For more than a century, the economic case for cities has rested on a simple proposition: proximity creates prosperity. Put enough people, businesses, institutions and markets close together, and economic activity becomes more productive. Workers find better jobs, firms find specialized suppliers, customers gain more choices, and ideas travel quickly from one enterprise to another. This is why cities have historically been engines of growth rather than merely concentrations of population.

But there is a flaw in the way we often understand proximity. Two businesses may be five kilometers apart on a map and still be an hour apart in practice.

That distinction is becoming increasingly important for the rapidly expanding cities of the developing world. As metropolitan areas grow denser, their economic geography is increasingly determined not by physical distance but by travel time. A city may appear highly connected when viewed from above—millions of workers and thousands of firms packed into a relatively small area—while functioning on the ground as a collection of fragmented economic islands.

Recent research on firms across developing economies provides compelling evidence that this is not merely an inconvenience for commuters. Congestion can diminish one of the principal economic advantages for which cities exist: the productivity benefits of agglomeration.

Density is valuable only when it is accessible

Economists describe the advantages of urban concentration through three broad mechanisms: sharing, matching and learning.

A dense city allows businesses to share infrastructure, services and specialized suppliers. It creates deeper labor markets in which employers are more likely to find workers with

precisely the skills they require, while workers have access to a larger number of potential employers. It also facilitates the formal and informal exchange of knowledge—the meetings, conversations, collaborations, and movements of people through which ideas circulate.

It also offers a straightforward market-access advantage. A restaurant surrounded by a million people potentially has a larger market than one surrounded by ten thousand. A consultancy located among hundreds of potential corporate clients should have an advantage over one operating in isolation.

The crucial word, however, is *potentially*.

A worker who lives eight kilometers from a job but requires 90 minutes to reach it is not meaningfully close to that employer. A customer who must negotiate an hour of traffic to visit a shop is less likely to make the journey. A supplier whose vehicle spends much of the working day stationary on a congested road cannot exploit geographical proximity particularly effectively.

The economic city, therefore, is not identical to the physical city.

Its true size is determined by how many jobs, workers, customers, suppliers and institutions can realistically reach one another within a reasonable amount of time.

This distinction helps explain an apparent paradox of urbanization in many developing economies. Their cities have become extraordinarily dense without always producing the productivity gains that density should theoretically generate.

Research has long offered conflicting answers to this puzzle. Some studies find substantial benefits from urban concentration, broadly comparable to those found in advanced economies. Others find what might be called sterile agglomeration: cities become larger and

more crowded without becoming proportionately more productive.

There are several reasons why this can happen. Pollution, crime, disease, expensive land and overstretched public infrastructure can offset some of the advantages of concentration. But another factor deserves far greater attention: mobility.

The invisible tax on the urban economy

A large cross-country study, combining firm-level information with measures of urban mobility, offers an unusually revealing picture.

The researchers examine more than 38,000 firms spread across 356 metropolitan areas in 80 developing countries. To understand how easily people can move within these cities, they draw on mobility indicators constructed from more than 530 million simulated journeys.

Importantly, the research distinguishes between two different urban problems.

The first is a city that is simply slow. Poor roads, inadequate networks or weak infrastructure mean journeys take a long time even when there is relatively little traffic.

The second is congestion: a city whose movement deteriorates sharply during periods of high demand.

Both reduce the economic value of density. But the evidence suggests that extreme congestion is considerably more damaging. The estimated erosion of agglomeration benefits associated with congestion is roughly two-and-a-half times as large as that associated with generally slow travel caused by inadequate roads.

That finding should alter the way governments think about traffic.

Congestion is conventionally treated as a transportation problem. It is measured in minutes lost by commuters, additional fuel consumed, or pollution generated by vehicles.

All of those costs matter. But congestion is also a productivity problem.

Every severe traffic jam changes the effective geography of the city. It pushes workers farther from jobs without moving their homes. It pushes customers farther from businesses without relocating either of them. It separates firms from suppliers and reduces the number of economically useful interactions that can occur during a working day.

