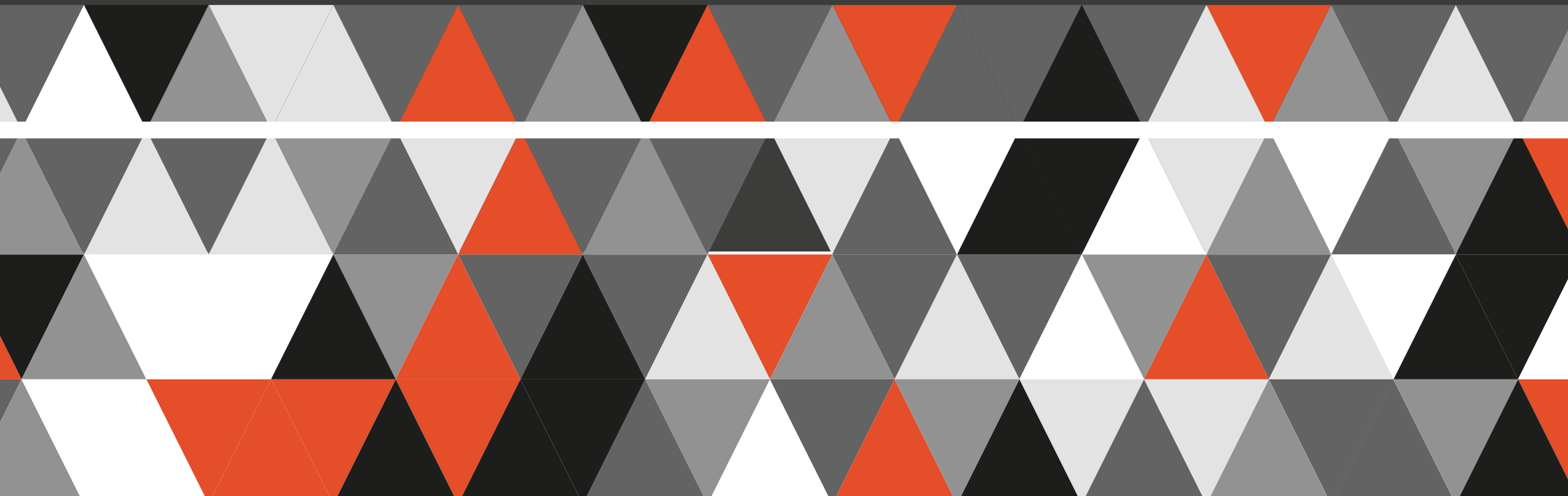
Regionally, we have found that the house price premium in percentage terms tends to be larger in the north of England. To live near one of England's best schools, the largest primary house price premium is in Yorkshire and the Humber, while the largest secondary school house price premium is in the West Midlands.

The areas with the highest percentage premia are also the regions where these premia are least affordable (compared to wage levels).

Higher house price premia are correlated with the availability of school places, particularly for primary schools.

Improving the quality of lower performing schools and building more affordable housing could help to reduce this difference in house prices around good schools in the longer term, but shorter term action is also needed from businesses (for example, introducing school leaver programmes) in order to enhance social mobility.

1. Department for Education (2017). House prices and schools: do houses close to the best performing schools cost more?
2. The analysis is only for England as the Department for Education do not publish consistent data for Wales, Scotland, or Northern Ireland.



Contents

Introduction 1

Results 2

Implications 11

Technical appendix 15

£27K

Our analysis shows that on average across England, houses near a top primary school cost £27,000 more than in wider area...

£25K

...while houses near the top 10% of secondary schools cost an additional £25,000.

There is a growing evidence base showing that house prices tend to be higher around good schools. Higher prices have the potential to lock out poorer families from quality education, reducing their opportunities in life and so social mobility.

In this report we have sought to add to this evidence base by updating and extending research published by the government in 2017.[1] We have looked at the average premium to live near one of the top primary or secondary schools in England, and then broken this down to estimate the premium in each region.

Our methodology involved grouping all state schools in England into deciles of attainment.[2] We then compared average house prices in the postcode sector (e.g. SE1 2) of the schools in each decile with the average house price in the wider postcode district (e.g. SE1). This gives us an average price difference for each decile of school performance, which we call the house price premium. The full details of the methodology can be found in the technical appendix.

