Cities without Land Markets

Lessons of the Failed Socialist Experiment

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Alain Bertaud
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The World Bank
Washington, D.C.
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FOREWORD

About a third of the world’s population lives in former centrally planned economies. The transition of these countries to market-based, competitive mechanisms for resource allocation is one of the dominant issues of the 1990’s. However, such reforms raise analytical and operational problems which are considerably more difficult to address than those of liberalization or privatization in market economies.

The possibility to observe closely the outcomes of a state-run, administrative-command system which has been in operation for a long time can also throw a powerful light on critical elements of a well-functioning market economy which we often take for granted. One such outcome is the pattern of land use and resource allocation in socialist cities. There the well-intentioned goal of socializing the collection of the land rent through total public ownership and allocation of real estate property has yielded unexpected and undesirable outcomes. The resulting structure of socialist cities renders the transition to markets economically much more difficult and socially painful. This evidence also holds major implications for developing countries which are grappling with this same issue of land rent recovery and may be tempted by various forms of land nationalization and public allocation.

The present paper relies primarily on data from Russian cities but consolidates results from field work in several socialist economies in transition. It provides important systemic insights into the transition problems of socialist cities and points at the critical need to develop efficient urban land markets. The findings also strongly underline the need to identify suitable urban regulatory systems for the transition cities. What are the most desirable urban planning regulations, institutions and professions for land development, commercial and real estate investment, and property transactions? How do they affect the provision of infrastructure? What are their pricing effects? Finding an answer for transition cities will also be of great value to the rapidly growing market cities of developing economies.

Implementing a sound and adaptable urban regulatory system is not a narrow technical issue when one considers that the international competitiveness of countries rest on the efficiency of their cities where most of the GDP now originates. Land use management and the urban regulatory framework are not critical only to a city’s internal organization, but also to its economic viability, its adaptability to change as well as its livability. Looking beyond this paper, we therefore hope that these important regulatory issues can soon be successfully addressed by the international community working on the urban problems of transition economies, and beyond.

Anil Sood, Director
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ABSTRACT

What has happened to the socialist city where all investment decisions have been made without land markets? What are the consequences for the national economy? This paper presents an empirical analysis and a theoretical interpretation of the spatial dynamics and urban efficiency of socialist cities. The empirical work is based on Russian cities which have been operating without land markets for seven decades, precisely at the time when the Soviet economy became fully urbanized. Soviet planners have made urban investment decisions under three greatly distorted prices: land had no site value, interest on capital was not recognized, and energy prices were only a small fraction of world prices. Lacking price signals and economic incentives to recycle land sites over time, the administrative-command process has led to a startling pattern of land use with a perverse population density gradient which rises as one moves away from the center of the city, in total contrast with the market city. Population density in Moscow at 17 kilometers from the center is equal to that in the center of Paris which is know as one of the densest market cities. Equally remarkable, the location of jobs has remained highly centralized like in 19th-century cities, in contrast with modern market metropolitan areas with their multiple suburban employment centers. Today, the Soviet city is characterized by rusting factories in prime locations, a monocentric pattern of job location together with distant residential areas located in the suburbs. Such an internal structure tends to maximize the internal inefficiency of the socialist city in terms of energy use, infrastructure and commuting requirements. The share of land allocated to industrial use in the socialist city is often two to three times higher than that found in market cities of comparable size and economic function. These major inefficiencies diminish the international competitiveness of the socialist city. Moreover, the environmental impact of a ring of older or decaying industries in the urban core surrounded by high density residential areas is likely to be very significant.

These land use distortions are causing problems for the transition to markets. With price liberalization and the opening of the economy, relative prices are shifting very rapidly; especially energy prices. In Russia, a good part of the residential stock of high-rise suburban mass housing may have a negative asset value for a significant period of time as rents compared to housing operating costs are out of balance. Meanwhile, opportunities for capital gains at the center are very significant. The analytical framework presented shows why and how these distortions are generic to the "socialist city". However, the intensity of distortions may vary according to the length of time a specific city has been operating without land markets. In Moscow, the trading of housing is now allowed and a clear negative price gradient has emerged in 1992. This gradient is rotating very rapidly. Yet, legal, institutional, and administrative impediments to clear property rights remain large and center-periphery price differentials are still too weak compared to those found in the market city to stimulate much land recycling yet.

The evidence presented points at two key issues: what are the critical decisions required to start-up a viable land market? What are the appropriate institutions needed to sustain sound urban land markets? The final section outlines key components of the program of urban land reforms needed to support the emergence of land market. Yet considerable technical work is needed beyond this paper to provide operational answers to these two key questions in Russia and other semi-reformed transition economies.
ACKNOWLEDGEMENTS

This paper reflects extensive discussions with and contributions from colleagues working in China, Russia, Poland and quite a few other semi-reformed transition economies. While our concerns were first raised in China in 1988, much of the work reported here was part of the Technical Cooperation Project on Housing Reform and Privatization carried out with the Government of Russia in 1992. We are particularly grateful to the urban planners and economists of Russia who assisted us in the collection of data without which the evidence presented in this paper would not exist. Our special thanks go in alphabetical order to Mikhail P. Berzin, Olga Z. Kaganova, Nataliya V. Kalinina, and Oleg Matiukhin. We thank Joseph K. Eckert for his permission to reproduce the price gradient analyses which he generated as part of our technical cooperation work. During the development of our analyses we have benefitted from discussions with our World Bank colleagues, in particular Gian Carlo Guarda who currently works in Poland and Albania and Andrew Hamer who works in China. A more limited version of this paper was presented at the 1992 Seminar on Urban Land and Housing Reform in Socialist and Formerly Socialist Economies held to commemorate the centennial of the foundation of the University of Chicago.
I. INTRODUCTION

1. The rejection of private ownership of capital and of the means of production, and of the market as a mechanism for resources allocation has been a central tenet of Marxist ideology. The total commitment to public ownership of land under the administrative-command system used to manage the economy has led to a dramatically different structure of socialist cities. Now that controls over information have been lifted, access to actual local urban data can be obtained. It is therefore possible to carry out empirical analyses of the urban land use which has resulted from the absence of markets to allocate land among competing uses. The combination of marxist ideology, national institutions and domestic economic system has produced somewhat different results in each socialist economy. Yet, the systemic impact of the administrative-command system as a substitute to the market is quite clear. The empirical evidence provided in this paper is based on the Soviet Union and Russian cities, because these are urban centers with the longest history of development in the absence of land markets. Russia is also the country where we have worked most recently. The conceptual framework we use, however, is applicable to other socialist cities with a strong legacy left by the administrative command-system. We observe similar outcomes in the cities of Poland and China which we have analyzed.

2. Except for the old historical centers, almost all of Russian urban growth has taken place during the socialist era 1917-1992. The fact that urban development took place in a period when land was nationalized and administratively allocated rather than sold on an open market for a price has had a very profound impact on the internal organization of Russian cities. It is therefore

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This paper has been prepared by Bertrand Renaud. It is based on joint work done with Alain Bertaud in Russia, China, and Poland. The land use analyses of St Petersburg (formerly Leningrad) and Moscow presented here were carried out by Alain Bertaud with the cooperation of the state planning organizations of these two cities, and the assistance of independent Russian urban planners. Joseph K. Eckert contributed the analysis of prices for Moscow, Russia and Krakow, Poland. This analysis of urban land use in Russia originates in a larger technical cooperation project directed by Bertrand Renaud for the World Bank whose results appear in the report Russia: Housing Reform and Privatization, Strategy and Transition Issues to be published.
empirically quite relevant to speak of a distinct "socialist city".\textsuperscript{2} The inability of the administrative-command system to evaluate even approximately the value of a land site and its opportunity cost in alternative uses (under such concepts such as site value according to highest and best use) has generated striking spatial anomalies and urban inefficiencies. The transition to markets and the opening of the national economy requires a shift from administered prices and bureaucratic allocation to market prices. This is resulting in major and rapid shifts in relative prices which are bringing into sharp relief the pattern of past resource misallocation in the urban economy. For instance, Russian domestic energy prices until 1992 were less than 5 percent of world prices. Even an imperfect adjustment to 50 percent of world prices will have a massive impact on urban transport costs and the energy intensive construction sector as well as on the maintenance of the inordinately energy intensive housing stock.

3. In order to identify generic features of the socialist city using Russian cities, this inquiry treats four questions:

(1) How do Russian urban land use patterns differ from those in market economies; do those differences generate major inefficiencies?

(2) What issues may arise once market land pricing is applied to Russian cities previously developed under a command model?

(3) Will long run market forces correct existing inefficiencies or should Russia adopt specific transition strategies?

(4) What changes in existing laws, institutions, and professions will be needed to operate sound urban land markets?

