LIVING CLOSER PRODUCES MORE: THE UNEXPECTED BENEFITS OF THE DENSE CITY

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Millions of people around the world aspire to live in quiet neighbourhoods, with less traffic, less noise and more space. The preference is understandable. For many people, the idea of a dense city conjures images of congestion, pollution, overcrowded buildings and poor quality of life. In the collective imagination, urban density tends to be associated more with a problem than with a solution.

Yet **the most productive, innovative and dynamic economies on the planet tend to emerge precisely in places where people live, work and interact in closer proximity to one another**. Denser cities tend to generate more wealth, higher wages, greater innovation and lower emissions per inhabitant than dispersed territories. This happens not because density is inherently good in the abstract, but because physical proximity between people reduces many of the economic frictions that constrain productivity.

The city as a proximity machine

Urban economics starts from an observation that is apparently simple but highly significant: cities occupy around 2% of the Earth's land surface, yet concentrate nearly 58% of the world's population and generate approximately 80% of global GDP (UN-Habitat, 2022). This enormous disproportion is not accidental. **Cities generate far more economic value than dispersed territory because they allow people and activities to interact with much greater intensity.**

When firms, workers, universities, shops and services are close to one another, the time, cost and difficulty of coordination are reduced. This reduction in friction makes urban economies more efficient and productive.

Economists call this agglomeration economies: benefits that arise simply because many people and activities share the same urban space (Duranton and Puga, 2004). These benefits operate primarily through three mechanisms. First, sharing infrastructure and services that would be too costly in dispersed settings: transport networks, specialist hospitals, universities and cultural facilities. Second, facilitating the matching of firms and workers in larger and more diverse labour markets. Third, allowing knowledge to circulate more rapidly between people and organisations.

The empirical evidence accumulated over decades is remarkably consistent. Various studies show that **doubling urban density is associated with productivity gains of between 3% and 8% in developed countries** (Melo, Graham and Noland, 2009). In Europe, estimates find similar effects, with productivity gains of around 4.5%–6% (Ciccone, 2002). In other words: people do not necessarily produce more because they work longer hours or because they are individually more talented, but because **the urban environment makes it easier for that talent to generate more value**.

These effects are also reflected in wages. One of the most robust regularities in urban economics is what is known as the urban wage premium: workers with similar characteristics tend to receive higher wages in large, dense cities than in small or dispersed settings (Glaeser and Resseger, 2010). The city amplifies economic opportunities because it multiplies the possibilities of finding employment, clients, suppliers and professional networks.

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Density as an infrastructure for innovation

Perhaps the most interesting and least intuitive effect of urban density is its relationship with innovation. **Dense cities not only produce more: they also tend to generate new ideas more frequently**. They register more patents, attract more skilled talent and concentrate a disproportionate share of creative and technological activity.

The explanation does not lie solely in the fact that large cities have more universities or more technology firms, although that too matters (Glaeser, 2012). The central point is different: **proximity facilitates the frequent, informal human contact that often lies behind new ideas.**

Innovations rarely emerge in complete isolation. They arise from conversations, job changes, collaboration between firms, informal circulation of knowledge and everyday encounters between people with different skills. Urban density increases precisely the probability that such encounters will occur.

Jane Jacobs, the celebrated American urban sociologist, intuited this before most contemporary economists. In *The Death and Life of Great American Cities*, she argued that the diversity of uses, people and activities within urban neighbourhoods created a fertile environment for economic creativity (Jacobs, 1961). The urban mix — housing, commerce, offices, leisure — was not simply an aesthetic matter, but a way of producing innovation.

Decades later, the empirical evidence has confirmed that intuition. So-called knowledge spillovers — the informal transmission of ideas between firms and workers — diminish rapidly as the physical

distance between people increases. Innovation, to a large extent, continues to depend on proximity.

This is why, even in an increasingly digital economy, knowledge-intensive activities continue to concentrate in particular cities and urban districts. **Technology has reduced many communication costs, but it has not eliminated the economic value of face-to-face contact.**

Closer together, fewer emissions

There is a second benefit of density that tends to surprise those who associate the compact city with pollution: **dense cities tend to emit less carbon per inhabitant than dispersed urban models**. This does not mean, of course, that large cities emit fewer pollutants in aggregate terms, but rather that their energy consumption and per-capita emissions are generally lower than those of dispersed urban developments.

The reason is structural. When housing, employment and services are relatively close together, people need to travel shorter distances. This makes high-frequency public transport viable, reduces dependence on the private car and cuts the energy consumption associated with daily travel. Furthermore, collective buildings tend to be more energy-efficient than dispersed single-family dwellings in terms of heating, cooling and infrastructure.

Bettencourt et al. (2007), in a comparative study of cities across different countries, found that **larger, denser urban areas tend to show lower CO emissions per inhabitant than smaller** and more dispersed cities. Urban scale, properly managed, can become an environmental advantage.

The problem, therefore, is not density itself. The problem is poorly planned density: without adequate public transport, without green spaces, without accessible housing and without quality public space. **Well-designed density is very different from overcrowding.**

The hidden costs of dispersal

If density generates so many economic and environmental benefits, why do so many cities continue to expand in a dispersed manner?

Part of the answer is that the dispersed city offers highly visible private benefits: more space, less sense of congestion and access to cheaper housing on the periphery. But many of its costs are collective and barely visible.

Urban dispersal forces the extension of water, electricity, transport and public service networks across ever larger and less efficient territories. It increases car dependence, lengthens commuting times and hinders equitable access to employment, education and services. It also fragments urban space and weakens many of the economic and social interactions that make cities productive.

In economic terms, the dispersed city tends to appear cheap from an individual perspective, but

proves far more costly from a collective one.

This does not mean that all density is automatically desirable. There are thresholds beyond which agglomeration can generate congestion, rising land prices, pressure on urban services or the displacement of lower-income populations. The evidence does not support the view that "more density" is always better in every circumstance. What it does reject is the idea that dispersal is, by default, more efficient, more sustainable or more humane.

The crucial difference is not between density and low density. It lies between planned density and overcrowding; between compact, accessible cities and fragmented, car-dependent ones.

Urban form is also economic policy

Decisions about how cities grow are often presented as purely urban planning or aesthetic debates. In reality, however, they are economic and social decisions of enormous consequence.

Deciding what can be built, where, with what mix of uses, what type of transport is prioritised and how much space is devoted to the private car determines, in part, how much an economy produces, how much it pollutes and how it distributes its opportunities.

Urban form influences productivity because it determines how easy it is to connect people with jobs, firms with suppliers, students with universities, or ideas with opportunities to become innovation. **Cities do not generate wealth solely through the talent of those who live in them, but also through the way they physically organise their interactions.**

The debate about urban density is not really about taller buildings or more compact streets. It is about **how easy or difficult we make it for people to access opportunities, knowledge and services within the city**. And, ultimately, about what kind of urban society we want to build.

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