In effect, congestion makes the city larger in all the wrong ways.

INTERACTIVE CALCULATOR

How Far Away is X Kilometres?

Physical distance tells only part of the urban story. Adjust the journey below to see how congestion changes the economic distance between two points in a city.

Distance 10 km 10

Normal travel time 25 min 25

Peak-hour travel time 60 min 60

NORMAL TRAVEL SPEED

24.0

km/h

PEAK-HOUR SPEED

10.0

km/h

CONGESTION PENALTY

140%

extra journey time

ECONOMIC DISTANCE

24.0 km

time-equivalent distance at normal speed

Illustrative area reachable within 45 minutes

Normal

1018 km²

Peak hour

177 km²

> During peak congestion, this 10 km journey behaves more like a 24 km journey in normal traffic.

How this works: Speed is calculated from the distance and travel time selected above. “Economic distance” asks how far a traveller could have travelled in the peak-hour time at the normal travel speed. Reachable area is an illustrative geometric measure based on the distance that could be travelled in 45 minutes at each speed. It does not estimate firm productivity or imply that every point inside the radius is actually accessible. This is designed to illustrate the accessibility mechanism discussed in this piece.

A metropolitan area may occupy the same number of square kilometers, but economically meaningful distances expand.

This is why simply increasing density cannot guarantee greater productivity. Density creates economic opportunity only if the people and businesses within that density remain accessible to one another.

One city, several economic islands

This problem is especially relevant to developing economies because urban growth frequently runs ahead of infrastructure.

Housing expands in one direction, employment clusters in another, and transportation systems struggle to catch up. Low-income workers are pushed towards cheaper peripheral neighborhoods while many of the best employment opportunities remain concentrated elsewhere. Roads designed for much smaller populations become permanent bottlenecks.

The result can be a peculiar form of metropolitan fragmentation.

On a map, everyone belongs to the same labor market. In reality, a two-hour commute may exclude a worker from a job as effectively as geographical distance would.

Likewise, a neighborhood may contain hundreds of thousands of potential consumers but remain commercially isolated if reaching it is difficult.

This also has implications for inequality and informality.

Where mobility is poor, businesses naturally shrink the geographical radius within which they recruit, sell and purchase. Workers similarly restrict the area within which they can realistically seek employment. Low-income communities with weak transportation links consequently become disconnected from formal economic opportunities even when they are physically surrounded by a prosperous metropolis.

The irony is striking: enormous cities can simultaneously possess extraordinary concentrations of economic activity and severe shortages of accessible opportunity.

The neighborhood business pays the highest price

Congestion does not affect every firm equally.

The research suggests that businesses producing nontradable services—including restaurants, shops, transportation services and personal services—are particularly vulnerable.

The reason is intuitive. Much of the service economy requires producers and consumers to occupy the same place at approximately the same time.

A meal cannot be exported from a neighborhood restaurant in the same way as a manufactured component. A haircut requires the customer to reach the salon. Many professional and personal services depend upon meetings, visits and repeated local interactions.

When travel becomes difficult, the effective market available to these businesses contracts.

A restaurant may theoretically have two million potential customers within ten kilometers. But if most of them require an exhausting journey to reach it, that theoretical market means little. The economically relevant customer base is the population that can reach the restaurant conveniently.

The same applies to labor. A business may be surrounded by millions of workers but struggle to recruit them if commuting is prohibitively difficult.

Manufacturers and exporters are often somewhat better protected. Factories may be situated outside the most congested central districts. Larger companies can organize employee transportation, alter delivery schedules, maintain inventories or absorb some logistical costs. Export-oriented firms also depend less heavily on customers traveling across the local metropolitan area.

Foreign-owned and better-capitalized companies similarly possess more resources with which to adapt.

This creates another hidden consequence of congestion: it is not competitively neutral.

A large company can purchase resilience. A small local business often cannot.

The cost of urban dysfunction therefore falls disproportionately on enterprises whose

markets, workers and revenues are most dependent on the city immediately around them.

