

in brief...

What the Berlin Wall can teach us about urban development

What makes cities thrive? CEP researchers consider what can be learned from the division and reunification of Berlin, in work for which they were awarded the prestigious Frisch Medal in 2018. The city's history provides a unique setting in which to investigate how connectivity between neighbourhoods influences the urban economy and residents' quality of life.

Economic activity is unevenly distributed across geographical space. This is reflected in the existence of cities, as well as the concentration of economic functions in specific locations within cities, such as Manhattan in New York and the Square Mile in London.

Understanding the strength of the forces of agglomeration that underlie these concentrations of economic activity is central to a range of policy issues, including one overarching question: what makes cities thrive?

Is it proximity to natural resources – such as rivers, oceans and energy sources – that makes places attractive for firms to locate production? Is it shared amenities – such as leafy streets and scenic views – that make them attractive places for people to live? Or does the cumulative effect of growing population density itself make cities more productive, thereby attracting more firms and workers, boosting productivity further and raising demand for services, such as shops, cafés and theatres?

From a policy perspective, it is important to distinguish between fundamentals and density as determinants of urban productivity because the former are given whereas the latter can be changed. But since density is also influenced by the fundamentals of natural resources, it is notoriously difficult to identify each effect separately.

Our research develops a model that indicates a positive relationship between urban density and productivity growth in a virtuous circle of 'cumulative causation'. We apply our model to the unique natural experiment of the construction and demolition of the Berlin Wall – and the impact on economic activity in neighbouring locations.

When Berlin was divided at the end of the Second World War, the western part lost access to the heart of the city; when the wall came down in 1989, the city was reunified. We track the fortunes of West Berlin, which remained a market economy during the 41-year period of division, collecting data on employment, population and rents between the 1930s and the 2000s.

We find that property prices and economic activity in the eastern side of West Berlin, close to the historic central business district in East Berlin, began to fall when the city was divided. Then, after reunification, the same area began to redevelop: West Berlin suddenly had access to all the knowledge and public resources in the resurgent central business district it had been denied. This spurred development in these areas, raising land prices close to the central business district and demonstrating the positive effect of exposure to density in neighbouring areas.

Our model is successful in explaining the observed reorganisation of economic activity within West Berlin not only qualitatively, but also quantitatively. What's more, it has practical applications for urban planners making decisions on infrastructure and housing in modern cities. For example, if a city is considering a subway, the model can be used to demonstrate how property prices are likely to increase.

The model also makes it possible to simulate what will happen to places that are close to proposed new infrastructure – and what the potential economic spillovers to other locations may be. And it can predict when improving one area is likely to hurt another area – for example, when firms and workers might move away to better connected and more desirable locations.

The Berlin Wall provides a unique natural experiment for analysing the organisation of economic activity within cities

Lessons from Berlin have practical applications for urban planners making decisions on infrastructure and housing

This article summarises 'The Economics of Density: Evidence from the Berlin Wall' by Gabriel Ahlfeldt, Stephen Redding, Daniel Sturm and Nikolaus Wolf, CEP Discussion Paper No. 1154 (<http://cep.lse.ac.uk/pubs/download/dp1154.pdf>) and published in *Econometrica* 83(6) in November 2015.

In 2018, the study's authors were recognised by the award of the Frisch Medal of the Econometric Society, which is presented biennially for the best applied (empirical or theoretical) paper published in *Econometrica* during the previous five years.

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