Order without Design

How Markets Shape Cities

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1 Economists and Urban Planners: Two Visions of Cities That Need to Be Merged

Nations stumble upon establishments, which are indeed the result of human action, but not the execution of any human design.

—Adam Ferguson, *An Essay on the History of Civil Science*, 1782

Order generated without design can far outstrip plans men consciously contrive.

—Friedrich Hayek, *The Fatal Conceit*, 1988

Markets and Design

This book is about the observed interaction between economic markets and design in the development of a few cities around the world. Markets are impersonal, transactional mechanisms resulting from human action (e.g., exchanges of value, movement of goods) but not from human design, as expressed by the Enlightenment-era Scottish philosopher Adam Ferguson. Indeed, markets create an order generated without design, as argued by Frederich Hayek, an Austrian-British economist and philosopher who taught at the London School of Economics, the University of Chicago, and the University of Freiburg in the middle of the twentieth century. The order created by markets manifests itself in the shape of cities. Markets transmit through prices the information generating the spatial order. When prices are distorted, so is the order generated by markets.

Urban planners—on behalf of politicians—aim to modify that order through design. These design interventions implemented by planners consist mostly of regulations and the building of infrastructure and public spaces. The objective of planning regulations is to modify the outcome of unconstrained markets to increase the welfare of citizens. What is the extent of the modification of market outcome achieved by planners? It varies from only slight modification in a city like Houston, Texas, to complete obliteration in a city like Brasília, Brazil, and in some cities of the former Soviet Union.

We are facing a strangely paradoxical situation in the way cities are managed: the professionals in charge of modifying market outcomes through regulations (planners) know very little about markets, and the professionals who understand markets (urban economists) are seldom involved in the design of regulations aimed at restraining these markets. It is not surprising that the lack of interaction between the two professions causes serious dysfunction in the development of cities. It is the story of the blind and the paralytic going their own ways: The planners are blind; they act without seeing. The economists are paralyzed; they see but do not act.

The main objective of this book is to improve operational urban planning, as practiced in municipal planning departments, by applying urban economists' knowledge (and models) to the design and planning of regulations and infrastructure. Urban economists understand the functioning of markets, while planners are often baffled by them. Unfortunately, the very valuable knowledge that has accumulated in urban economics literature has not had much impact on operational urban planning. My aim is not to develop a new urban theory but to introduce already existing urban economics knowledge into urban planning practices.

Urban Planning versus Urban Economics

Urban planning is a craft learned through practice. Planners must make rapid decisions that have an immediate impact on the ground. The width of streets, the minimum size of land parcels, and the heights of buildings are usually based on planners' decisions. Urban planners are "normative," that is, they base their decisions on best professional practices that usually rely on rules of thumb transmitted from generation to generation. Urban planners use expressions that are often more qualitative than quantitative. They like to use adjectives like "sustainable," "livable," "compact," "resilient," and "equitable" to characterize their planning objectives. However, planners seldom feel the need to link these qualitative objectives to measurable indicators. It is therefore impossible to know if the planning strategies used are indeed "sustainable" or "livable." In the absence of quantitative indicators, one might conclude that these terms are only labels that provide a kind of moral high ground to whatever urban plan is proposed.

By contrast, urban economics is a quantitative science, based on theories, models, and empirical evidence that are developed mostly in academic settings. Papers published in academic journals are the primary output of urban economists, and urban economists mostly exchange ideas with other urban economists. They seldom have direct contact with people in planning departments who make decisions on zoning or on the alignment of a new subway line. Economists' contacts with cities are usually indirect, consisting mostly of obtaining databases that they analyze with great skill. There is no obligation to give feedback to the planners.

I believe that applying the theories of urban economics to the practice of urban planning would greatly improve the productivity of cities and the welfare of urban citizens; I have seen the benefits of this approach in my own practice as well as for a small subset of planners. In addition, convincing urban economists to participate directly in the day-to-day work of municipal planning departments might, as an added benefit, focus academic research on current crucial urban development issues. Cities generate a large amount of data, often recorded in urban departments, but it remains unused; planners, busy with their day-to-day operational responsibilities, lack the time and the theoretical background to fully use the data to guide their decision making. New technologies are creating an abundance of new sources of urban data. Starting in the 1980s, the availability of satellite imagery allows year-by-year monitoring of the development of cities; NASA night light imagery provides a useful proxy for urban economic development; and data from GPS-enabled phones permits measurement of traffic congestion and commuting times at any time of the day. The usefulness and significance of these new data sources have seldom been explored. Economists working in urban departments should be able to make good use of the data available. This would rapidly increase our understanding of cities for the greatest benefits of their citizens.