We have found a strong relationship between the quality of schools and house prices. Our analysis shows that on average across England, houses near a top primary school cost £27,000 more than in wider area, while houses near the top 10% of secondary schools cost an additional £25,000.

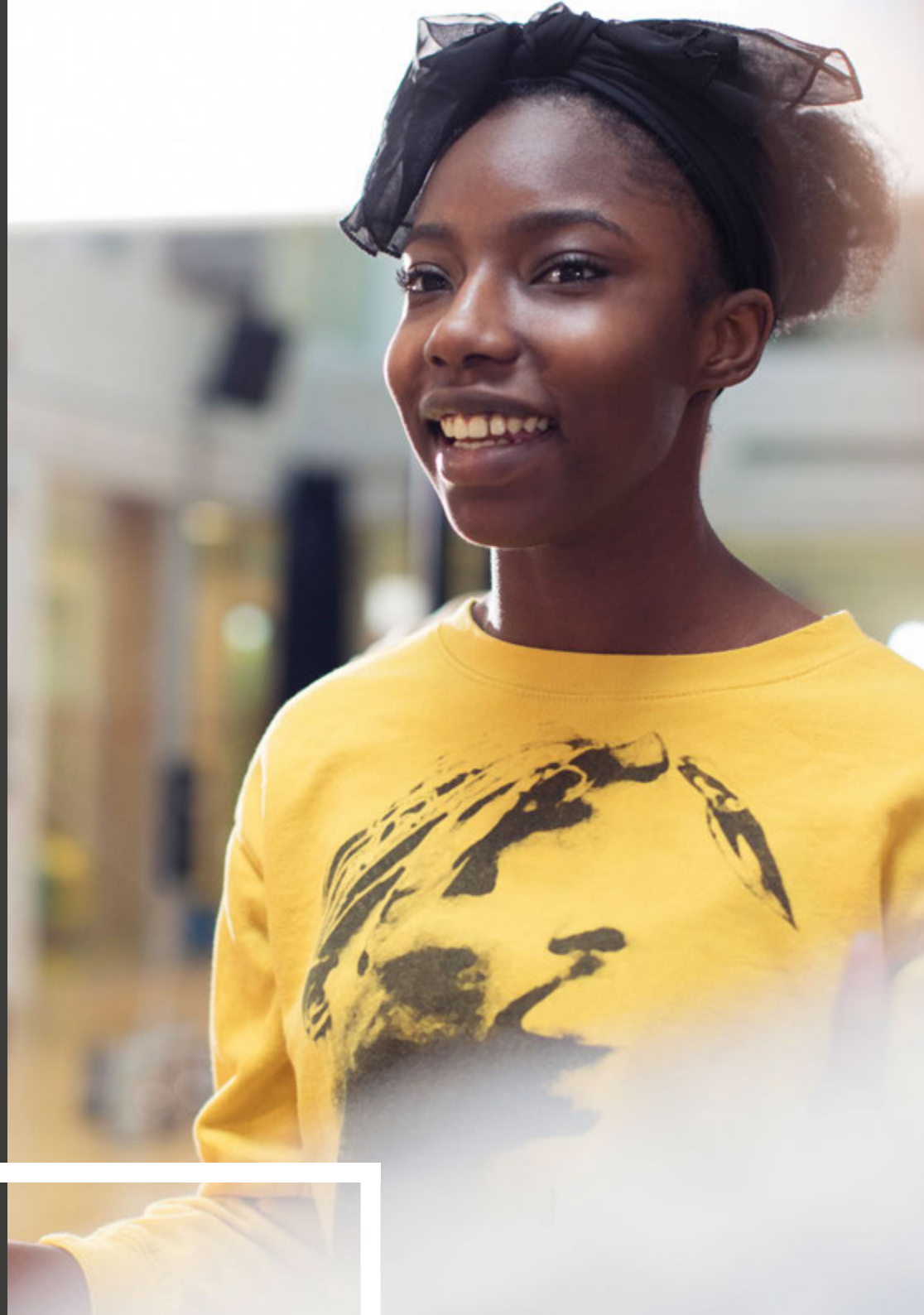
“

Our analysis shows that on average across England, houses near a top primary school cost £27,000 more than in wider area, while houses near the top 10% of secondary schools cost an additional £25,000.

