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Editorial

Money and cities

Economics is the so-called 'science of money'. Its application to cities has been largely confined to the application of abstract models that demonstrate how the prices of land and to a lesser extent labour are determined through competitive markets. Economics also deals with systems that manifest scarce resources and it is this scarcity that determines the level at which prices are set. What is conspicuously absent in our understanding is the way money flows between individuals, firms, governments, and so on that determines how activities locate and interact in cities. Our theory has focused almost exclusively on physical flows determining spatial interactions—which may of course have one of their manifestations in the flow of money—but in general these are usually represented as physical flows of energy in terms of goods and people.

This lack of focus on money has many origins but two are very significant. First, data on money flows are not collected in any systematic manner and although a great variety of financial data is reported, there is no spatial dimension to their organisation. The best that one can get is data aggregated to regions, sometimes cities, compiled usually from national income returns but those data are invariably nonspatial. This problem is manifest in that even flows of physical goods, the raw data for input–output analysis, are hard enough to assemble for national economies, and these are more or less entirely absent for cities. This is despite the fact that the need for such analysis goes back as far as Artle's (1959) path-breaking work on the Stockholm economy. You can count the number of articles on money flows on the fingers of one hand. For example, a project called "Where's George" tracked the movement of US Treasury dollar bills across the continental United States (see http://www.wheresgeorge.com/) but studies like this are rare.

The second reason for this dearth is that money is one of the first elements of modern society that has moved from physical to virtual or digital form, from tangible assets to information, from atoms to bits as Negroponte (1995) so cogently formulated it. Up until the development of the web, the impact of new digital technologies on cities was confined largely to transactions processing, passive telephony, and television. But once wired and wireless communications put anyone who could afford a mobile device in touch with others with a digital presence, a vast number of physical transactions have moved into the ether. The sheer scale of e-mail traffic, social media, and the massive migration of services and even traditional manufacturing to the online economy, are leading to profound changes that are largely invisible in cities (Batty, 1990). In the past, even if we did not know the actual decision-making mechanisms that took place, we could at least observe outcomes. For example, urban sprawl and the emergence of edge cities can be largely traced to the impact of the automobile and the demand for new physical space while increasing agglomeration of populations is still explicable in terms of the need for face-to-face contacts.

In general, much urban theory is conditioned on the notion that some places are more desirable than others, particularly where populations cluster and it is no accident that the more accessible the place, the higher the cost of location and the higher the rewards gained. In general, although this implies an abstract theoretical model, by and large the way our cities have been shaped physically is determined by these geometrical considerations. Indeed, a succession of well-known economists have received the highest accolades for developing their theories with some applicability to cities as a long line of Nobel laureates from Leontief

to Solow to MacFadden and Krugman attests. To an extent conceptually, these ideas do explain the way costs of location change in terms of the relative trade-offs between space and distance, but one of the main problems is that prices in spatial markets are usually determined by some kind of spatial boundary. A consequence of globalisation is that these boundaries have become fluid. They are continually shifting and it is this liquidity that makes the contemporary city itself an almost transient affair. As boundaries shift, then markets themselves become subject to quite volatile restructuring. This can be profound for it means that the whole notion of space within which a city operates is now a continually shifting kaleidoscope of activities and populations. Information technology is loosening the glue that sticks the bits of the city together and there appears to be an increasing disconnect between what goes on in cities and what they look like, spatially and physically.

The need for a major effort in tracking how money flows in cities is now paramount and two examples serve to emphasise this. In Britain the high street is dying as consumers begin to shift many of their purchases online. The shift from goods retailing to entertainment in major city centres is evidence of this and, apart from a handful of the more prosperous larger out-of-town malls, more modest retail centres are dying in the suburbs. The example of what Amazon is doing is significant. It is the largest online retailer by far but it is the world's ninth largest overall and predictions suggest that by 2018 it will be the second (*The Economist* 2014). It is no longer about selling books; this was just a taster: all kinds of things are being marketed and so with many other online companies. Amazon and its like are changing retailing and supply chains dramatically. Combined with aging populations, which due to the demographic transition will dominate the globe by the end of this century, it is hard to see how traditional spatial clusters of activity for retailing and commerce can still remain in the same form they have done for the last 500 or more years. Something has to give.

The second impact is in terms of activities that compose the city: in particular, housing. Due to increasingly inequality and globally cash-rich populations, the largest and most attractive cities are seeing dramatic rises in house prices with nondomestic buyers dominating the market. Houses have almost become an asset class, especially since the great recession as interest rates are so low. This is making such cities increasingly disconnected with their local and even national economies, and the problems of employment and inequality in such locations are enormous. Moreover, the fact that these markets are increasingly online is making transactions possible from anywhere, and the cities in which such markets are being distorted seem largely to be sustained by immigration.

These are just two of many important changes in spatial behaviour that are having an enormous impact on cities. I could spend a lot longer on these issues for they are uppermost in terms of the kinds of new theory urgently needed to develop a robust and informative science from which we might build future models to inform us how to get to grips with such urban complexity. As ever, the pages of this journal are open for such material.

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