A Personal Journey of Discovery

This book is largely based on my personal experience as a practicing urban planner and on what I learned from urban economists on the job. Urban planning is a craft learned mostly in the field. I worked in many cities and many countries during a professional career of about 55 years. Every new project and every new city contributed to my experience and knowledge. I have been a resident urban planner for seven cities and consulted for more than fifty cities. I'm now working at New York University, where I teach planners and urban economists from around the world. I try to reflect this experience throughout this book.

Some readers might deplore the fact that I do not devote much space to a critical review of urban planning theory. Indeed, in this book I do not refer often to academic debates about the nature of urban planning, or to the urban planning literature. By contrast, I often quote academic urban economists, precisely because this discipline appears to me more relevant to understanding the problem at hand. In writing this book, I have been inspired by the approach used by Albert Hirschman when confronted with world development economics. Hirschman's method was to observe reality on the ground, analyze the facts, and then develop a theory. He had a marked skepticism for imported theories and expert opinion. One of his major books, aptly named *Development Projects Observed*,[1] is entirely based on a field survey of development projects around the world. He summarizes his field

method this way: "Immersion in the particular proved, as usual, essential for the catching of anything general."

Three major events significantly improved my understanding of cities. The first was in 1965, when I became, by chance, responsible for authorizing building permits for the city of Tlemcen in Algeria. I then discovered how arbitrary and harmful some urban regulations could be, no matter how well intentioned their original objective had been.

The second major event was in 1974, when for the first time I had the opportunity to work with an urban economist on a specific project in Haiti—the master plan of Port-au-Prince. I discovered there that there were economic theories that explained some of the empirical observations I had made about cities.

The third event came much later, in 1983 in China and in 1991 in Russia, when I had the opportunity to work in countries that were just transitioning from command economies to markets. By then, I already knew the indispensable role that land prices and rents played in shaping the spatial structure of cities. In China and Russia, I witnessed for the first time the absurdity resulting from planners having to allocate land among users without the help of land prices, the primary driver of urban markets.

The experience of working in the 1980s and 1990s in China and Russia was particularly valuable and unique. Large command economies have now disappeared. The cities of the last two command economies in the world, North Korea and Cuba, are seldom analyzed. Command economies have never been very open about sharing data. Unfortunately, the memory of the poor outcomes created by the command economy experience in the development of cities seems to have been lost. In this book I will occasionally remind the reader of the outcomes of the utopian system I personally witnessed, not only the Marxist experiment in urban planning, but also other equally utopian ideas based on the design of inspired planners like Le Corbusier, Lúcio Costa, or Oscar Niemeyer. I sometimes meet younger colleagues or students taking my course on Market and Design at New York University who are tempted by the idea of cities designed entirely by planners without the guidance—they would say hindrance—of land prices. I hope this book will convince them that there is no need to repeat this costly utopia.

Approving and Rejecting Building Permits in Tlemcen, Algeria

In 1965, I had not yet completed my architectural and planning studies in Paris. At that time France still had a military draft, and my student deferment period had expired. I was lucky enough to spend the last year of my military service in Algeria as a civilian technical assistant, a sort of French version of the Peace Corps. Algeria had been independent for only 2 years after a bitter war to free itself from

colonial rule. At the time, there were so few Algerian urban planners that the government appointed me "*Inspecteur de l'Urbanisme*" or "Urban Inspector" for Tlemcen, a city of about 80,000 people in the Western part of Algeria. My job consisted of preparing new land development plans, but mostly it required spending the majority of my mornings deciding the fate of building permit applications.

A very experienced administrative assistant, many years my senior, reviewed the building permit applications the day before I had to make the final decisions. She prepared letters addressed to the applicants that approved or rejected their applications. I had only to sign the letters. The decision to approve or reject building permits was based on whether the plans provided by the applicant conformed to the rules contained in the *Code de l'urbanisme.* The huge book that contained the rules, norms, and regulations for land development and construction looked like a family bible. It certainly had the authority of a Holy Book for urban planners and for the employees working in the urban planning department. Because independence was so recent, the Algerian administration had to rely on the regulations previously imposed by the colonial power. Therefore, the provisions of the *Code de l'urbanisme* reflected the practices and norms of France, a country very different from Algeria in terms of income, culture, traditions, and climate.

On my first day on the job, to my dismay, about eight out of ten residential building permits were to be refused. The letters of rejection were already typed in their final form, including references to the articles of the "code" that were violated by the plans attached to the request. Most of the violations had to do with inadequate setbacks as well as window sizes and locations.