The lesson for urban policy

For policymakers, the conclusion should not be that developing countries must resist density.

That would mistake the symptom for the disease.

Low-density urban sprawl carries its own enormous costs. It increases infrastructure requirements, lengthens journeys, consumes land and can make mass transit less viable. Properly functioning density remains one of the great economic advantages of urbanization.

The objective should instead be to make density usable.

That requires a shift from thinking primarily about how many kilometers of roads a city possesses to asking a more economically meaningful question: how much opportunity can a citizen or business reach within 30, 45 or 60 minutes?

A successful transportation system is ultimately an accessibility system.

Its purpose is not simply to move vehicles faster. It is to connect people with jobs, businesses with customers, producers with suppliers and neighborhoods with opportunity.

That distinction matters because building more roads cannot by itself solve congestion. Additional road capacity can encourage additional driving, while poorly coordinated development can quickly overwhelm new infrastructure.

Cities therefore need several policies working together.

Reliable mass transit must form the backbone of large metropolitan regions. Buses, metro systems and suburban rail must connect residential concentrations with employment centers rather than merely follow administrative boundaries.

Land-use policy must evolve alongside transportation policy. Housing and commercial development should be concentrated where high-capacity transportation can support it, while new employment centers should not be created without considering how workers will reach them.

Public transport also has to become competitive with private vehicles in reliability, comfort and travel time. Governments cannot indefinitely subsidize the social cost of driving while expecting commuters voluntarily to abandon cars.

This is where measures such as rational parking charges, congestion pricing and reform of fuel subsidies deserve serious consideration.

Congestion pricing is often politically difficult because motorists see immediately what they are being asked to pay. The costs imposed by congestion, by contrast, remain largely invisible.

But a driver entering an already saturated road does not impose delays only on the vehicle immediately behind. The cumulative effect is transmitted across the metropolitan economy. Meetings disappear from schedules. Deliveries become less predictable. Workers reject distant jobs. Consumers avoid distant businesses. Firms maintain larger inventories to compensate for unreliable logistics. Valuable interactions simply do not occur.

The social cost of congestion is consequently larger than the sum of wasted commuting hours.

Digital connectivity is now urban infrastructure

There is another element that urban policy should increasingly recognize: not every journey needs to happen.

High-quality digital connectivity can substitute for some physical movement. Remote work, digital government services, online banking, telemedicine and electronic commerce can remove millions of unnecessary trips from metropolitan networks.

This does not eliminate the importance of physical proximity. Indeed, the continuing value of cities demonstrates that face-to-face interaction remains economically powerful.

But if a document can be submitted online, a citizen should not need to travel across a metropolis to submit it at a counter. If a routine business meeting can occur digitally, five participants need not contribute five additional journeys to peak-hour congestion.

Broadband should therefore be understood partly as transportation infrastructure: it moves economic activity without moving bodies.

From the crowded city to the connected city

The urban debate in developing countries has too often been framed around a misleading question: are our cities becoming too crowded?

A better question is whether they are becoming sufficiently connected.

A crowded city is not necessarily an economically successful city. Nor is a dense city inherently dysfunctional. What matters is whether its density produces interaction.

The distinction will become increasingly important as the developing world urbanizes. Governments will spend enormous sums over the coming decades on metros, highways, housing, business districts and new urban extensions. The success of those investments should not be judged merely by kilometers of infrastructure constructed or numbers of passengers carried.

They should be judged by the economic connections they create.

How many additional jobs can the average worker reach in 45 minutes? How many customers become accessible to a small business? How much larger does a firm's realistic supplier network become? How many previously isolated neighborhoods become integrated into the metropolitan labor market?

These are not merely transportation questions. They are questions of productivity, inequality and economic growth.

The great economic promise of the city has always been that bringing people closer together allows them to accomplish more together. But physical closeness is no longer enough.

A city fulfills that promise only when proximity on the map becomes proximity in everyday life.

In the twenty-first-century metropolis, distance should increasingly be measured not in kilometers, but in minutes.