4. These questions are central to the urban economy with the end of the socialist administrative-command system. During the transition toward a market economy, urban infrastructure and housing investments may help restart the construction sector. Depending on the geographic pattern of future real estate market values, transition investments might have a negative economic rate of return and might perpetuate land use distortions. Failure to carry out land use reforms could lead to even worse land use distortions as partial market forces collide with distorted existing uses. By contrast, recognizing and understanding land market values will help direct investments to high return areas and could reduce relatively quickly some of the worst land use inefficiencies. In short, the spatial distribution of investment in the urban areas is a matter of substantial policy relevance during the transition. Far from being an ideological or doctrinaire prescription, the development of urban land markets is the only way to remedy past urban distortions and inefficiencies in a decentralized, incremental and organic way in all transition socialist

This is particularly true for the far-flung Russian urban system which is spread across 1,030 cities and towns located in 21 republics, 11 autonomous regions or districts, six administrative territories, and 51 regions over a land area two and a half times larger than the United States.

5.

This evaluation of the Socialist city is divided into four parts. Part II evaluates what has happened to resource allocation and to the spatial structure of Soviet cities without land markets. It begins with the spatial analysis of Moscow and St Petersburg. This analysis documents the outcome of administrative decisions about what to build and where to build when such decisions are made without the guidance of market prices. The resulting cities have a land-use structure which differs strikingly from market cities. This land use is fragmented and perversely, the density of population rises away from the city center. Such a spatial organization tends to maximize commuting costs and infrastructure requirements linked to the various urban networks. To remedy past distortions, site and property valuation have become a major operational issues for local governments. Part III discusses this critical problem. Over the last three years, active real estate markets have been emerging in major cities like Moscow. Early analyses of such voluntary trades are already possible. They show the extent of land misallocation, as the emerging price pattern is

Space in this chapter is too limited to discuss adequately the open letter dated November 7, 1990 addressed to Mikhail Gorbachev, initiated by Nicolaus Tideman and William Vickrey, and signed by 28 very prominent U.S. economists. This letter warned Mr. Gorbachev that "there is a danger that you may follow us in allowing most of the rent of land to be collected privately" and that "[...] It is important that the rent of land be retained as a source of government revenue [...] Some economist might be tempted to suggest that the rent can be collected publicly simply by selling land outright at auction. There are a number of reasons why this is not a good idea". Among all the advice sent to the Soviet Union and later to Russia, there may have been few letters so well-intentioned, but so poorly cast and ill-timed as this letter. It totally disregards the historical antecedents, administrative reality, political behavior, institutional base, and land use structure encountered in Soviet cities. The recommendations also dismiss entire areas of Western economic analysis and evidence regarding public choice economics, principal-agent problems, Ronald Coase’s work on property rights, and the impact of imperfect information on transaction costs in land and real estate markets.

Put simply, how could land rent on a specific site be even roughly estimated today when the land pricing and site valuation needed to reflect resource cost and opportunity cost are totally lacking in Russia? One may legitimately wonder whether, prior to signing, any of the signatories had spent even one day examining in situ the reality of the urban land system and of political and economic reform in the Soviet Union. Amidst fierce ideological and political debates, the deleterious message that was heard in Moscow was that U.S. economists were strongly recommending against the privatization of land, and by direct implication land markets. In fairness, an annex to this letter recommends a third way for land use and rent recovery. Unfortunately, most people would agree that when switching from left-side driving to right-side driving, the most accident-prone place to drive is in the middle of the road. Three years later, far from having been lost in the rush of massive political changes, this letter is still being used as an argument by opponents of land privatization and market reforms. This is a cause of considerable distress for Russian urban specialists and economists. Emerging from seventy years of ideological experiments, they wish that the signatory U.S. economists had tested their theoretical concepts on their own country first, before proffering their advice on others.
exactly opposite to the current urban population density profiles. Such a complete contrast between the new price gradient and the old density gradient is a cause for concern in managing the transition to land and real estate markets. Part IV concerns the extent to which various parts of the distorted Soviet city are economically sustainable when key internal prices such as energy prices and capital prices must now be adjusted to world prices. The impact of the transition to markets on enterprise, residential areas, and the services sector is examined before discussing the components of urban land reform.

Moving from diagnosis to remedies, Part V highlights four major elements of urban land reform in the socialist city: (1) land ownership and property rights; (2) mechanisms for the trading of land and information systems and market needs for timely, accurate and easily accessible information; (3) the critical issue of property valuation, and the flawed recent Russian land tax; and, finally, (4) the new role of urban planners. A leitmotif of reforms in TSE’s is that markets are not self-defining. To function well, they need proper institutions and skilled professions. There should be no misunderstanding about the requirements of urban land markets. Markets for short-lived consumer goods like pencils, tomatoes or vodka do not require much regulation to operate well. In great contrast, markets for the perpetual good which an urban site is could not operate soundly without well-trained professionals as well appropriate regulations to operate. Therefore, the new role of urban planners in Russian cities will need to be examined, however briefly.

II. LAND ALLOCATION IN CITIES WITHOUT MARKETS

In Russia, administrative decisions based on "needs" and norms have so far governed the use and quantity of land consumed. By contrast, in a market economy, land price differentials constitute the most important factors determining quantity and location of land consumed. These divergent principles governing land allocation and land use could be expected to produce different spatial and efficiency outcomes. A quantitative land use analysis of Moscow and St. Petersburg reveals that there are indeed important differences between Russian cities and market economy cities.

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4' The direct functional relationship between the residential land price gradient and the population density gradient which exist in a free market economy has been established theoretically by Richard Muth in his classic Cities and Housing, Chicago: U. of Chicago Press, 1969. For a full development and application, see Follain, Lim and Renaud "Economic Forces Underlying Urban Decentralization: A Structural Model for Density Gradients" Environment and Planning, Series A, August 1979. This empirical analysis was applied to Korea.
in the distribution and consumption of land. (See BOX 1). Inspection of land use maps or satellite photos of other Russian cities confirms that these are systemic features of the socialist city. 

A. Major Spatial Differences Between Soviet and Market Cities

1. Absence of Incentives to Recycle Land in Soviet Cities

8. As their economy and their population grow, cities expand through the progressive addition of concentric rings, similar to the process for trees in successive growing seasons. New rings are added to the periphery as the city grows. Within each ring, land use reflects combined effects of demography, technology, and the economy at the time when the ring was developed. While this organic incremental growth is common to all cities, in a market city changing land prices exert their pressure simultaneously in all areas of the city, not just at the periphery. Changing land prices exert a powerful influence to recycle already developed land in the inner rings when the type and intensity of the existing use is too different from the land’s optimum economic use. Thus, changing land values bring a built-in dynamism: continuous variations in land prices trigger land use changes by putting a constant pressure on the existing uses of land.

9. By contrast, under Russia’s command economy, the absence of land prices removed all incentives to redevelop built-up areas. Once land was allocated, it was almost never recycled. Without price signals, it was administratively simpler to respond to current land demand pressure by developing at the periphery than to redevelop well-located areas with obsolete land uses. While the city expanded outward, land use in already developed areas remained unchanged. One striking illustration of this phenomenon is the persistence and uniformity of housing types in successive rings around Moscow. Each type is usually designated by the period in which it was built. Thus, driving from the center of Moscow, one passes through rings of Stalin, Khrushchev, and then Brezhnev flats.

10. This socialist land use process creates sizable enclaves of "fallow" or "dead land" -- areas which combine low levels of economic activity with negative environmental qualities.

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5 The methodology used is based on the measurement of population density in the built-up area, i.e. the population within two concentric rings at 1 km interval divided by the built-up area within this interval. This built-up area does not include large parks, physical obstacles to land use such as rivers and lakes, and any undeveloped area. These densities are derived from land use maps, digitalized satellite photographs and detailed numerical databases of land uses by type of users maintained by local urban planning offices. The geocoded data was analyzed with a graphics-based GIS software.

6 We obtained results comparable to those for Moscow and St Petersburg for other socialist cities such as Warsaw in Poland and Beijing, Shanghai and Tianjin in China. In Chinese cities, however, the socialist system has a much shorter and more recent history. As a result, the historical urban core which was developed under a market economy has kept a much larger relative importance than in Russia. Moreover, in China, the absence of large urban infrastructure and public transport investment plus severe underinvestment in housing until 1979 has led to more compact cities and reinforced the population density at the center. Yet, under the rapid urban investment of the last decade, the floor area ratio follows the Russian pattern and is higher in the periphery than in the center.
Following this process, the Russian command economy has generated an urban development process with two characteristic features of large land use inefficiencies:

1. Areas with obsolete land use occupy large amounts of the total city area, and
2. Households tend to be concentrated in the periphery with increasing densities further from the center and "historically" low densities in central areas.

This pattern tends to increase transport costs and pollution by requiring higher energy expenditures without providing better amenities such as larger plot size or a better environment that would be the normal trade-off for increasing commuting distance in a market economy.

2. Spatial Structure of Socialist Cities: Rusting Factories in Prime Locations

11. The failure to recycle land occupied by old activities of little value -- this "dead land" or "fallow land" syndrome -- yields several spatial outcomes: centrally located industrial belts, large total amount of urban industrial area, low job density in the industrial belts, and central land areas fragmented by dense railway networks. There are four major consequences:

12. Of these pathologies, the most startling are the old industrial belts that ring Moscow and St. Petersburg. Developed during the 1930's and 1950's, these belts are still spread between 4 and 8 kilometers from the city centers. These industrial land use bottlenecks have never been recycled, even though the land values would have been prohibitively expensive for the enterprises had market land prices been used. The absence of market signals resulted in a land use freeze that pushed residential areas further toward the city periphery than in market cities. Meanwhile, obsolete and low density activities have remained as enclaves on accessible and well serviced land.