The violations of the code were easy to explain from an economic and cultural point of view. In the cities of newly independent Algeria, vacant lots facing a formal street were rare and expensive. The price of land was such that lots tended to be small in order to remain affordable. Traditional houses in the old medina of Tlemcen were designed around a central courtyard, while the building surrounding the courtyard occupied the entire lot up to the property lines. Because privacy was highly valued, there were few windows opening onto streets, and these windows were narrow and placed high on the walls to prevent any direct view from the street into the house. The applicants for building permits were trying to design a house as close as possible to their preferred model, but the regulations were designed to produce a suburban detached house like the ones found in the suburbs of Paris. The small size of the lots the applicants could afford combined with the generous setbacks demanded by the regulations made the floor size of the prospective house much smaller than they would have been if regulations had allowed them to build a house, with a central courtyard, that occupied the entire lot. In addition, the requirement of large windows opening onto the streets was a direct violation of their cultural norms.

I had traveled extensively in the Middle East as a student and was well aware of the cultural differences between the design of houses in the Southern and Eastern part of the Mediterranean and those of continental Western Europe. I had also visited some of the elegant houses in the old medina of Tlemcen and found them, not surprisingly, much better adapted to the climate and mores of Algeria than were detached French suburban homes.

During my first 3 days on the job, I reluctantly signed the letters prepared by my administrative assistant, but with a guilty conscience. By enforcing the regulations, I was forcing on local people an inadequate design and an inefficient use of scarce land in the name of abstract norms established long ago in a distant land with a different climate and culture. I was also aware that by rejecting building permit applications I was slowing down and increasing the cost of construction of new dwellings that Algerians desperately needed. Most of the new immigrants moving from the countryside to Tlemcen could not afford a formal house, so they built whatever they could afford in the informal settlements surrounding the city. By rejecting building permits, I was likely to further increase the growth of informal settlements. With the end of the war, people were moving to cities from rural areas in great numbers. They formed tightly packed informal settlements filling vacant land around cities. These settlements lacked running water, sewer, and electricity, but the new settlers found their location close to a city more desirable than the isolation of the scattered villages and hamlets of the countryside.

On the fourth day, I did not sign the letters but went to see the prefect of the region. The prefect was the representative of the central government in Tlemcen and had authority over all the functionaries of the state, including me. I explained the problem to him: by enforcing the law I was decreasing the welfare of the inhabitants of the region. As an architect, I asked him for permission to use my own professional judgment and common sense in providing building permits, even when some norms were at variance with the code. The prefect was a young military officer who had fought in the armies of the National Liberation Front and, like me, was a little puzzled by all the administrative rules that he was supposed to enforce. He heartily gave me permission to use common sense. In any other circumstances, giving permission to ignore the law would have been a crime, but in the frontier atmosphere of newly independent Algeria, we both got away with it.

Poor Regulations Are Still Common

This episode in my early professional life gave me a healthy skepticism toward urban regulations that are based on norms whose rationale is seldom challenged. The dimensional norms that I was supposed to apply were imposed by the code solely to impose a preset design on residential areas. They were conceived for the sole purpose of preventing a deviation from the design that was predominant in

the suburbs of French cities. The regulations had nothing to do with safety or sanitation—I would not have doubted the wisdom of these types of regulations without expert evidence.

In this case, the circumstances were exceptional. Algeria's urban regulations had been imposed by a colonial power, and there had not yet been time to modify them. My current experience, more than 50 years later, makes me fear that the same regulations are still on the books in Algeria. To this day, when working in India, I am still stumbling on some remnants of the British Town and Country Planning Act passed in 1932, causing similar welfare reductions in India as the *Code de l'urbanisme* did in Algeria in 1965.

I do not deny the necessity of urban regulations. But their impact should be regularly audited to weed out those regulations that have become irrelevant or even noxious. The original objectives of urban regulations are often lost and therefore are difficult to question. Urban rules are often transmitted through generations as traditional wisdom that is seldom challenged. However, circumstances change, and rules, specifically urban rules, must be adapted to these new circumstances.

At the time I revolted against the regulations applied to Algeria, I was not yet aware that the urban economics literature had an abundance of papers that evaluated the costs and benefits of urban regulations. Unfortunately, to this day the knowledge accumulated in this economic literature seldom percolates into urban operational planning practices, and urban regulations detrimental to the welfare of citizens still survive unchallenged. The inadequacy of poorly designed urban regulations is not an idiosyncrasy of a recently independent Algeria. In a recent report, Edward Glaeser,[2] a prominent American urban economist at Harvard University, writes about US urban regulations:

> Arguably, land use controls have a more widespread impact on the lives of ordinary Americans than any other regulation. These controls, typically imposed by localities, make housing more expensive and restrict the growth of America's most successful metropolitan areas. These regulations have accreted over time with virtually no cost-benefit analysis.