1. Department for Education (2017). House prices and schools: do houses close to the best performing schools cost more?
2. The analysis is only for England as the Department for Education do not publish consistent data for Wales, Scotland, or Northern Ireland. We focus on non-selective state schools as evidence suggests that pupils may be willing to travel further to attend selective/private schools.

1

Results



Living near to one of England's best primary schools costs an extra £27,000 while houses near top secondary schools cost £25,000 more

7%

House prices in the areas immediately around the top 10% of primary schools are 7% higher than the wider area...

6%

...and house prices in the areas immediately around the top 10% of secondary schools are 6% higher than the wider area.

Key findings

House prices in the postcode sector around England's top 10% of primary schools cost, on average, £27,000 more than in the wider postcode district.

House prices in the areas immediately around the top 10% of secondary schools in England are roughly £25,000 higher than in the wider area – slightly lower than the respective premium for primary schools.

House prices in the areas immediately around the bottom 10% of secondary schools are 5% lower than the wider area, while prices in the areas around the bottom 10% of primary schools are 7% lower than the wider area.

Living near a secondary school that ranks in the third to eighth decile of attainment has little impact on house prices. Primary schools show a stronger relationship, with higher deciles of performance generally associated with a higher house price premium.

In Table 1 we present our estimates of the house price premium for both primary and secondary schools, by each decile of school attainment.

Table 1 House price premium by decile of school performance in England

Decile	Primary schools		Secondary schools	
	% premium	£ premium	% premium	£ premium
Top 10%	7%	£27,000	6%	£25,000
9	6%	£19,000	4%	£13,000
8	3%	£9,000	0%	£0
7	3%	£8,000	2%	£5,000
6	2%	£6,000	0%	£0
5	0%	£1,000	0%	£1,000
4	-2%	-£4,000	-2%	-£5,000
3	-2%	-£6,000	-3%	-£6,000
2	-4%	-£10,000	-4%	-£8,000
Bottom 10%	-7%	-£14,000	-5%	-£9,000

Source: PwC analysis, Department for Education, Land Registry

Note: The values in the table can be interpreted as "the average difference in house prices between the postcode sectors and the wider postcode district in which a school of the respective decile is located".

Over the past decade the relationship between house prices and secondary school performance has remained stable

8% in 2012

5% in 2018

The relationship between house prices and the bottom 10% of secondary schools appears to have weakened over the last five years with prices around these schools 8% lower in 2012 but 5% lower in 2018.

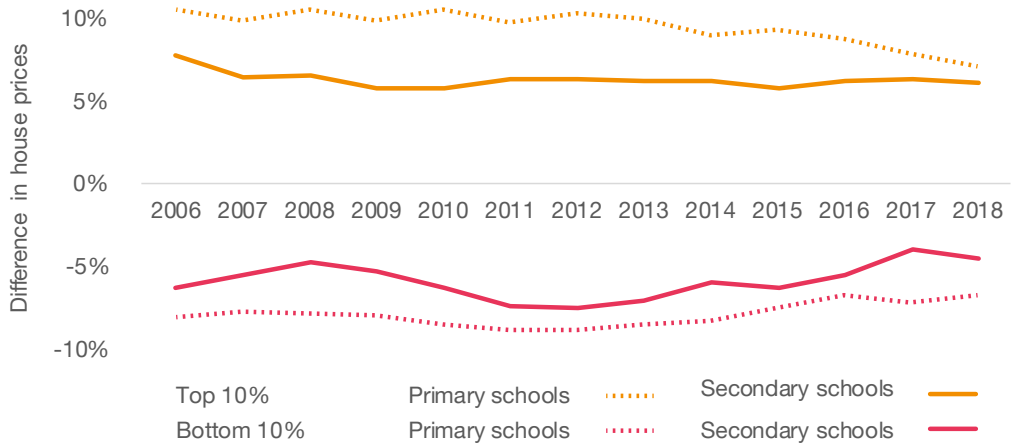
But the relationship for primary schools has weakened slightly.

Key findings

Between 2008 and 2018, the relationship between house prices and primary school attainment weakened slightly, particularly for better performing schools, suggesting that access to the best primary schools for lower income families has improved.

The relationship between house price premia and the top decile of secondary school attainment has remained largely consistent over time. The relationship between house prices and the bottom 10% of secondary schools appears to have weakened over the last five years, with prices around these schools 8% lower in 2012 but 5% lower in 2018.