13. The absence of land prices and the dominance of industrial planning in government thinking and policies explains the second phenomenon. Not only are Moscow and St. Petersburg characterized by centrally-located industrial belts, but also the total industrial land area within these cities is extraordinarily large. For example, in Moscow, 31.5% of the total built-up area is used by industries, compared with 5% in Paris, 6% in Seoul, and 5% for Hong Kong. In the industrial belt from 7 to 8 kilometers from the center of Moscow, 67% of land is used by industries. (See FIGURE 1.a). The extensive use of prime centrally-located urban land for industries is particularly inefficient in Russia because of socialist industrial organization which requires most industries to hold large inventories of materials in order to survive in the socialist system. These industries therefore use large areas of land for warehousing and heavy transport infrastructure -- a peculiar constraint on industrial land use that results in a low ratio of jobs per unit of land. In a market economy, such a low job-to-land ratio would be incompatible with the central location of these industries.

14. Third, the distribution of jobs by distance to the city center shows that both Moscow and Saint Petersburg, are still monocentric cities with a high concentration of jobs in the city center, a feature common with most market economy cities. (See FIGURE 1.b). As the transition to markets progresses, many industrial jobs will disappear and more service jobs will be created. The
The pattern of land use distribution in St Petersburg within a radius of 25 kilometers from the city center at the intersection of Nevsky Prospect and Sadowa Street, shows the features typical of a planned urban economy where site value was not priced, energy costs were heavily subsidized, and the cost of capital was not recognized:

- A low percentage of residential area of 35% out of the total built-up area because land was allocated in priority to non-residential use. In market cities a share of 50 to 65% is common for residential areas.

- Very few residential areas between 5 and 8 km from the city center where most of the land is used by old land-intensive industries. Because land is not priced, it cannot be recycled when the city grows. Wasteful old users have no incentive to release any of their holdings. New residential areas have to "leap-frog" these obsolete industrial areas rather than push industries toward the outskirts of the city.

- A spatial discontinuity of residential areas showing three density bumps caused by a supply-driven housing system where projects are planned with the objective of rationalizing large-panel industrial construction technology. The result is residential areas without continuity with the existing city.

- Yet, there are no significant topographical constraints and a large amount of land is available for expansion.

The pattern of population density shows four distinct concentric zones:

- The pre-socialist historical core with high population densities similar to the ones encountered in Paris intra muros.

- The industrial belt showing a sudden drop of residential density in the immediate vicinity of the city center.

- The "socialist" residential belt where land use is dictated by uniform urban planning norms independently from the distance to the city center.

- Fringe suburban areas where we find a mix of individual housing, dachas and low rise apartment blocks which finally lowers the average density to levels comparable to the fringes of market cities.

Under market conditions, such brutal discontinuities in population densities would be unlikely to occur. In the socialist city, households are pushed toward suburban areas by administrative fiat, not because they are making a voluntary trade-off between the convenience of the city center and the better environment of the suburbs, i.e. between commuting time and housing space.

With the absence of market prices, land consumption per person is similar in the city center and in distant suburbs. The same residential density of 400 persons per hectare is found at 2 km and at 15 km from the center. This is symptomatic of the absence of differentiated housing products. Actually, average apartment sizes tend to be smaller in the suburbs than in the center, and residential densities are similar or even higher than in the center. Such land use patterns lengthen commuting times, increase infrastructure requirements, and greatly intensify energy costs. Moreover, the old industries at the center have a greater polluting impact on the residents surrounding them. There is also a significant shortage of space for services activities which were under-planned by the system. With land market prices to reveal trade-offs, these features would correct themselves over time.
majority of these jobs will be located in the city center further reinforcing the monocentric characters of these cities. The histograms of the geographical distribution of jobs for Moscow (FIGURE 1.b) and Saint Petersburg (not shown) confirm that the industrial zones do not significantly increase the number of jobs to justify their prime location so close to the city center. No data were available to conduct a more detailed analysis of present land use and floor space. But the very high spot prices reached by new office space in Moscow and Saint Petersburg are indicative of an acute supply constraint for land and floor space dedicated to services in the city center, a typical shortage in socialist economies in transition.

15. Fourth, the land of the industrial belt of Moscow is serviced by a dense network of railways which have the effect of further fragmenting the land and making land on the exterior side of the industrial belt expensive to service. Only a small part of the volume of traffic on the rail network within Moscow Municipal boundary is used for passenger and commuter traffic; most of it is used for freight. This fragmentation further reduces the usability of land adjacent to centrally-located industrial areas and increases significantly the cost of the primary infrastructure network which has to be developed to service it. This fragmentation of the city land area by railroads is linked to the Soviet Union’s extraordinarily high dependence on rail transport compared to any other country (nine times higher than Western Europe), as well as the industrial bias of Soviet economic and urban planning. This problem is encountered in many Soviet cities.

B. Dynamics of Housing and Residential Development in the Socialist City

16. The prevalence of unrecycled large-scale industrial belts in Moscow and St. Petersburg is a subset of a larger set of spatial distortions found in Russian cities. The process of development of housing projects under the administrative command-system and the activities of real estate developers in market cities follow different motivations and yields totally different outcomes. The key to understanding these larger distortions also provides a tool to design policies for reducing inefficiencies. In a market economy, housing developers are value maximizers while in a supply-driven command economy bureaucratic housing builders are cost minimizers with little interest in final users satisfaction since these are not the direct clients which are other administrations.

17. In a market economy, private developers compete for the same location. The winning bid will go to the activity estimated to be most profitable at that site. Land prices exert their pressure on the whole supply of land, including the already built land. This is the key to economically efficient cities. As the city expands, land prices tend to rise throughout the city. Land prices stay the highest in the most accessible areas around the city center and along transport corridors. This triggers a density rise in those areas. The rise in density triggered by relative price changes is due to the compounded effects of two phenomena:

(1) Floor-to-land area ratios (FAR) increase in central locations because of land recycling through demolition and reconstruction, and

(2) The consumption of land space per job or per resident decreases because the more efficient land users out-bid less efficient land users who then move to more peripheral locations where land is cheaper.
FIGURE 1

INDUSTRIAL LAND USE AND JOB DENSITY PATTERNS

Figure 1.a

MOSCOW - LAND USE
Percentage of Industrial Land within Built-up Area

Figure 1.b

MOSCOW - LAND USE ANALYSIS
Job Density in Built-up Area

Source: Institute of Master Plan of Moscow 1992
Over time, the interaction of these effects produces a population density profile that is negatively sloped from the high-population center to the sparsely-populated periphery. The driving force behind this density gradient is not master planning by city planners, but the individual decisions of real estate developers who want to maximize the difference between production costs and the market value of the final product. As a city grows larger and richer, recycling land in already built-up areas offers the opportunity to maximize this difference. This is an incremental and decentralized process but it is not slow. In advanced industrial economies, about 2% to 5% of all urban jobs within an urban area relocate every year, depending on economic growth conditions. In a country like the U.S. families relocate every five years and 80% of their moves are within the same urban area.

18. By contrast, in Russia under the administrative-command economy, housing construction organizations, the housing kombinats, respond to very different incentives. A kombinat's performance is measured by its ability to reduce input costs while meeting quantitative production targets. The costs have to be minimized while the "value" of the final product is irrelevant. Land may be free, but it must be allocated from what is available. Due to the lack of incentive for land recycling, the supply of land is limited to the new areas developed that year in the outer fringe. As a consequence, kombinats have to meet their production targets using land that is almost exclusively at the periphery. The density of the newly built area (defined as the unit of floor space divided by unit of land) will then reflect the ratio between the developed land available and the amount of floor space to be built to meet the production quota.

19. As the Russian city expands, the land at the periphery becomes less and less desirable and more expensive to develop because primary infrastructure -- and metro lines in the case of Moscow and St Petersburg -- have to be expanded. But in a command economy, housing is entirely supply-driven and, if the supply of serviced land is lagging behind the floor space production target, the building density in the outer rings will tend to rise. Over time, housing kombinats have been stacking up more floor space on the more distant land. The failure to price land is compounded here by artificially low energy prices. The dynamics of such a system do not tend to produce the resource-preserving, more efficient negative density gradient of market cities.\textsuperscript{7}

\textsuperscript{7} Note also the compounding distortion of the socialist low-wage policy and the structure of household incomes which is explained in B. Renaud, \textit{Housing Reform in Socialist Economies}, World Bank Discussion Paper No. 125, 1991, p.20. Behavioral studies in market cities show that urban residents tend to value their time travelling to work as a significant proportion (about one-third) of the hourly-wage equivalent of their salary (see for instance the work of Michael Beesley). Therefore, the distorting effects on land use allocation of the lack of land prices are further masked by the artificially low value that urban residents are placing on their time.
FIGURE 2

THE SOCIALIST CITY COMPARED TO THE MARKET CITY
Moscow Compared to Paris

Figure 2.a

Comparative Population Density Gradient Between Moscow and Paris Built-up Area

Source: Institute of Master Plan of Moscow 1992

Figure 2.b

Comparative Population Distribution Moscow, St. Petersburg & Paris

Data Source: Institute of The Master Plan of Moscow, St. Petersburg Institute of Urbanistic Theory
Paris Census 1990
C. The Socialist City Compared With the Market City: Moscow versus Paris

20. The comparison of density profiles between Moscow and Paris is revealing (see FIGURE 2.a). Both metropolitan regions have a population of about 9 million. They are strongly radio-concentric, and have similar peak densities. However, the way densities are distributed geographically is strikingly different. Paris shows the typical density profile of a market economy city, with a negatively sloped gradient. In sharp contrast, Moscow has a positively sloped density gradient. The net density of Moscow at 15 kilometers from the city center is twice as high than in the center. The density of Moscow suburbs at 15 kilometers from the center is the same as in the center of Paris. One should note the drop of density at 6 kilometers from the center in Moscow. This drop of density is due to the unrecycled industrial land use producing the enclaves of “dead land” in the city fabric.