Although Glaeser is writing about US land use regulations, based on my worldwide professional experience, his comments also apply to the urban regulations of most world cities.

I want to make clear that I do not advocate "deregulation" as an ideological doctrine. Some urban regulations are indispensable. I only advocate periodically auditing urban regulations to eliminate the ones that are irrelevant or malignant. This is an exercise that every urban planner should do on a regular basis. Auditing urban regulations is like periodically pruning a tree: the objective is not to cut branches but to allow the tree to develop fully.

The Fortuitous Encounter of an Economist and an Urban Planner in a Capital City of the Caribbean

My first encounter with an urban economist took place in Port-au-Prince, Haiti, in 1974. That year, I was going to be the lead urban planner of a multinational team assembled to prepare the master plan of Port-au-Prince, a project financed by the United Nations Development Programme. In the preceding years I had worked as resident urban planner in several cities around the world, including Chandigarh, India; Tlemcen, Algeria; Sana'a, Yemen; and Karachi, Pakistan. My experience in those cities had been purely operational, setting standards for new areas to be developed, designing low-income housing, and planning new public transport routes. In addition, I had worked for 2 years in New York City for the Urban Planning Commission, where I had been conducting some research on the possible redevelopment of air rights over Park Avenue in Harlem.

I was considered experienced enough by my employers—the United Nations and a Washington-based US consulting firm for which I worked—to lead the preparation of a master plan for a capital city; a project that would require 2½ years of residence at Port-au-Prince. Among the team members that I met in Port-Au-Prince when we assembled there for the first time was Jim Wright, a 30-year-old American urban economist who had graduated from Georgetown University and who had already worked in Zambia and Bolivia in the Peace Corps.

It was my first encounter with an economist, despite my several years of urban planning practice. My degree in architecture and urban planning from the École des Beaux-Arts in Paris had taught me that a city was to be designed just like a building—only the scale varied. Urban problems could be solved through good design. I did not have a clear view of what urban economists did. Like most urban planners, I did not even make a clear distinction between an urban economist's job and that of a financial analyst or even an accountant. In 2017, I still often encounter urban planners who do not have a clear view of the difference between economics and accounting. In their view, an economist is someone who will add up the costs of an urban project they propose and probably will argue that the costs are too high despite their "good design."

During my professional practice, I had observed patterns in the way cities were spontaneously organized. Land prices decreased as one got farther away from city centers. When land prices were high, households and firms consumed less land, and as a consequence, population density increased. While the objective of urban planning regulations was nearly always to limit densities, I noticed that they had very little success in doing so when the price of land was high compared to household income.

These were personal observations on the relationships between densities and prices. I did not know that a rich theoretical and empirical literature on the subject

helped explain, with the help of mathematical models, why those patterns emerge spontaneously. Using simple models, economists could predict in which directions densities were likely to change with changes in variables like income, price of transport, or price of agricultural land.

Some readers might think that I may have been an exceptionally ignorant urban planner. I do not think that I was exceptional: I was rather typical in my ignorance. In the planning profession, high land prices are often deplored but are usually thought to be caused by speculators. To this day, few planners make a connection between land prices and rents, and the supply of land and floor space. That is why planners who design regulations that severely limit the extension of cities (e.g., through measures such as green-belts, designations between urban and agricultural land, etc. explored in chapter 4) are often surprised by increasing land prices and attribute them to external factors for which they were not responsible.

The Port-au-Prince Experience

Because of the very open personality of Jim Wright, his enthusiasm, and his competence in his field, I soon learned that urban economics could provide a theoretical framework and solid empirical evidence to explain facts that I had observed but could not explain. I was like somebody who, after spending years observing the planets, has suddenly gained access to Newton's law of gravitation.

Our first professional exchange concerned the population growth of Port-au-Prince. Both the Haitian government and some "experts" sent by the United Nations had declared that the growth of Port-au-Prince—636,000 inhabitants in 1973, growing at about 5 percent a year—should be stopped and that the government policy should be to divert migration toward smaller towns. Jim and I thought this policy absurd, but for different reasons.

I had three main arguments against policy limiting the growth of Port-au-Prince. The first was that no known urban planning instrument could prevent people from migrating to large cities, even under the dictatorship of Jean-Claude Duvalier, who was then Haiti's "President for Life."

The second was that I knew that people moved to large cities to find jobs. They had other choices as well—like migrating to smaller cities or staying in their villages—but most did not make those decisions. Instead, they moved into the dense slums of Port-au-Prince, where living conditions were terrible. This decision was motivated by the living conditions in the rural areas from which they came, which were even worse.

