

in brief...

Fear of fracking: the impact on UK house prices

Shale gas offers the prospect of a low-cost energy future – but does extracting it invoke anxieties about the possibility of environmental catastrophe among local residents? **Steve Gibbons** and colleagues detect a distinct ‘fear of fracking’, as indicated by falling house prices in the one part of the country where exploratory drilling has taken place.

The UK government has recently given its approval for exploratory drilling and hydraulic fracturing – ‘fracking’ – for shale gas at two sites in Lancashire. This follows a similar decision for North Yorkshire earlier in the year.

Some will see these approvals as landmark planning decisions marking the way to a low-cost energy future for the UK. For others, particularly those who live locally, the decisions will be seen as leading to potential environmental catastrophe. These fears are fuelled by many reports from the United States about the risks associated with shale gas extraction by fracking – including water contamination and earthquakes – plus concerns about the local impact of traffic and extraction infrastructure.

Our research investigates whether these fears affect what people are prepared to pay to live in areas affected by fracking, by tracing out the impacts of shale gas licencing and exploration on house prices in England and Wales.

Although commercial shale gas development has not yet taken place in the UK, exploration licences have been offered since 2008 and many exploration wells have been drilled. Figure 1 shows the location of these exploration licences (in red) and potential shale gas-bearing areas (in grey). Our findings suggest that licencing and exploration in themselves had little or no impact on house prices throughout most of England and Wales.

The one exception is the one site in the UK where exploratory fracking – the high-pressure injection of fluids to extract shale gas – has taken place (the red dotted area in the North West in Figure 1). Here we find that house prices fell, on average, by up to 5% after

fracking commenced. A specific trigger for this was the occurrence of two highly publicised earthquakes in 2011 that were linked to the fracking.

What happened is illustrated succinctly in Figure 2, which plots the trend in adjusted house prices at quarterly intervals up to and after the earthquakes in 2011. The solid line represents the earthquake zone, while the dashed lines show trends in other licenced areas and where licences specifically mention shale gas. Clearly, there was quite a marked fall in transaction prices in the months after the fracking and the earthquakes.

These earthquakes were minor and would not have caused personal injury or damage to property. So the most likely explanation for any impact on house prices is that the earthquakes reminded people of the potential risks, and so reduced demand for homes in the vicinity.

Figure 1:
Shale gas exploration in the UK

Note: The map shows blocks that were licenced for gas exploration in 2008 (red) and previous rounds (blue).



Figure 2:
The effects of shale gas licencing, exploration and earthquakes on local house prices



Note: Prices are scaled relative to the beginning of 2011.

The implication is that there are ‘psychological costs’ associated with fracking, which should be compensated. An existing industry ‘community engagement charter’ already recommends payments by drilling and exploration companies to local communities: around £100,000 for exploration plus 1% of revenues during extraction.

In addition, the government has recently consulted on a new shale gas wealth fund that proposes using 10% of revenues from shale gas to fund payments up to a maximum of £10 million per site to individuals and communities affected by extraction. But aggregate costs per site implied by the house price reductions are far in excess of these.

Compensation to communities could prove to be very costly if local objections to fracking are to be overcome by those who see fracking as the answer to securing the UK’s energy supply.



This article summarises ‘Fear of Fracking: The Impact of the Shale Gas Exploration on House Prices in Britain’ by Steve Gibbons, Stephan Heblich, Esther Lho and Christopher Timmins, Spatial Economics Research Centre (SERC) Discussion Paper No. 207 (<http://www.spatial-economics.ac.uk/textonly/SERC/publications/download/sercdp0207.pdf>).

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