21. The degree of population dispersion can be measured in a rough manner by comparing the median distance to the center per person. FIGURE 3.b shows the cumulative population distribution curve of Moscow, St. Petersburg and Paris. The cumulative curves of Moscow and Paris intersect each other at Kilometer 14, corresponding to a population of about 6 million people. This means that within a circle of a 14 kilometers radius, Moscow and Paris serve the same population, and as a consequence the same average density. But because of the difference in the density profile between the two cities, the median distance per person to the center is 7 km for Paris and 10 km for Moscow, a 42% greater dispersion in the case of Moscow.

22. Is the land use and the density profiles of socialist cities like Moscow or St-Petersburg a mere curiosity for land use specialists? Emphatically not. It matters a great deal to the Russian urban economy where three-fourth of the population lives, for the following reasons:

(1) Average densities being equal, the population of a city with a positively sloped density profile is more dispersed than one located in a city with a negatively sloped profile. This implies higher transport costs, higher primary infrastructure costs, higher urban operating costs, and a greater share of labor time wasted in travel. These distortions are paid for in the form of lower levels of economic development.

(2) A large amount of floor space has been developed where there is little demand for it, that is, in the suburbs with less accessibility. When transport subsidies are progressively removed and full wages restored, demand — and consequently land prices — for this type of high density housing far from the city center will drop even further. Prices could well drop below replacement costs and trigger abandonment.

(3) The fully-serviced, underused land close to the city center has a high opportunity cost.

Russia has used its great natural resources to build an urban system of doubtful efficiency and sustainability for lack of adequate and up-to-date economic information about the opportunity cost of its urban land. The evidence support the earlier assertion that the socialist city has inordinately high capital/output ratios and requires more resources for less urban output that market cities.
III. EMERGING REAL ESTATE PRICES

A. Synthetic Land Price Gradients and Normative Prices

23. During the late 1980's, Russian local governments resources had become severely constrained. Local mechanisms to finance the production of serviced land had to be found to complement inadequate resource transfers from the central government. It was therefore decided to create a land use tax to finance local infrastructure. In the peculiar logic of an administrative-command system, land officially has no value in construction projects, yet everyone agrees that different locations have very different economic values. The solution chosen was to estimate normative land prices on which taxes could be based. Various research institutes have developed models to calculate synthetic land price maps from which land price gradients could be calculated and according to which taxes might later be raised. These synthetic land price gradients could also become helpful for privatization and the location of urban public investments.

24. In a market economy, there is a very strong correlation between the density profile of a city and the land price gradient because prices drive locational choices. While the density profiles of Russian cities can be readily estimated, Russian cities are not yet at a stage where land price gradients can be simply derived from land markets — in part because such markets are operating in a stage of significant disequilibrium. Research institutes have attempted to map anticipated market land values based on location characteristics. The normative value of land was calculated using a number of weighted coefficients representing amenities such as transport, infrastructure, environmental quality etc. Typically demand factors were not included, and price estimates were based on very distorted late 1980 accounting prices. Land value maps were produced and from the data they contained it is possible to build the city's normative land price gradient.

25. The resulting normative land price gradients of Moscow and St. Petersburg are negative. Moscow’s gradient is somewhat flatter than St. Petersburg. The normative price variation between the center and the periphery in Moscow is only 2.5 to 1 (from Rb 4,000 at km 0 to Rb 1,600 at 22 km). Based on what is known of urban land prices in market cities both curves are much too flat. In the absence of major topographical and legal constraints the ratio between the land price in the central business district and the one at the fringe of the built-up periphery is usually on the order of 10 to 1. The profile of those curves is highly arbitrary, as we do not know the high and low points, however the direction of the slope is correct. Such normative prices might improve the traditional urban master plans made in Russia, but would be of little value for activity-specific individual choices of location.

B. Housing Privatization and Rapidly Emerging Implicit Land Price Gradients

26. Normative prices may be of interest for research purposes, but they are fundamentally flawed for actual decision-making since they attempt to infer individual land values from flawed models and simplistic normative ratios based on partial data and past distorted prices. It is worth restating again here the fundamental rationale for reviving urban land markets in Russia. This rationale is that the allocation of land in cities should be driven by its current opportunity cost. This "opportunity cost" is commonly referred to as "highest and best use" by market analysts to stress
that current land use may be inefficient. In practice, the value of a specific land parcel in its highest and best use can prove difficult to estimate even a stable fully developed urban land market. The next best price are current actual market transactions which are the result of private valuation of investors looking at the future and risking their own-resources.

27. With the beginning of housing reforms, actual apartment sales transactions between private parties have been taking place in Moscow since 1991. Privatization and opportunities to trade units are now rising dramatically. A preliminary empirical analysis of 2,000 transactions carried in the first trimester of 1991 and of another group of transactions in the fourth trimester of the same year provides an important first look at emerging real estate and land prices. The study analyzed the residuals from an apartment sales model that uses only building-specific variables based on resales of privatized apartments. It is possible to construct a land price gradient by plotting the residual as a function of distance from the center of the city as show in FIGURE 3. These preliminary results provide some critical information. First, the emerging price gradient is downward sloping from the center. Clearly, housing kombinats are not providing the housing that household value most. As FIGURE 3.a shows, the land price index decreases from 100% in the center to 70% at 25 km -- a negative price gradient -- with the greatest decreases coming in the first 8 km. This model suggests that, at present, imputed land prices are only about 1.5 times higher at the center than at 25 km. This is still a very weak price differential to trigger the urban restructuring that Russian cities need. Various factors can explain this flat price gradient including the collapsing economy, ambiguities about land values, and the disequilibrium state of an emerging market.

28. What is rather striking and unanticipated is that the land price gradient seems to be rotating very rapidly during the transition to market. The analysis for the second period in Moscow shows that the slope of the price gradient has steepened from 100 percent in the center to 58 percent at only 15 km from the center. This a real adjustment of 20 percent in less than a year. It can be expected that, with new legal clarifications of land ownership rights in December 1993, privatization, as well as continuing relative price changes regarding energy the gradient will continue to rotate rapidly. This expectation is also fed by a similar analysis of land prices in Krakow, Poland which shows that in that city the land price differential has already reached a market city differential of about 10 to 1. Polish urban reforms, in particular the restoration of private land ownership rights has been more thorough that what has been done so far in Russia. At this early stage in the development of the land market, location values are not yet being fully capitalized into property values. A more normal price differential will only emerge when investors have more certainty about

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For reference, it is estimated that about 125,000 housing units may have been exchanged or sold in 1992. Since there about 3.1 million apartments in Moscow this represents a rate of about 4 percent of the housing stock. In a market city, the annual ratio of housing trades is often of the order of 15 percent of the stock. Yet mobility and trading in Moscow are rising significantly. A major structural change is taking place with the rapid privatization of the housing stock by owner-occupants in late 1992 and early 1993. The share of privately owned units may rise as high as 30 percent in dramatic contrast to a ratio of less than one percent in 1990. This moscowite rate of privatization is much higher than any other city in Russia as of 1993.

This rapid rotation is confirmed in the analysis of different Moscow housing price data by G.S. Madalla, Y. Toda, and N.N. Nozdrina in "The Price of Apartments Auctionned in Moscow: A Hedonic Approach" (unpublished draft paper, May 1993).
land tenure, when real estate information institutions become more proficient, and when economic and political conditions stabilize.

**FIGURE 3**

**EMERGING MARKET LAND PRICE GRADIENTS**
in Moscow and Krakow, Poland

(Source: Joseph K. Eckert)
IV. MANAGING THE TRANSITION: IS THE SOVIET CITY SUSTAINABLE?

29. The passage to an urban land market is expected to raise the efficiency of the socialist city. But what happens to the cities during the transition? What will be the outcome of the interactions between a negatively sloped land price gradient with a positively sloped population density gradient? The answer can be found by studying two problem areas:

(1) The affordability of the land occupied by existing enterprises, and

(2) The pricing of dwelling units (rents or sale price) after the initial privatization of the housing stock is completed.