The fact that, after moving to Port-au-Prince, migrants survived and remained in the city demonstrated that they could support their families by the income from their work in the informal or the formal sector. Haiti was not a welfare state, and their mere survival proved their ingenuity at integrating into the urban economy. I had often talked to slum dwellers in India, Algeria, and Yemen, and

always found them very practical and full of common sense. We planners had to trust that migrants moving to the big city had knowledge that we did not have about living conditions in the city slums compared to those in the countryside.

Finally, I believe in democracy. In Haiti, under Jean-Claude Duvalier's dictatorship, people could not express themselves through the ballot box, but at least they could vote with their feet by moving to the place that would enhance their welfare. This form of primitive democracy had to be respected. The size of cities should be decided by the inhabitants themselves; cities will stop growing only when the misery of urban slums becomes greater than that of the countryside. Only migrants themselves can make this assessment.

At that time, planners were debating about the optimum size of cities, usually advocating for a size between half a million and a million people. I was firmly convinced that the size and growth rate of cities could not be modified by expert opinion, no matter how scholarly that opinion was. However, I had to recognize that my strong conviction was only based on personal observations and anecdotal evidence collected during a short professional career.

A conversation about the size of cities with Jim Wright, the first economist I had ever met, was enough to make me aware of a vast economic literature about the efficiency of large labor markets. I realized that the field of urban economics complemented urban planning. Jim Wright shared my opinion about the absurdity of planning Port-au-Prince assuming a constant or even decreasing future population. However, he could back up his opinion with a large body of economic literature, based on both theoretical and empirical evidence. Jim then patiently explained to me the concept of scale economy, knowledge spillovers, and why large labor markets were often more productive than smaller ones.

Our professional exchange was not only one way, however. To do his job as an economist, Jim needed data on Port-au-Prince, and except for the census and a set of recently taken aerial photographs, very little data were available. Jim had never worked with an urban planner before. It was my turn to explain to him that I could rapidly produce data on densities, housing prices and rents, and time and cost of transport from different parts of the city just by measuring and interpreting aerial photographs, and superimposing on the photographs census tracts drawn on tracing paper.

While we were in Yemen, my wife Marie-Agnes, who is also a planner, and I had developed a set of survey techniques based on the interpretation of aerial photographs associated with stratified sampling that required only rapid field surveys. Using these techniques, we could generate credible urban spatial data in a short time. There was no GIS at that time. Calculations were done using slide rules, and areas had to be measured on paper maps using a mechanical planimeter. It was a lengthy and tedious process, but the information that emerged justified the effort.

As planners, we were using the data generated by our surveys to project the need for infrastructure and social services per neighborhood, and we could link these services to the ability to pay for them based on an evaluation of household income, rents, and house values in each neighborhood. But our measures were static: We did not have models to predict trends in population densities.

Jim, of course, was delighted to learn that he would soon have access to spatial data, and he was planning to use the data for much more sophisticated analysis and projections than we had done so far for infrastructure and services. This is when we decided that our two fields were indeed complementary and that by working together—an economist and an urban planner—we could rapidly produce the evidence that would convince the Haitian government and the United Nations that a larger city could also become more affluent if we could plan and implement the minimum physical and social infrastructure that would accommodate the rapid spatial extension of Port-au-Prince. Jim and I became not only close professional partners but also good friends, and we have maintained our close friendship ever since.

Cities without Land and Labor Markets: China 1983, Russia 1991

Planners believe in norms. They happily regulate minimum lot sizes, minimum dwelling floor sizes, maximum heights of buildings, minimum street widths, and so forth. However, when trying to enforce these regulations, they often run into the harsh reality of land prices. What should be done when many households cannot afford the minimum regulatory lot size because of high land prices? Planners see land prices as the main obstacle to affordability. If a government were to replace land markets with design based on norms, the major obstacle to housing affordability—and to good planning in general—would be solved. Additionally, land could be allocated in sufficient quantity to low-, middle-, and high-income housing on a map. To this day, this is the essence of most master plans.

This urban planner's dream—where designed norms replace markets for allocating land—existed in the Soviet Union from 1922 to 1991, and from 1947 to around 2000 in the People's Republic of China. I had the chance to work in China and in Russia before land markets were reintroduced, and I could observe from the inside how a planner's dream could transform itself into a terribly wasteful utopia.

My first trip to China was in 1983. I was part of a World Bank team that was appraising, for prospective financing, a major sewer project in Shanghai. My job consisted of assessing population densities, spatial urban structures, and development trends to ensure that the sewer system financed by the World Bank maximized economic rate of return for the city and would benefit a large number of

low-income households. I was also asked to collect data on housing conditions in China to explore the possibility of housing reform, as the Chinese government had shown a tentative interest in the subject.