Figure 1 Percentage change in primary and secondary schools' house price premium between 2008 and 2018



The primary school house price premium varies from 5% to 12% between regions...

12%

The largest premium of 12% (£27,000) is in Yorkshire and the Humber.

£32K

Despite the percentage premium to live near one of England's best primary schools being one of the lowest in London, at 5%, higher house prices mean the actual cost is one of the highest at £32,000.

Key findings

We have also looked at the premium to live near to one of England's best primary schools in each of the regions.

Our results show that the difference in house price premia around the top 10% of primary schools varies significantly between regions – from 5% in the East of England to 12% in Yorkshire and the Humber.

To live near one of England's best primary schools, parents in Yorkshire and the Humber have to pay £27,000 more than they would to live in the wider area.

Despite the percentage premium to live near one of England's best primary schools being one of the lowest in London, at 5%, higher house prices mean the actual cost is one of the highest at £32,000.

The lowest premium to live near one of England's best primary schools is in the North East, both in percentage and cash terms.

In Table 2, we show how the house price premium varies by region.

Table 2 House price premium in each region to live near one of England's top 10% of primary schools

	% premium	£ premium
Yorkshire and the Humber	12%	£27,000
North West	11%	£24,000
East Midlands	10%	£23,000
South East	8%	£34,000
South West	7%	£21,000
West Midlands	5%	£12,000
North East	5%	£8,000
London	5%	£32,000
East of England	5%	£22,000

Source: PwC analysis, Department for Education, Land Registry

Note: The values in the table can be interpreted as "the average difference in house prices, by region, between the postcode sector and the wider postcode district in which a primary school with attainment in the top 10% of England is located".

19%

The West Midlands has the largest house price premium – at 19%.

17K

The house price premium in London is relatively small – at 3% – but due to higher prices in the region, this is worth about £17,000.

...but the secondary school house price premium varies more between regions

From £47,000 in the West Midlands to zero in the East of England.

Key findings

Our results show that the difference in house prices in the immediate vicinity of the top 10% of schools varies significantly, and much more for secondary schools than for primary schools.

The West Midlands has the largest house price premium – at 19% – which is equivalent to an extra £47,000 to live near to one of England's best secondary schools.

In the South and East of England, the cost of living near to one of England's top secondary schools is only marginally higher than to live in the wider area.

The house price premium in London is relatively small – at 3% – but due to higher prices in the region, this is worth about £17,000.

In Table 3, we show the premium to live near to one of England's best secondary schools in each of the regions.

Table 3 house price premium in each region to live near one of England's top 10% of secondary schools.

	% premium	£ premium
West Midlands	19%	£47,000
Yorkshire and The Humber	16%	£41,000
North West	14%	£27,000
North East	12%	£22,000
East Midlands	5%	£11,000
London	3%	£17,000
South West	1%	£4,000
South East	1%	£3,000
East of England	0%	£0