A. Market Prices and Affordability of Land Currently Occupied by Enterprises

30. The "market value" of land in a given area is a function of the discounted annual return which could be derived from the best alternative use of this land i.e. the combination of best type of use and best intensity of use. Most of the land occupied by enterprises close to the city center (that is, within a radius of 10 km) will have a high value because of the high accessibility provided by the existing transport network of Russian cities. The best alternative use for such high accessibility areas will probably be a mix of commercial, office and residential floor space with a high floor-to-land-area ratio. Developers of such projects, willing to pay market value, would be able to bid centrally-located land away from the low-value industrial enterprises that currently occupy large areas of centrally-located land.

31. Land reform administrators are presented with a difficult dilemma: if enterprises are asked to pay the market price (as defined above) for the land they occupy — in the form of rent or land use tax — most of them would not be able to afford it, and some would have to be declared bankrupt. Alternatively, if the financially weaker enterprises are given a reprieve or a waiver on the cost of land they occupy, this will perpetuate the status quo. The urban community will lose the opportunity cost of the land. New infrastructure would have to be developed elsewhere, while the costly existing infrastructure would remain underused.

32. If the objective is to improve land use efficiency as rapidly as possible, one approach for responding to the above dilemma is to grant to existing enterprises explicit property rights in the land they now occupy. Then the enterprise will have the incentive to use this land as equity in planning to relocate to more affordable, appropriate land. For instance, using a current, very flat land price gradient, an enterprise located at kilometer 7 from the center of Moscow and relocating at kilometer 22 around the external ring road would need only 20% of the value of the land it presently occupies to acquire a new equivalent site. If the enterprise reviews its land requirements and decide to use land more intensively on the new site, say only half of the present area — preliminary surveys indicate that this is a reasonable assumption — then only 10% of the value of the present site would be required to acquire a new site. The wealth to be released by the plant
relocation is clearly very significant. Under such a scheme, the benefit of relocating land-intensive enterprises to new sites will accrue not only to the enterprise themselves, but also to all urban households: enterprise relocation would reduce transport time and increase the supply of well-located land for new housing units, which in turn would thereby reduce housing costs. Of course, in some cases, where current industrial areas are heavily polluted, the cost of cleaning up decreases the land’s potential market value, and accordingly reduces also the enterprise’s incentive to move.

33. The value of the land resources involved in industrial land recycling -- even under the emerging low and still flat price gradient estimated for 1992 in FIGURE 3-- is very large. If we assume that the percentage of industrial land of Moscow could be reduced from the present 32% to 10% -- still a high ratio by international standards -- then about 100 square kilometers of already developed land could be recovered. Using the lowest and most conservative assumptions, the total value of the land recovered would be about US$ 2.2 Billion, assuming that two thirds of the industrial land recycled is evenly distributed from the center. The above evaluation of the value of the land frozen by industries is too low. Because of the way the industrial areas are spread within the built-up area, their total value is not yet sensitive to the location along the price gradient. However the total value of the fallow industrial land will be sensitive to the wider range of high and low land prices that will emerge as the land market develops.

34. Following this analysis, the affordability problem of non-residential land can be seen to be a false problem. By definition, the market price of land is affordable to new users. The land may not be affordable, however, to existing users who are asked to pay for it retroactively for the land -- but these existing users are precisely those who are using land in an inefficient manner. The affordability dilemma could be solved by recognizing the land equity interest of present land users and then allowing these users to trade freely the land they occupy.

35. This analysis illustrates a crucial point of the urban land reform. The recovery of 100 square kilometers of misallocated land will not be obtained through better design or with the help of sophisticated zoning plans or new master plans. Instead, improved outcomes will arise by establishing the rules and mechanisms which would allow the most efficient user to buy land from the least efficient. For each site, it is impossible to identify, in the abstract, the most efficient user or how much land or what floor-to-land-area ratio the most efficient user would consume. A well-functioning land market with a minimum of restrictions on the use of land would allow the most efficient user to obtain the right amount of land in the right place by buying it on the market from less-efficient users. In market economies, the role of urban planners is not to design cities, but rather to establish the minimum rules that all potential new land users must meet, and the limits within which the land market will operate.

In late March 1993, the asking price for a 3-room apartment (70 m2) centrally located in Moscow was reported to be range between $30,000 and $100,000. Taking a low estimate of $430/ m2 , using a floor-area ratio higher that average (FAR=2.5) and assuming that the economic value of land represents a low 20 percent of building cost yields a notional land price per square meter of $27.5/m2. In addition, taking the value at kilometer 7 to be only 80 percent of central locations yields a unit price for land of $22/m2. Such low assumptions yield a price per hectare of $220,000 which is clearly a lower boundary of actual land value in Moscow at that time.
B. Impact of the Transition to Markets on Housing and Services Areas

36. The basic price of a housing unit depends on three main parameters: (1) location, (2) floor area, and (3) land area. Households, when shopping for housing, have to make trade-offs between those three parameters. For a given shelter price, suppliers are theoretically able to provide a dwelling unit in any location. This is possible by allocating different combinations of values to the three basic parameters: location, floor, and land. Thus, the floor-to-land-area ratio of different housing unit types may vary widely within the same city. The net land area required to build one square meter of floor space may vary from 0.10 square meter for high rise apartments to 15 square meters for detached houses.

37. Urban regulations and the many-dimensional features of housing demand impose a limit to the theoretically infinite number of permutations between location, floor area, and land area. However, in market economies, the clusters of housing types that are built always follow the universal demand rule: an increase in distance from the center should be compensated either by a lower shelter price or by a larger consumption of land or floor space or both. This basic demand rule explains the quasi-mathematical relation which exists in a market economy between land price and density gradient and between land price and total production price. (see BOX 2 on the fundamental characteristics of the locational decision of households in market economies and matching empirical evidence).

38. During the process of housing privatization, a housing market is emerging in Russia. The present occupants are gaining ownership interest in the units they currently occupy. It is therefore useful to consider the likely value of the different parts of the housing stock at different locations within each city. The larger part of the housing stock built in the periphery of Moscow and St. Petersburg and the 150 largest cities of Russia (nationally about 55%) consists of prefabricated, reinforced-concrete, large-panel, high-rise apartments of 5, 9, 12, 15 and 22 floors. The actual economic value of such units will be revealed by household preferences for the first time. This value will be more strongly affected by the location and the type of dwelling unit than its floor area. For instance, a 1-bedroom apartment in the center of Moscow will certainly have a higher market price than a 3-bedroom apartment in a high rise at 20 kilometers from the center. When households are required to pay for the maintenance of their building — either indirectly through rent increases or directly because they have acquired ownership of their unit — the high rise apartments of the periphery will have:

(1) The highest maintenance cost — defined to include the cost of maintenance and operations of elevators and lift pumps, cost of central heating caused by the bad insulation of panel buildings, costs of frequent structural repairs required by the building technology used, and the cost of maintenance of large common open space.

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The lowest space standards measured according to room dimensions and height of ceiling,

The lowest amenities quality including distance to shops, variety of services, and

The highest transport costs currently expressed only in time to work, but soon expressed in financial terms when deep transport subsidies will decrease.

Given the above qualities of the typical unit at the city periphery, a potential buyer's choice of an apartment in a suburban high rise will not offer a trade-off between different benefits such as getting more floor space or land in exchange for living so far from the city center. The only reason, then, for a buyer to select a unit in a high rise suburban area will be the unit's very low price. The market price which will emerge as land and real estate markets develop may turn out to be much below the replacement cost of such a unit. Most importantly, the market price of such units expressed in terms of market rent, might not even cover maintenance costs.

Viewed through the prism of emerging market prices, much of the housing stock in periphery apartment buildings may have a discounted present market value of less than zero—a sobering insight for privatization policy and for future housing investment programs. In the case of Moscow, in FIGURE 2.a, the units at risk would be those located above the density line for Paris between kilometer 9 and kilometer 22. Given the current housing shortage, transition policies of preferential treatment in terms of transportation subsidies, higher quality maintenance may ease the burdens on residents. But it will remain a fact that these parts of the housing stock have very low and mostly negative transitory economic value. The high accessibility of some parts of the suburban areas (around metro stations for instance) should provide the opportunity for the emergence of secondary employment centers. Such centers would contribute to restoring the economic value of some of the residential areas. For this to happen, land use regulations and local administrative practices should show enough flexibility and speedy responsiveness to allow land conversion wherever firms of all sizes choose to use this location opportunity. Allowing this type of land use transformation to proceed should be a high urban policy priority.

It should be clear from the quantitative analysis presented that the suburban housing crisis which is looming in the cities of Russia cannot be attributed to the transition to markets, but to the legacy of the past. This crisis is the result of the administrative-command which disregarded the practical needs and preferences of the final users and lacked means of self-correction. The economic value of the housing that was produced did not match the true economic cost of the

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12 This situation arises today because the discounted present value of rents recoverable is only a fraction of the net present value of maintenance costs. Moreover, there is zero capital cost recovery so far in Russia. In 1992, total rents and utility payments had fallen to a trivial 0.9 percent of household incomes which themselves had fallen by about 50 percent in real term following the "shock therapy" macroeconomic reforms of January 1992. On the other hand, maintenance costs had risen sharply with increases in the cost of energy and price liberalization. This scissor effect between low rents and low wages on one hand, and rising operation and maintenance costs on the other is not sustainable. Restoration of an economic balance could result from abandonment of the least attractive part of the stock combined with increasing crowding of remaining units and much higher rent to income ratios.
LAND USE ALLOCATION IN THE MARKET CITY
The Fundamental Locational Trade-Off Made by Households

The most striking feature of the socialist city is the inability or unwillingness of the housing production system to provide households with the opportunity to make trade-offs between housing space and location according to taste, preferences and the life-events of the family life cycle.