Observing the inner workings of a command economy was an incredible opportunity to see a live experiment of what happens to a city when prices are not used to allocate resources. Urban planners have few opportunities to experiment on the real world. Economists may build mathematical models mimicking command economies, but observing first hand the impact of an economic system so different from anything we had seen before was fascinating for the entire team. Nothing provides a better understanding of markets than observing a city where market forces do not apply.

Brain surgeons greatly improved their understanding of the functioning of the brain when they had to treat victims of accidents and wars who had severe brain injuries. In the same way, planners and economists, familiar with the functioning of market economies, who worked in China in the 1980s and Russia in the 1990s, improved their understanding of markets by observing on the ground the spatial outcome of this gigantic social experiment.

Cities without Land Markets

In 1983, China had already started some reforms, but the country was still largely a command economy. Housing was provided by state-owned companies. Housing was not considered a commodity to be bought and sold but a factor of production owned by enterprises that provided housing to their workers practically rent free.

Salaries were set for each economic sector by the central government. There was no real labor market, as employees were expected to have lifelong employment in the same state firm. While changing jobs was theoretically possible, it usually had to be initiated by the state employer. Salaries appeared incredibly low to outsiders. My urban planners' colleagues were paid about US$25 monthly. This was not their real income, though. In a command economy, the state collects about 90 percent of the value that a worker produces and gives only "pocket money" in cash to the worker. Most of a worker's income is distributed in kind in the form of housing, food in the enterprise cafeteria, and heavily subsidized clothing and other consumer items available at nominal prices in each enterprise's commissary. Even vacations were usually provided by the work unit. Of course, as everything was either free or heavily subsidized, rationing and shortages were the only way to balance supply and demand.

For a planner, the absence of land markets created a striking difference in land use between Chinese cities and market economies' cities. According to the Chinese constitution, land belonged to the "people" and could not be sold or bought.

However, the right to use land was allocated to firms, and sometimes households, by the Land and Planning Bureau. In the absence of land prices, the quantity of land to be allocated to different activities was based on norms established by architects and engineers. These norms were often originally developed in the Soviet Union in the 1950s and eventually passed on to the People's Republic of China. I had an occasion to discuss norms with my Chinese colleagues, and they were curious to compare their norms with Western ones. I remember a discussion about the number and size of barber shops that should be planned per 1,000 people in residential neighborhoods. I had to use the favorite response of economists to answer the question from my Chinese counterpart on planning barber shops norms in the United States: "It all depends!"

Cities without Markets Are an Urban Planner's Dream …

The allocation of urban land following design norms without taking land prices into account is of course an urban planner's dream. But for planners working in market economies, it remained a dream, while in China it was the daily reality. Planners and engineers like to reason in terms of "needs," while urban economists think in terms of scarce resource allocation. Asked to provide an opinion on the optimum density of a residential area, a planner will usually provide a number, say, 150 people per hectare. This estimate would be based on norms—for instance, the density required if the walking distance to a primary school of optimum size should be less than 15 minutes, or the optimum density to be able to operate a network of public transport buses that arrive every 15 minutes. Asked the same question, an urban economist would answer, and rightly so, "it all depends." This answer will infuriate urban planners. However, it is obviously correct. Urban land is a scarce resource, and its price indicates how scarce it is in a specific location. Therefore, depending on its price, land should be used parsimoniously where the price is high, resulting in high density, and more lavishly where it is cheap, resulting in lower densities. From an economist's point of view, there is no optimum population density, as density, which is a land consumption indicator, depends on several variables whose values change over time even for the same location.

But Norms Are Unable to Allocate Land among Multiple Users

The absence of land prices in China and Russia had an important impact on the structure of their cities. Because the land occupied by a firm was not recognized to have value per se, it could not be recycled for another use or passed to another user, who, in a market economy, would have been bidding for it. As Chinese cities expanded, there were pockets of industrial land located close to the city center that could not be reconverted for other uses, because no mechanism existed to do so.

In a market economy, when the potential rent of a lot is higher than for its current use, the owner of the lot has a strong incentive to sell or redevelop the land for a more profitable use. In this way, low-rise buildings are transformed into high-rise buildings, and warehouses into office buildings. The increased price of the land under the new use pays for the demolition and relocation of the obsolete building. The land use transformation process is triggered by land prices. There is no need for a planner's intervention to initiate land use change. The dynamic of market prices is so powerful that often planners impose land use regulations to slow down the transformation triggered by the land market.

