How much are parents willing to pay to get their children into what they perceive to be a better school? The answer to this question has important implications both in terms of school admission policies and urban planning.

Residence-based school admission rules often aim at ensuring a degree of social diversity in schools. But a higher willingness to pay for better schools implies that residential choices are more heavily influenced by the perceived quality of local schools. Contrary to the original objective, this phenomenon will tend to reinforce the level of social segregation between schools and undermine the effectiveness of school catchment areas as a policy tool to reduce educational inequalities.

If parents care about the quality of education and if children are assigned to schools based on their place of residence, then differences in school performance should at least partly captured in house prices. The housing market therefore provides an indirect way of measuring the average willingness to pay for better schools.

Following this intuition and analysing data from the UK and the United States, empirical studies (including work by CEP's Steve Gibbons and Stephen Machin) have found that there is often a significant house price premium attached to an increase in the average test scores of local schools.

A limitation of these studies is that they restrict the analysis to state schools, ignoring the influence that private schools might have on residential choices. Since admission to private schools is not usually subject to a residence requirement, private education provides an outside option for parents who are not satisfied with the quality of the neighbouring state schools. It seems likely that the willingness of parents to pay for better state schools in a particular neighbourhood is smaller when the number of local private schools is higher.

Our study explores this issue by evaluating how house prices react to the quality of education offered by local schools, both state and private. We analyse comprehensive data on middle schools (those for pupils aged 11 to 14) and housing market transactions in Paris over the period 1997-2004.

The organisation of secondary schooling in Paris is a useful context for analysing how the interaction between state and private schools influences residential choices because it combines a residence-based system of assignment to state schools with a well-developed and almost entirely publicly funded network of private schools.

Parents who reside in a given neighbourhood have hardly any control over the choice of their child's state school because each catchment area contains only one school and because very few dispensations are granted to applicants who live outside the catchment area. In this context, parents who want to avoid sending their children to a low-performing local state school can either move to another area or seek admission to a private school.

What makes the latter option attractive is that in addition to being entitled to select their pupils from anywhere in the city, private schools usually charge relatively modest fees (between £1,000 and £2,000 a year). As a result, private schooling accounts for about a third of total secondary education enrolment in Paris.

Empirically, the issue of estimating the impact of state school performance on house prices is a challenge for researchers. As in most big cities, the best state schools in Paris tend to be located in the most expensive areas. This feature, however, does not necessarily imply that houses are more expensive because local schools are better.

In fact, the causality might go the other way round. Wealthy neighbourhoods attract households of high socio-economic status whose children tend to perform better at school than those in more deprived areas. This simple mechanism induces a positive correlation between apparent school quality and house prices, even if parents do not take account of the performance of local schools when deciding to move into a neighbourhood.

Our research addresses the causality challenge by
comparing the value of house sales across middle school catchment area boundaries – that is, sales of houses located close to each other but assigned to different state schools.

The key justification for this approach is that on average, flats located in the immediate vicinity of school attendance boundaries have similar attributes (period of construction, number of rooms, etc.) and, by definition, belong to the same neighbourhood. The only significant difference between them is that they are assigned to different state schools. Hence differences in cross-boundary house prices can be interpreted as a direct measure of the unequal valuation of the corresponding state schools.

Based on this empirical strategy, we find that the perceived quality of state middle schools has a significant impact on the house prices. Using various measures of school performance, we find that differences in school quality translate into differences in house prices of a similar magnitude to those found in the UK and the United States. Our analysis suggests that roughly 5% of local variations in house prices in Paris are explained by differences in the perceived quality of state schools.

We also show that the impact of state middle schools on the housing market varies with the local density of private middle schools. The effect of school quality is more pronounced for residences in areas with a low density of private schools and is non-existent for areas with the highest density of private schools. Our results suggest that in areas where private schools are scarce, the capitalisation of state school performance in housing prices is in the same order of magnitude as the individual cost of a private school four-year tuition fee in areas where they are numerous, that is about €4,000 at the average flat price. These findings are consistent with the idea that by offering a relatively cheap outside option to parents who are willing to avoid the constraints of strict catchment areas, private schools tend to mitigate the impact of state school performance on house prices.

In terms of policy implications, our results suggest that the co-existence of state and private schools is an important dimension to take into account when designing school admission policies. In particular, the effect of alternative state school admission rules (strict residence-based assignment, relaxed school zoning, open enrolment, etc.) on residential and school segregation, pupil performance and educational inequalities depends crucially on how the housing market incorporates state and private school performance.

As elsewhere, Parisian house prices are influenced by the perceived quality of local state schools