Source: PwC analysis, Department for Education, Land Registry

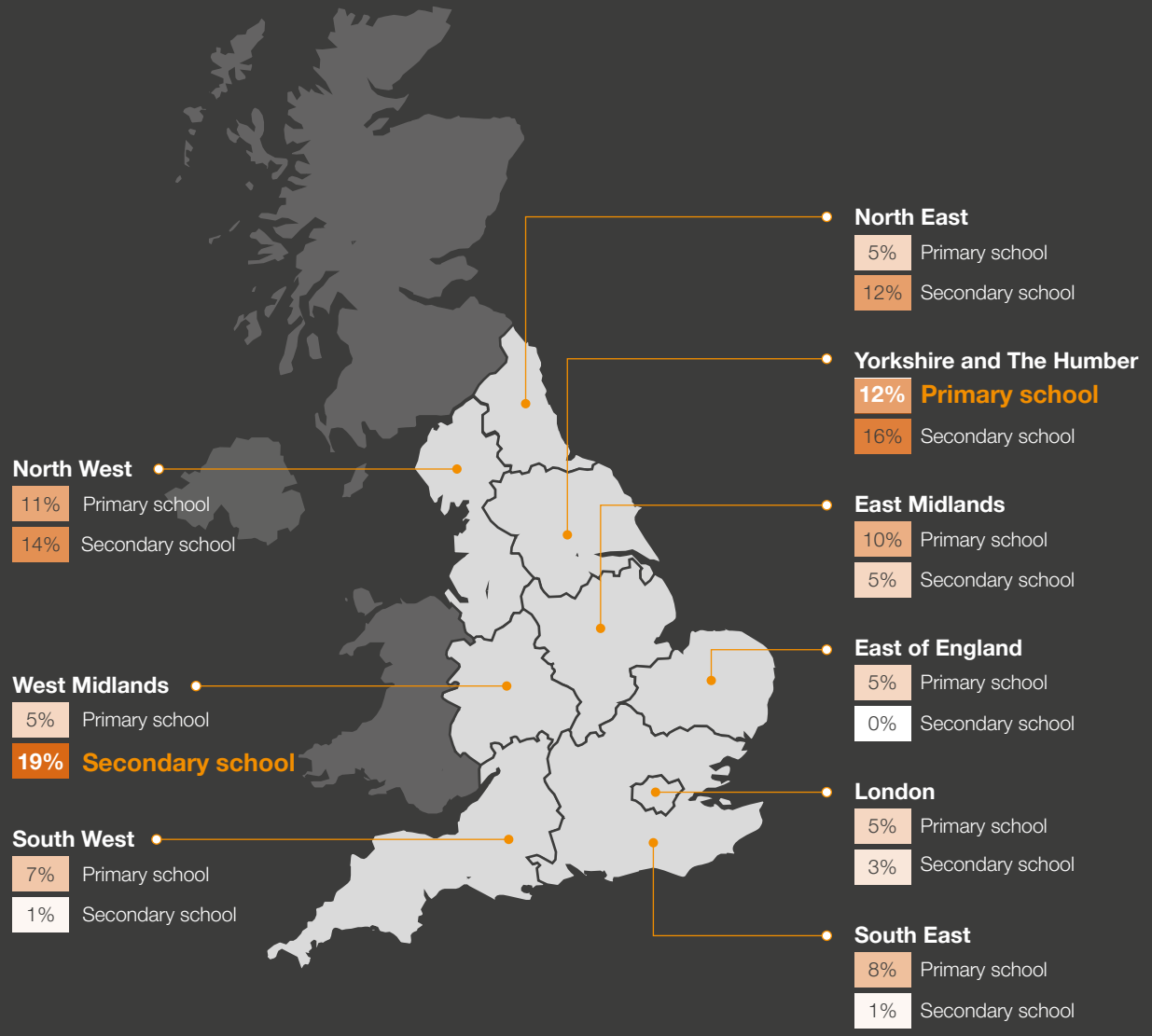
Note: The values in the table can be interpreted as "the average difference in house prices, by region, between the postcode sector and the wider postcode district in which a primary school with attainment in the top 10% of England is located".

Key findings

There is some similarity in the regions that have the largest primary school and largest secondary school house price premia.

In percentage terms, the largest premia for both primary schools and secondary are generally concentrated in the North of England, particularly for secondary schools.

Figure 2 Percentage change house price premium tend to be larger in the north of England, particularly for secondary schools



The areas with the highest percentage premia are also the regions where these premia are least affordable

96%

For primary schools, the largest house price premium as a share of average gross income is in Yorkshire and the Humber, at 96%.

160%

For secondary schools, the largest house price premium as a share of average gross income is in the West Midlands, at 160%.

The absolute size of the house price premium affects whether a family can move to an area near to a good school, but so does the premium relative to wages. In Figure 3, we present the house price premium as a share of average gross income in each of the regions.

Key findings

The house price premium around primary schools is more consistent across regions than around secondary schools.

The most affordable area to buy a house near to a top primary school is in the North East, while the most affordable area to buy a house close to a secondary school is in the East of England.