1. The Two Trade-Offs Facing Households When They Choose Their Housing

In a market economy, households are free to make their housing choice within the constraint of their total income. In making their selection they face two trade-offs: first, how much of their budget to spend on housing compared to other goods; second, within this budget allocation how much space to get and where.

Households aim to maximize their satisfaction with respect to the consumption of housing, goods and commuting, subject to their budget constraint. This budget constraint says that expenditures on housing, goods, and commuting must not exceed income. In this budget constraint, income must include the money income foregone as a result of commuting. Different households will make different choice. But the general pattern of choice can be conveniently represented in a simple mathematical relationship. The household budget constraint can be represented by three types of expenditures: (1) goods whose prices do not depend on location Q_o, (2) housing whose price and size is affected by location Q_o(u) and (3) travel costs which are a function of the distance to the center u and a rate t. These three budget items must be equal to the wage w. The budget constraint is therefore:

1) \( P_1 Q_1 + P_2(u) Q_2(u) + t \cdot u = w \)

The notion of trade-off under a budget constraint also means that when making a choice about its housing, a household may also trade off housing against other goods based on their prices. Expressing small variations in mathematical terms, trading-off between housing and other goods means the relation (based on partial derivatives):

2) \( \frac{dQ_2}{dQ_1} = - \left( \frac{P_1}{P_2} \right) \)

The combination of trading more housing with commuting in equation (1) and housing against other household needs in equation (2) yield the location equilibrium condition which is intuitively appealing and yields important insights about the structure of cities, and the basic economic forces at play in Russia now:

3) \( \frac{dP_2(u)}{du} = - \frac{t}{Q_2(u)} \)

The left side of equation (3) is the slope of the housing price function. The equation says that the rate of decline in the price of housing as one move from the city center \( \frac{dP_2(u)}{du} \) is directly and negatively proportional to the commuting cost per kilometer (4). The housing price is more expensive close to the center.
Further examination would reveal that this relation (3) explains the curvature of the price gradient linked to household budget trade-offs, and also why the price curve is steeper close to the center. To reveal the intuition behind it, this relation can also be rearranged as:

\[ Q_2(u) \cdot \frac{dP_2(u)}{du} = -t \]

This new equation says that if du measures a move of one kilometer away from the center, the increased quantity of housing available due to a lower housing price at that location will be matched by the increased commuting cost of t. The logic of market housing choice under constraint is that suburban residents will consume more housing than close-in residents. As people locate away from the center, the housing price will fall, but the effect on the budget will be offset by rising commuting costs. Since land is cheaper in suburbs relative to other housing inputs, suburban housing will have lower capital/land ratios than downtown housing. It must be kept in mind that this analysis applies to two households with exactly the same budget who choose to meet their preferences differently. The fundamental flaw of the socialist city is that housing unit sizes are uniform irrespective of location. In that case the city housing office is implicitly redistributing income to those who get the same space downtown.

Housing Diversity and Efficiency in a Market City

The preceding formalized analysis is verified very well empirically. In an actual city, not only families have different preferences at the same level income, but incomes also vary significantly. In response to this diversity, the housing markets are producing a wide range of units. A middle-income city like Kuala Lumpur, Malaysia—where an actual analysis was made—shows such an expected wide choice of units with usable floor space ranging from 20 square meters to 130 m² and land consumption varying between 30 m² to 500 m² per dwelling unit depending on location.
resources used. This cost was masked by distorted accounting prices which provided no meaningful
guidance to decision makers who resorted to inadequate or perverse physical and administrative
criteria.

V. COMPONENTS OF URBAN LAND REFORM

42. The preceding analysis demonstrates the predicament that Russian cities face with a
built environment that is inefficient and unsustainable to such a large extent. Unless an urban land
market develops, there will be no way to induce obsolete industrial land users to relocate from their
prime land and release it for commercial and residential uses. However, markets cannot operate in
an institutional vacuum. What are the new institutions which can achieve sound results now, after
the administrative command system failed to do so for seventy years? This section focuses on four
key components of urban land reform: (1) land and property tenure, (2) the trading of land and
supporting information systems, (3) land valuation and taxation, and (4) the entirely new role of
Russian urban planners in market cities. To provide a more concrete understanding of the nature
and scope of transition problems in other socialist cities, each section provides a brief historical
review, describes current practice, and proposes institutional reforms for the Russian city. There
are several justifications to this process. We aim to provide more insights into how the present
socialist system operate. We would like to make more concrete the new role of the public sector in
supporting emerging private land markets and guiding the future growth of cities, and to clarify
how the existing institutions need to change. By detailing this institutional dimension of the
transition to market we also aim to stress the dominance of proper institutional, economic and
financial factors over the wide variety of engineering and technical choices available worldwide
in determining the soundness of future urban investment outcomes in "transition cities".

A. Land and Property Tenure

43. The development of clear and verifiable property rights is the cornerstone of the
development of efficient urban land markets. Among the wide and complex variety of property
rights existing in an advanced industrial economy, real estate property rights are one of the most
ancient form of rights. The central role that clear property rights play in sound, efficient and modern
urban planning by lowering the need for state intervention with its inevitably high transaction costs
is much better understood today. Yet, in TSE's, these rights have to be either restored and
their necessary institutions recreated, or even fully developed for the first time. Practical reform

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13/ See William F. Fischel, The Economics of Land Use Zoning, Baltimore: The Johns
Hopkins Press, 1984. The link between personal liberties which are such a significant political concern in
most TSE's and property rights should not be underestimated either. U.S. Supreme Court Justice Potter
Stewart observed in 1972 that "The dichotomy between personal liberties and property rights is a false one.
Property does not have rights. People have rights. In fact, a fundamental interdependence exists between the
personal right to liberty and the personal right in property. Neither could have meaning without the other."
problems differ significantly in this area between Eastern and Central Europe, Russia, the other former Soviet republics, and China.

1. A Russian Overview

44. The outstanding features of the history of the Russian land tenure system are: (1) no tradition of individual land ownership and (2) divergent tracks along which land and property tenure have developed. The absence of ownership rights in Russia can be traced back before the Soviet period through a long history of anti-mobility policies that tied peasants to the land. Even after the Emancipation of the Serfs in 1861, peasants remained tied to their communes which held title to the land. The Stolypin reforms of the early 20th century brought land ownership to only 20 to 30 percent of peasant households. Following the 1917 Revolution, land and structures were collectivized and the "propiska" system of residency permits instituted to control mobility.141

45. During the socialist period, the land regime was consolidated around the basic principle of state ownership of land and a complex system of allocation of land use rights. Management of most urban land was delegated to the municipal governments, although central ministries controlled land reserved for industrial uses. Municipal governments allocated land for specific uses to public agencies, enterprises, chartered organizations, or households who then could use the land for the specified purpose for an indefinite period, but the user could not lease or sell the land and the "right of use" could be revoked by the municipal government. "Kitchengarden" plots were typically held in this form of tenure. This "revocable right of use" was the only form of land tenure recognized by the USSR.

46. It is important to note that unlike land itself, structures on the land were held in somewhat different forms of tenure in the USSR. Enterprises often had "limited ownership tenure" in buildings that had been built especially for their use. They carried the buildings as depreciable assets; and could lease but not sell surplus space. "Leaseholds" in buildings owned by the municipality were allowed. Residential rental tenants had a "hereditary, indefinite right of occupancy" paying nominal rents and being virtually immune from eviction. Apartment exchanges were allowed. Housing cooperative members, who supplied the capital to build their buildings, received "cooperative tenure" under which they held joint title to the building, and could lease or sell their apartments through the cooperative association. Finally, a small number of single-family urban houses were held in "full ownership," although the household held only a revocable right of use on the underlying land.

47. This divergence between land and structure tenure forms has developed because socialist law broke up rights in ways totally different from normal market uses, and incompatible with them. Land and housing law were different branches of socialist law written by different legislative committees; while in market economies, land and buildings are generally considered

jointly as "real estate". In Russia, restricted land tenure rights now impair ownership rights in structures. For example, a factory owner must assume that useful title to improvements will expire at the end of any leasehold period. In addition, separate systems of tenure create real estate valuation and taxation confusion as privatized flats carry valuable, but uncertain claims on the underlying land. Also, as discussed in more detail below, separate tenure systems are leading to expensive administrative duplication and confusion as cities create parallel registration and valuation systems for land and buildings. While Article 37 of the Land Code is supposed to ensure that land and building tenures are reconciled when ownership of a building is transferred, in practice, such a procedure can create a significant administrative bottleneck.