In a command economy, there are no price signals, so an obsolete land use is likely to remain in effect for a very long time. Let us take the example of a factory built long ago near a city's central business district, on what would now be a very desirable piece of land for a department store or an office building because of its accessibility. The state firm owning the land use rights cannot move its factory to a different part of town that would be more convenient for operating a factory, because the land occupied by the factory has no market value. The firm can only request the government to provide a new parcel of land in a new location, while probably also requesting funds to cover the cost of relocating the factory. As one can imagine, this is not likely to happen often. In a command economy, a land use change always appears as a cost without any direct apparent benefit either to the owner of the land use right or to the government department that will have to authorize the change and pay for it. Even the loss of productivity due to a poor location will not appear in obvious ways to the managers of an enterprise, as prices for production are established by the central government independently of the cost of inputs.

This has consequences for the structure of cities in command economies. The newest buildings are always found in areas newly developed in the suburbs. In Russia, for instance, factories built in the nineteenth century or in the first half of the twentieth century found themselves located in what is now the downtown area. High-rise residential buildings are found on the periphery of cities, while low-rise buildings are found closer to the center. High population densities are found in the suburbs, where land values would be the lowest if located in a market economy, and low densities are found close to the city center, where land values would be the highest. One of my colleagues, an economist from the World Bank named Bertrand Renaud, and I wrote a paper titled "Cities without Land Markets,"[3] which summarized our observations of the impact of the absence of prices on land use in Russian cities.

Does this difference of urban spatial outcome between command and market economies matter? A Russian colleague, head of a construction *kombinat*,[4] once told me, "The Soviet Union had a wonderful system; we just ran out of money!"

This was precisely the point. The inefficiencies of urban spatial structure, the lack of labor market mobility, the inability of an economy based on norms to adjust to evolving technology and to changing demand for land, contributed to the economic collapse of the Soviet Union, despite its very well educated and skilled urban population and its abundant natural resources.

In cities of market economies, urban planners still tend to prefer norms to prices when allocating land and floor space. In the cities where they are successful, they may waste land in a way that resembles what happened in the Soviet Union.

The system allocating resources in the former Soviet Union was so inefficient that its economy collapsed suddenly. There was not much time to ensure a smooth transition from one system to another. It resulted in a rapid and opaque privatization of many state enterprises that produced oligopolies that only remotely resemble markets. Some Russian cities have real land market; in others the system of land allocation is less clear.

Under Deng Xiaoping, China chose a different path. It gradually reformed its system until it made a progressive, orderly transition from a command to a market economy. However, the shift of the system in China was not due to an ideological conversion. As Ronald Coase and Ning Wang explained in their book on China's reform, "China became capitalist while it was trying to modernize socialism."[5] Indeed, the Chinese government allowed cities to experiment with small-scale labor and land market liberalization before expanding successful experiments to the entire country. It was only in 2013 that the Central Committee of the Chinese Communist Party declared that:

> The basic economic system should evolve on the decisive role of the market in resource allocation.[6]

Urban planners, who still dream about the wonderful cities that they could design without the hindrance of land markets, should get acquainted with the experiments made by the Communist Party of China, whose results drove them to decide that using market prices was a good way to allocate resources. The Chinese now advocate adopting market mechanism to allocate land because:

- it sends strong signals through prices when land is underused or the use is unsuitable for its location;
- it provides a strong incentive to users to use as little land as possible in areas where there is strong demand, in particular in areas well served by transport networks; and
- it stimulates innovation in construction: without land prices, there would have been no skyscrapers, no steel frame structures, and no elevators.

A Channel of Communication Is Needed between Urban Planners and Urban Economists

Do I exaggerate the knowledge gap that exists between urban planning practices and urban economics? Even today, a first encounter at mid-career between an experienced urban planner and an economist could still happen. But unfortunately, most of the time the economist and the planner are likely to talk past each other, because they are not familiar with the vocabulary and professional jargon specific to the other's field.

I think that, worldwide, the unfamiliarity with basic urban economic concepts by those in charge of managing cities is one of the major problems of our time. This is a serious issue at a time when cities are the major engines of economic growth, and living in cities is the only hope of escaping poverty for billions of people. The constraints put on the supply of urban land and floor space by restrictive regulations, which have nothing to do with preserving the environment, are causing severe urban dysfunctions, which I explore in depth in the following chapters. In poor countries, these supply constraints are responsible for the severe hardships imposed on households living in informal settlements. In richer countries, they are responsible for a lack of mobility of poorer households toward the cities, where they would be the most productive.

Urban Planners Usually Have a Deep Knowledge of Their Own City

Although, in the following chapters I will at times be critical of the planning profession, I think that urban planners are often very competent in managing the day-to-day operations of the city they work in. They usually know their city in great detail, including the history behind the complex features of the built environment. They work under great pressure because a city is constantly transforming itself, and this constant evolution cannot be delayed by asking for more time for reflection or further studies. They are also subject to pressure from various interest groups that have a stake in the changes affecting cities. Some pressure groups would like the city to stay still; other groups would prefer to accelerate changes. Each of these groups has a valid point to make. In many cases urban economics could help provide a solution based on quantitative reasoning rather than on an arbitrary normative preference.