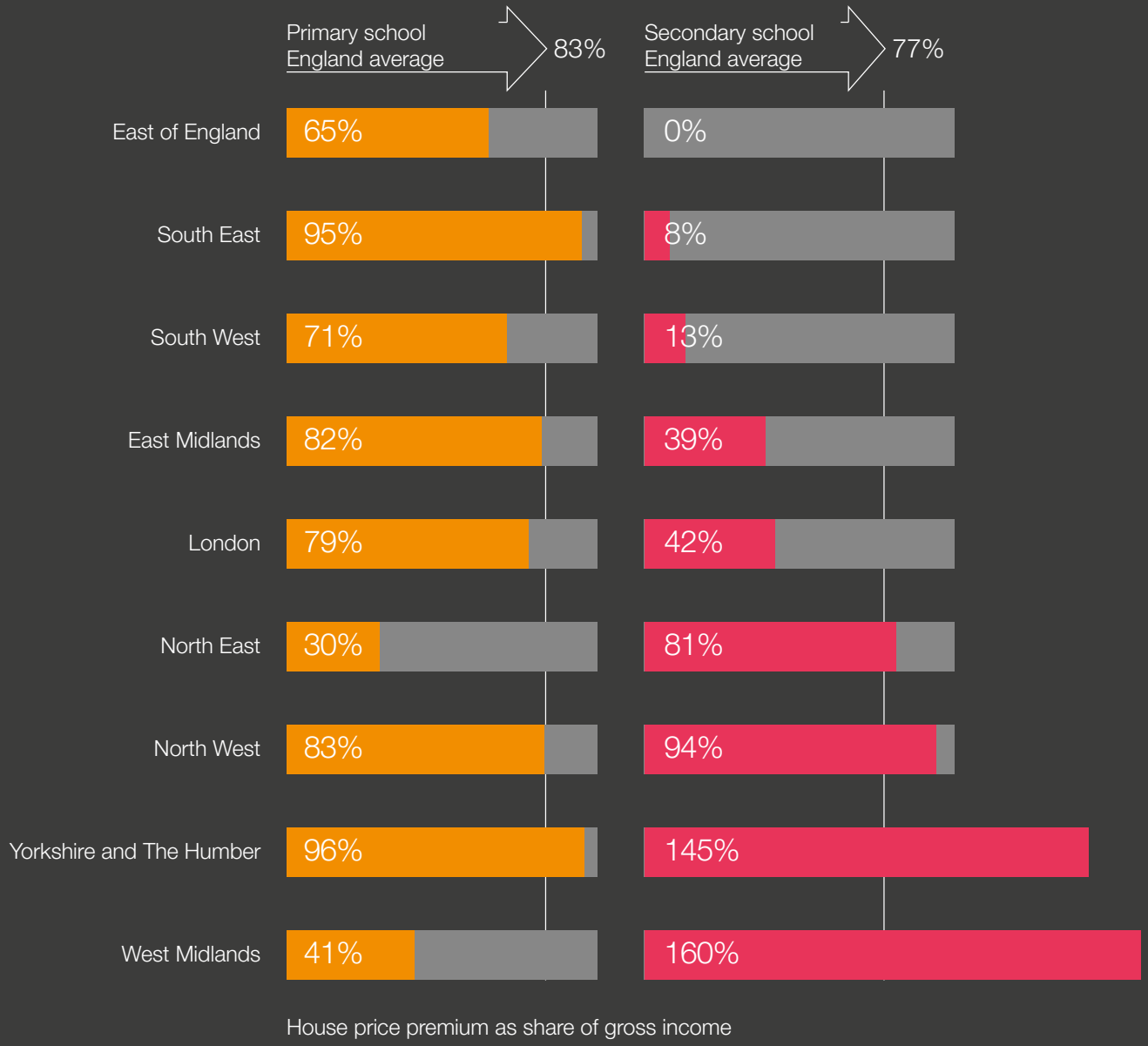
For primary schools, the largest house price premium as a share of average gross income is in Yorkshire and the Humber, at 96%. The ratio is only slightly larger than in the South East, where the premium is 95%.

For secondary schools, the largest house price premium as a share of average gross income is in the West Midlands, at 160%. This is a result of the high house price premia around secondary schools in the area.

As with house price premia, the areas with the lowest premium affordability are generally concentrated in the north of England, particularly for secondary schools.

Figure 3 Affordability of the house price premium by region

Source: PwC analysis, ONS, Department for Education, Land Registry



Areas where places at top schools are more competitive also tend to have high house price premia, particularly for primary schools

55%

The correlation between the strength of competition for places at the best schools and the size of the house price premium is stronger with primary schools (55%)...

33%

...than secondary schools (33%).

Key findings

A number of factors influence the house price premia around good schools. One such factor is the number of good schools, and places available at these schools.