2. Current Tenure Forms

48. During the past three years, tenure confusion has increased as three new forms of land tenure have been created, each limited to certain kinds of owners or certain land uses. The objective of land privatization is to convert the traditional "right of use" to one of these three forms as quickly as possible.

(1) Hereditary Life Tenure. This type of tenure was reasonably adapted to single family dwellings or garden plots by providing a legal guarantee of permanent use and the right to pass on the property through inheritance. The main drawback is that the property can not be sold or leased to others. Municipal authorities retain the right to cancel possession rights with compensation for the cost of the dwelling, but not for the land.

(2) Lease. Recent legal changes have introduced the leasehold form of ownership with terms up to 49 years allowed under the responsibility of municipal authorities.

(3) Ownership of Agricultural Land. Private ownership of agricultural land is now allowed subject to the restriction that it not be resold for ten years or leased for more than five years.

49. These three forms of land tenure are imperfect alternatives to allowing full private ownership of urban land, a reform that has remained a controversial issue until now. Long-term leases remain the main form of tenure for urban development — a serious bottleneck to further reforms. 15

50. In December 1992 The Seventh Congress of People’s Deputies passed two amendments to the current Constitution of the Russian Federation which are critical to housing reform, yet do not deal adequately with the full requirements of urban land reform. The Amendment to Article 12, part 3 removes the restriction on the right to freely possess, use and dispose of land plots owned by individuals. It eliminates previous "anti-speculation" restriction on sales. The amendment remains inadequate since such land can only be sold without any restriction only if it

15 See Vincent Renard et al, op. cit.
remains in residential uses. The large-scale needs for land recycling across land uses of Russian cities still remain unanswered. An amendment to Article 58, dealing with the rights of citizens to housing has been made more consistent with market-oriented reforms since the state’s obligation to provide housing can be considered satisfied through a household's purchase or construction of its own dwelling, the provision of housing through a найм (social housing) contract, payment of housing allowances, or construction and maintenance subsidies. The December 1992 Law on the Fundamental of Russian Housing Policy also creates the possibility of full private ownership of urban "real estate" defined to include land.

3. Direction of Reform

51. The key elements of any reform strategy for the Russian government are to: (1) define further rights to full land ownership granted by the 1992 Housing Policy Law and (2) integrate land and property tenure forms.

52. The first step on reforming land ownership rights is to clarify, coordinate, and publicize the rights granted in the various decrees, laws, and codes over the past few years. There are still many restrictions on types of uses and users associated with existing tenure rights that are incompatible with a well-functioning land market. For example, the Land Code allows full land ownership only for Russian citizens for agricultural or residential use, with restrictions on alienation; the law does not appear to allow development companies or groups of households in joint stock companies to own land for residential development. Enterprises retain traditional "rights of use" until they convert to a land lease through negotiations with the municipal authorities. But, land leaseholds are not necessarily included in property leaseholds from municipalities or as part of apartment property in privatized residential buildings — a potential source of uncertainty. Presidential Decree 301 appears to allow full ownership by corporations in acquiring land of privatized enterprises; while the December 1992 Housing Policy Law appears to allow full ownership rights in real estate in the market legal sense. In the face of such complexity and ambiguity, prudent investors will not act. The present legal patchwork may freeze developing land markets by greatly raising transaction costs and unnecessarily raising the level of uncertainty of transactions whose effects reach far into the future.

53. Consistent with this first point, a second priority in land tenure reform is to unify land and property tenure forms in order to simplify trading of real estate. Corporate ownership of land, or long-term leases (such as 99 years) with provisions on the disposition of improvements at the end of lease term, are a prerequisite for residential land development and industrial area redevelopment. Institutional reforms are necessary to establish the procedures, at a local level, by which clear titles to well-delineated land parcels may be obtained. While Russia’s land and property codes describe permissible forms of tenure, they are unclear about how to achieve such tenure. It appears that more than half of all land users lack adequate documentation of their claims to title. Many claims predate the 1917 Revolution. Even recent claims to land seldom include a careful parcel boundary.
B. Trading of Urban Land and Market-Oriented Information Systems

54. Once again, property rights are not self-defining. The trading of land and other forms of real estate between either private parties, public entities, or private and public entities requires a major overhaul not only of the legal framework, but also of the existing registration and information systems, and administrative procedures and practices in all TSE's.

I. Current Administrative Procedures

55. The land information system of the City of Moscow can be used to illustrate several general points about current obstacles to the development of urban land markets: (1) land and property registries are developing separately from one another rather than as a single system, (2) improper incentives discourage those making market transactions from recording accurate sales prices, (3) normative prices for valuation and property taxation bear no relation to market prices. Because of the size of Moscow, bureaucratic fragmentation and the administrative lack of cooperation are probably more pronounced there than in other Russian cities, but the nature of the problems is usually similar. In Moscow, the following are the current parties in the land information system:¹⁶

(1) Geotrust is responsible for all mapping, but has no titling or adjudicatory role. Geotrust provides staff to the Moscow Land Reform Committee for surveying parcel boundaries.

(2) The Moscow Land Reform Committee is responsible for granting rights to use land, recording the rights, conditions, and contracts relating to the use of each parcel, inventorying land resources, and establishing a policy for land valuation. Currently, the Committee is undertaking a cadastral survey to fix the boundaries of existing parcels and documenting the initial registration of existing tenure rights. Many boundary disputes will arise and will require mediation or adjudication — in Poland, this process of parcelization has proven quite cumbersome as municipalities, enterprises in the process of privatization, and individuals began to recognize the value of struggling over boundary definitions. New tenure laws seem to require case-by-case privatization and re-registration of these titles, quite a lengthy process.

(3) The Bureau of Technical Inventory (BTI) is responsible for the physical inventory of buildings — both residential and non-residential. BTI has no mapping information on the buildings it records, although it has a nearly complete register of buildings in the city, including a detailed site map, with measurements of building perimeters. The building dossier or "passport" contains a register of owners and leaseholders that occupy the building with a reference to the document that granted the title. However, this passport is infrequently updated and now quite out-of-date.

¹⁶ This description draws extensively on a field report by J. Eckert as well as on V. Renard et al., op. cit.
(4) The (City not GKI) *Property Committee* is responsible for registering contracts on non-residential buildings only. Individuals or enterprises initiate registration by requesting registration of their rights; and the Committee does not perform on-site verification of information on rights in registration requests. Neither does the Committee have any mapping information, nor does it send information back to BTI.

(5) The *Committee on Housing*, also known as the Residential Affairs Committee, registers contracts only on residential units — including municipal, cooperative, or private units — for a small fee. The actual registrations are performed by a private company, "Mosprivatization" which had registered 135,000 first-time "privatizations" and 5500 "subsequent transactions," as of end-June 1992. Subsequent transactions of privatized apartments list the reported price paid for rights. Sometimes prices are accurately reported as a means of legitimizing funds, or if a bank is used as an intermediary. Often prices reflect the extremely low BTI book value as a method to avoid paying the extremely high transaction tax.

(6) *Genplana* or the *Master Planning Institute* is responsible for planning city development and keeping track of land usage. In order to get a land passport with permission to build, Genplana’s signature is required, along with the requesting enterprise, the raion, and the local architect’s office.

56. Faced with this bureaucratic structure, what steps are normally involved in a property transaction? First, the seller obtains a copy of the building’s technical passport from the local BTI office, which lists the normative price of the building, derived from a non-indexed historical cost, itself derived from very distorted administrative prices. Second, buyer and seller go to a notary who checks the BTI passport, among other documents, and then oversees that the buyer signs a "price setting" certificate. The seller is then required to pay the transfer fees or taxes, which are set at between 10 to 20 percent of declared value — a strong incentive to under-report the actual sales price. The notary then validates the transfer; while the buyer registers the property in the appropriate office which issues an "ownership certificate."

2. *Direction of Reform*

57. The development of local market-oriented land information systems for Russian cities has too many legal, technical, institutional, and economic dimensions to treat them adequately within this chapter. The scope of the technical work to be done to arrive at a market-oriented land information system covers a wide array of issues that remain unsettled in Russia: (1) the legal framework, (2) the institutional framework, (3) the strategic information systems that cities should develop, (4) identification and procedures for the registration of all property interests related to a parcel, (5) a GIS development strategy, (6) the choice of geographic information system and related hardware and software issues, and (7) objectives, function and organization of cadastral mapping.
C. Property Registration, Valuation and Taxation

58. Many local governments in socialist cities have backed into property valuation activities for the purely opportunistic aim of increasing local revenues. They have typically failed to grasp the central role of accurate property valuation as a measure of the opportunity cost of a site, or the possible allocative effects of property taxation on the use of land. Due to its immovable nature, land is simply seen as an easy target of opportunity for fund raising. Such a myopic and often disruptive behavior is very noticeable in Russia.

1. Current Conditions

59. In 1991, the Law on Land Tax was introduced. This new tax is part of a larger set of taxes and fees, and payments associated with privatization and use of land and buildings. Four types of payments could be considered:

(1) Payments for privatization of tenure rights to non-residential property have been fairly limited to date, including lease payments for land and buildings based on formula-driven payments. Auctions of rights will presumably become more common.