Finally, urban planners are also subject to pressure from elected officials, who want to get things done or at least want to show that they are doing something in the short time frame of their terms. Land use decisions are, and should be, political, because there is no scientific way to know what is best for the future. However, mayors and planners who design the regulations that modify the outcome of their land markets would greatly benefit from better knowledge of the

way markets function. This understanding would be more likely to help them develop regulations that result in an implementation of their objectives.

Urban Planners Are Usually Unfamiliar with Basic Urban Economics

Some urban planners are indeed familiar with urban economics, and they might regularly contribute papers to economic journals. I know a few of them, for instance, V. K. Phatak, a Mumbai urbanist, who over the years has relentlessly pushed to introduce economic thinking into the reform of Mumbai land use regulatory system. But I am afraid they are not numerous. I have worked in many cities during my years as Principal Urban Planner of the World Bank, and later as an independent consultant working directly for municipalities all over the world. I have found that many urban planners, even in the very affluent cities of Western Europe, North America, and East Asia, not only seldom understand how markets work, but are proud to pretend to ignore them. I have heard mayors and planners complain that their city had too low density, while simultaneously complaining that land prices were far too high.

Over the past few years I have reviewed many new master plans for cities located in various parts of the world. None of them mentioned real estate markets, land prices, transportation costs, commuting times, or basic supply and demand concepts. All of them recommended specific densities in various locations. These densities were selected as if densities were generated by planners' design and not by the laws of supply and demand for land and floor space.

In chapter 4, I give an example of a master plan recently prepared for the city of Hanoi by a reputable international consulting firm. This urban development plan, typical of many other plans prepared by planners and infrastructure engineers, never uses the words "markets," "land prices," or even "household incomes." As I was taught nearly 55 years ago, it seems that urban planning is all about design and "needs."

Urban Economists Are Too Removed from Day-to-Day Operations of Cities

Urban economists are not innocent, either. They certainly strive for rigor in their reasoning, and they constantly try to better understand how cities function and operate. But they seem to avoid being involved in the day-to-day decisions made in urban planning departments. Possibly they are not given the opportunity, because they speak a different language, unintelligible to urban planners. Most of their analytical work, whether theoretical or empirical, is aimed at their academic peers; the products of their efforts are papers published in prestigious peer-reviewed journals. I have not seen many efforts to make the results of urban economic research operational for cities, framed to have a direct impact on decisions made in the day-to-day operations of a city.

Of course, I am not the first urban professional to raise the alarm over the impact of poorly conceived urban regulations that ignore basic urban economic concepts. Many economists have certainly attempted to influence how decisions are made by cities. For instance, in the United Kingdom, the work of Kate Barker, Paul Cheshire, and Alan Evans, among others, has shown convincingly how urban regulations can have an adverse impact on land prices and housing supply if poorly conceived. In the United States, Jan Brueckner, William A. Fischel, Edward Glaeser, and Stephen Malpezzi, among others, have also looked at the costs and benefits of urban regulations. Many urban economists have contributed to shaping the policies of the US Department of Housing and Urban Department (HUD) at the federal level. Many economists have testified in front of municipal planning boards and city councils. But the ones who have raised the alarm about the lack of theoretical and empirical evidence justifying many urban regulations have always been economists who do not directly participate in the design of these regulations. No matter how eloquent and convincing their papers are, they have no way to change a practice in which they do not directly participate. I have never met an urban economist working as a team member in a planning department at the time land use regulations were being designed. In this sense, my working experience in Port-au-Prince with Jim Wright was rather unique.

The Purpose of This Book

I wrote this book with two objectives in mind. First, to familiarize those urban planners who have not yet met an urban economist with basic urban economic concepts and how these concepts apply to issues encountered in a municipal urban planning office. Second, to generate an interest among urban economists in working in the trenches, side by side with urban planners. In this way, they could provide economic input to the design of urban regulations, infrastructure, and urban development strategies when they are conceived, not after they have been approved by the mayor and city council.

I would like to convince some economists to participate directly in the decision making of an urban planning department. For this to happen, urban economists and urban planners should speak the same language and understand each other's jargon. It is impossible to avoid jargon when practicing a profession. Jargon is a short cut for specialized concepts. Avoiding it may be possible in a newspaper article aimed at a mass audience, but rarely in professional communication.

I hope that this book will contribute to the communication between urban economists and planners by familiarizing planners with concepts like negative externalities and opportunity costs, and helping urban economist learn about the different ways of calculating a floor area ratio or population density.