There is some correlation between the strength of competition for places at the best schools and the size of the house price premium. The correlation is stronger with primary schools (55%) than secondary schools (33%).

The most competitive region for places in England's best primary schools is in Yorkshire and the Humber, which is also the region with the highest house price premium for primary schools.

The most competitive region for places in England's best secondary schools is in the South West.

London is the region with the lowest population of children per place at a top school for both primary and secondary schools.

The most competitive regions also tend to have the fewest schools that achieve attainment in the top 10% of England's schools.

In Table 4, we present a measure of the competitiveness of places at top schools by region.

Table 4 Number of children per place in one of England's top 10% of schools, by region.

	Children (4-11) per place at a top school	Children (11-16) per place at a top school
Yorkshire and The Humber	24	14
West Midlands	20	16
East Midlands	20	15
South West	19	19
East of England	15	8
North West	14	13
South East	14	12
North East	11	14
London	8	8

Source: PwC analysis, Department for Education, Land Registry

Note: This measure of competitiveness is calculated by dividing the number of children of the relevant age per region by the number of places at the top decile of schools in England that are located in each region.

2

Implications

We have found that house prices tend to be higher around good schools, which could affect social mobility

As with the existing evidence, our analysis shows that house prices tend to be higher in areas around good schools.

High house prices around good schools have the potential to lock out poorer families from these schools and impact social mobility. For example, if only wealthier families can afford to live near good schools, children of poorer families may not have access to the same opportunities. The additional cost is significant, and parents in London need to find an extra £32,000 to send their child to a top secondary school. This amount varies across England, but remains a significant obstacle to social mobility across regions.

The impact on social mobility is also potentially compounded over time. For example, children from wealthier families, which can afford more expensive homes, may do better in school as they can afford additional support, which contributes to higher attainment in these schools, which reinforces the house price premium.

Reducing the relationship between house prices and schools is therefore a component in improving education for all and increasing equality in opportunity. Both business and government can take action to help to unlock these benefits, but it is likely to take time to achieve.

It is important to note that good schools are not the only cause of these higher house prices. Other factors, such as type and size of housing, transport links, and crime levels are also likely to affect house prices and vary by postcode sector. However, we have controlled for this by comparing postcode sector with the surrounding area (as opposed to a wider region), and quality of schools are nonetheless a significant factor.

“Reducing the relationship between house prices and schools is therefore a component in improving education for all and increasing equality in opportunity. Both business and government can take action to help to unlock these benefits, but it is likely to take time to achieve.

Actions for government and business

Education

Invest in under-performing schools

As part of the 2019 spending settlement for schools, the Government has agreed to increase real spending on education by £1.8bn in 2020/21, building up to £4.3bn by 2022/23. Targeting funding, talent, and resources towards improving weaker schools, and providing additional support to students, will help to bring them to the same standard as better performing schools and provide students the same opportunities.

Change how pupils are admitted to schools

State school places are usually offered to children who live nearest to a school, and proximity becomes increasingly important the better the school. To mitigate this, the government could seek to expand catchment areas or change other criteria for admittance (e.g. entry tests or lottery systems), but supporting transport schemes and other policy will have to be put in place to facilitate this.

Social mobility

Consider potential rather than attainment

Children who attend lower performing schools may not have the opportunity to achieve the same attainment. Some businesses have removed grades from their hiring criteria, but more universities and businesses could start to select candidates based on their potential and broader measures of success, not just the grades that they achieve.

Invest in school-leaver schemes

Businesses could offer apprenticeship programmes and other school-leaver programmes, which contribute to a qualification and allow people to gain practical experience.

Housing

Build affordable family housing close to good schools

Expand the housing supply around good schools, particularly affordable and social housing that is large enough for families. A number of policies suggested in our previous work with the World Economic Forum (WEF) could be relevant, including ensuring that there are multiple tenures for housing in new developments, and keeping costs low by using modern construction materials.[1] This needs to happen in parallel with improving schools, as local schools may not be able to expand sufficiently to cope with the extra demand.

Increase availability of existing property

There may be vacant property around good schools, and aging populations may hold onto their properties around good schools or they may pass them down to their children and grandchildren, suppressing the supply of housing available to lower income families. To help address this, the government could incentivise repurposing vacant properties, as proposed in our analysis with WEF,[1] as well as encouraging aging population to consider downsizing by supporting the development of quality smaller or retirement properties.

1. World Economic Forum, PwC (2019). 10 ways cities are tackling the global affordable housing crisis.

Contacts

For more information about this report please contact:

Jamie Durham
Economist, PwC UK
jamie.durham@pwc.com

John Hawksworth
Chief Economist, PwC UK
john.c.hawksworth@pwc.com

For advice on education policy and strategic issues:
Alison Breadon
alison.breadon@pwc.com

Ian Koxvold
ian.koxvold@pwc.com

For advice on housing policy and strategic issues:
Rob Walker
robert.j.walker@pwc.com

In addition to the authors above, Mike Jakeman provided oversight, and Nabil Taleb contributed to the analysis during an internship with PwC in summer 2019.

Our Economics practice offers a wide range of services covering: market reform in a range of industry sectors (including energy, water, media and telecoms, financial services, health and government services); competition policy, disputes and other investigations; economic, social and environmental impact analysis; financial economics; fiscal policy and macroeconomics. This practice forms part of Strategy&, PwC's strategy consulting business.
For more information about our Economics services please visit: www.pwc.co.uk/economics

3

Technical appendix

We have found that house prices tend to be higher around good schools, which could affect social mobility

Our methodology is based on that published by the government in 2017 using 2014/15 data.[1] We have updated the analysis to the latest available data (2017/18) and made some adjustment to the methodology to improve robustness.

Our approach to calculating the house price premium is broken down into two broad steps: first, ranking schools by attainment, and second, calculating the average house price premium for each decile of school performance. We describe these steps in more detail below.

School attainment

We collected attainment data published by the Department for Education.[2] This database includes the location and attainment results for all schools in England. As noted in the Government paper, we used attainment data rather than measures of progress, as attainment data is more widely available and more often used by parents. Ofsted ratings offered a possible alternative, but they do not provide the level of variation provided by attainment measures.

We then cleaned the data to remove selective schools and independent schools.

We then calculated a three year rolling average of attainment for each school using the three years before the year of interest.

Following the Government's methodology, for:

- Primary schools, we have equally weighted the percentage of pupils reaching the expected standard in reading, writing and maths (or equivalent) and the percentage of pupils achieving a high score in reading and maths and working at greater depth in writing (or equivalent).

- Secondary schools, we have used the percentage of pupils achieving the Level 2 threshold including standard pass grades between 9 and 4 in both English and Maths GCSEs (or equivalent).

We ranked each school by its average attainment and then organised these schools into deciles.

1. Department for Education (2017). House prices and schools: do houses close to the best performing schools cost more?
2. See: https://www.compare-school-performance.service.gov.uk/download-data

House prices

We collected house price data from the Land Registry Price Paid database.[1] This includes the price and location of all house sales in England.

We then cleaned the data to remove:

- the 'Other' property type, which we found to be skewing the results due to the presence of commercial property.
- any postcode sectors where there were fewer than two house sales in a year, as these sales could be unrepresentative of actual prices in the postcode sector.

We then calculated an average price for each postcode sector and each postcode district.

We calculated a three year rolling average of house prices for each postcode sector (e.g. SE1 2) and each postcode district (e.g. SE1).

Using the deciles calculated as part of step 1, we then took a simple average of the difference between the average price in the postcode sector and the average price in the postcode district to establish an average difference for each decile of school attainment. These results are presented in this report.

Deviations from the government's methodology

We have extended and updated the analysis in a number of ways compared to the paper published by the government in 2017. These include:

- Updating the data from 2014/15 to 2017/18.
- Excluding the 'Other' property type and any postcode sectors with fewer than two house sales in a year.
- Not weighting attainment scores by average scores in the year.
- Calculating the premium specifically for each region.

Comparisons with the government's paper

Our results are broadly consistent with the government's paper for England as a whole.

For the 2014/15 school year, the government found an 8% house price premium for the top 10% of primary schools and 6.8% house price premium for the top 10% of secondary schools.

For the 2017/18 school year, we found a 7% house price premium for the top 10% of primary schools and 6% house price premium for the top 10% of secondary schools.

1. See: http://landregistry.data.gov.uk/app/ppd/

pwc.co.uk/economics

190905-152354-ON-UK