(2) For residential units, the federal Law on Housing Privatization specifies a guaranteed free transfer of up to a certain quantity of space per household member with payments for extra space or amenities to be decided by local governments. Formula for determining payments have been hotly contested, but generally based on the depreciated historical replacement values reported by the BTIs, without reference to current construction costs. Article 17 of the Land Code assigns municipal governments the obligation to allocate land to citizens for single family houses and garden plots, but does not specify the procedures or tenure types for such allocation.

(3) Property transfers between private individuals require payment of a transfer tax of 10 percent of the transfer price – a prohibitive tax that encourages under-reporting of actual transaction prices. With under-reported values, it is difficult to establish accurate property valuations.

(4) Recurring payments, in the form of real estate taxes, are required under the 1991 Law on Land Tax, and the 1991 Law on Taxes Levied on the Property of Natural Persons. (i) The Land Tax requires all owners and users of land to pay tax, while those who lease municipal land must pay annual land rents. 10 percent of revenues go to the federal government for public works in the city; 90 percent goes to the municipal treasury. Unfortunately, the Law has many flaws.\footnote{For a good overview and critique of the land tax as of 1992 see Ira S. Lowry and Olga Kaganova, \textit{Real Estate Tenure and Taxation in the Russian Federation}, Urban Institute and USAID Technical Assistance Project, Moscow and Washington D.C., June 1992. See also in French: Joseph Comby, Vincent Renard, Rodrigo}
land tax per unit area, rather than allowing local governments to set a rate; it allows
city to vary the land tax by district as long as a citywide average tax is maintained.
The law also sets residential tax rates at 3 percent of the general city rate. Finally,
the Law introduces the concept of a normative or standard land price -- at 50 times
the promulgated land tax -- to govern terms of transfer of land to private ownership,
establishment of collective ownership shares, transfer by inheritance or donation, and
to obtain mortgage credit. (ii) The tax on residential premises is set at 0.1 percent
of "assessed value," a term defined in the implementation order to equal BTI's
deprecated replacement value.

60. In many countries, the payment of property tax has been a first step in defining
property rights. In Russia, this may be happening because the tax rates and tax base are quite low,
while the incentive to stake out claims to land parcels is high. Enterprises pay the tax in a simple
declaration procedure according to the land area they claim; apartment occupants pay according to
their proportion of total floor area, once the land area of the building is determined. This process
will help to define the land area that firms and apartment buildings are using, thus clarifying their
holdings or pointing out conflicts. On the other hand, the current tax has numerous shortcomings.

(1) The law determines an actual Ruble payment per hectare, a number that becomes
increasingly meaningless in a high inflation setting. A better approach is to allow
local governments to set a rate which then allows revenues to track market values.

(2) The normative assessments are not based on real transaction prices or actual
construction costs, but instead on "depreciated replacement costs," a book value
maintained by the BTIs on all buildings. This number could only be a good proxy
if related to current prices or real construction costs. Estimates indicate that the
June 1992 replacement cost for residential construction was 35 times the official
normative value. Assessed value should be based on either the market value of
property calculated from actual replacement costs or transactions prices.

(3) Specified tax rates are also quite low, so that combined with the low normative
assessments, the amounts collected from this tax are trivial for most users -- they may
even be below the cost of collection. As a collateral issue, the extremely low rate
for residential property, 3 percent of the citywide rate, overly discourages local
governments from promoting residential construction, once assessments are more
realistic.

(4) A serious drawback of the law is that it allows a high degree of arbitrariness in the
value assessment of individual buildings. Article 13 allows negotiation of the value
on a case-by-case basis. Also a highly discretionary series of exemptions may be
applied for particular taxpayers, including for example, young people, artists, large
families, or veterans. Such discretionary power over assessments is prone to

corruption and might encourage municipalities to interfere too much in the enterprise decision-making. Allowing individual negotiation maximizes the transaction costs of administering the tax, while encouraging evasion and corruption.

2. Directions for Reform

61. As the above suggests, the key elements of a reform strategy in the land information-valuation-taxation areas are: (1) the establishment of a reliable, public cadastre with incentives for private individuals to report transactions prices accurately, (2) better valuation techniques that move from normative to market prices, (3) the reform of the land tax law to set more realistic, consistent, and non-arbitrary rates at a local level.

Necessity of a Cadastre

62. The most urgent step is to create a reliable, transparent, public cadastre that identifies parties to real estate transactions, the land and property rights conveyed, the type of transaction, and the actual purchase price. Land markets require a clear identification and delineation of land parcels. This requirement of markets is reinforced in Russia by the 1991 Law on the Land Use Tax of the Russian Federation which introduced the annual payment of a tax for use of land (analoga): cadastral information is necessary because land appraisal must be based on current, complete, and accurate cadastral maps that show boundaries, areas, legal constraints, along with identification data. Thus a public, accessible cadastre serves several purposes: providing information about the functioning of the land market, facilitating collection of a land use tax, and providing information for land use planning. Access to such a register should be broadly open to the public, with only a small fee sufficient to cover cadastral administration.

63. While a cadastre does not exist presently in Russia, most of the basic information is already available in the municipal BTI offices, which could be compared to the German Grundbuch, or property registry which was familiar in pre-1917 Russia. As discussed above, the key missing element is the lack of a general cadastral map that gives coherence to individual building passports, or allows continuous maps of new subdivisions or land pooling. The second key missing element is a reliable link between land and property titles. Thus, the Land Reform Committees are planning cadastral surveys and registration procedures that would clarify parcel boundaries, identify owners, and document forms of tenure, and the Property Committees and BTIs have good building information, but the land and property agencies are not unified. There should be in each city a single, centralized archive of property records that includes both land and property transactions.

64. Creating incentives (positive and negative) to encourage parties to report the actual transaction price will require a creative approach. One possibility is to give the municipality the right to preempt transactions that clearly understate the transaction price, by allowing the city to buy the property at, say, a 10 percent premium and then auction off the property. Another mechanism is to require a notarized statement as to the veracity of the reported price, with stiff penalties for fraudulent reporting, such as forfeiture of the property or voiding the contract. The Italian experience shows that a properly designed capital-gains tax collected at the time of sales can eliminate the collusion incentive to underreport between the buyer and the seller, the buyer being
exposed to the risk of a greater tax in the future than is actually owed in the event that he resells the property. 18

**Land and Property Valuation**

65. Better valuation techniques are a difficult undertaking in the present unstable and high inflation environment. The paucity and low quality of economic information which is one of the many legacies of the administrative-command system could be corrected relatively rapidly considering the extensive size of Russian administrations and the education level of the workforce. It is at the conceptual level that the greatest needs exist since there is no data collection system without an underpinning analytical and decision-making framework. At present, the information requirements of real estate markets remain imperfectly understood. The problem exists at every level of government. Regarding the price of land in particular, the analysis presented in Part III and the early price analyses illustrated in FIGURE 2 indicate that modern mass-valuation method to identify the market value of land can be adapted to Russian cities with great benefit. The critical difference between such methods and the current Russian attempts to derive "normative land prices" is that mass valuation methods can embody the general concept of "highest and best use" and therefore of the opportunity cost of a site which is missing in Russia today.

66. In the longer-term, the goal is valuation based on actual transaction prices. Professional assessors should be trained to estimate market values based on standard procedures that look to actual prices of comparable property sales. The assessment procedure should be established in a manner that ensures its relative impartiality, including with appeals procedures for property owners. Tax preferences or tax exemptions could then be implemented through differential tax rates not through preferential value assessments granted on a case-by-case basis.

**Improving the Land Tax**

67. Overall, the Land Tax is a good start. It encourages owners to declare their land and to begin to think about defining their land parcel boundaries. It prepares the public for the concept that along with ownership comes responsibilities in the form of paying taxes. It encourages municipal governments actively to develop and improve their cadastre. And, if assessments and tax rates are made more realistic, it is an incentive to use well-located urban land more efficiently by increasing the costs of land hoarding.

68. However, two glaring flaws of the present version of the law are, first that it specifies land prices and taxes in rubles, and second, that these values are written directly into the law. Soon inflation will require a new act of parliament to modify and update this national law. Prices are elements of managerial decisions which should be kept to the lowest level of government possible. The Russia federation is a country twice as large as the United States and there is more than a small element of economic irrationality to assigning implicitly the same economic value to land everywhere, even regional adjustments are made. Second, the perspective on taxation should be different. The present law assigns different prices according to current land use: two contiguous

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18 We owe this point to Gian-Carlo Guarda. A decade later, market value reporting prevailed in Italy.
parcels with different uses could be priced totally differently. This will ensure long-term land resource misallocation. The better perspective is to price land according to highest and best use. Then a tax rate can be selected. If certain activities need to be encouraged or buildings or historical sites need to be protected, the tax rate can be adjusted accordingly.

69. The Land Tax should be primarily a local tax -- it can be one of the few reliable sources of revenue to support infrastructure and public services provided by cities. Municipal governments should be able to set real estate taxes and rates -- indexed to market values -- within their jurisdictions as they deem appropriate for their local revenue needs and local voters' willingness to pay.

D. The New Professions: Role of Urban Planners in Market Cities

70. Because of the complexity of housing and other forms of real estate as economic goods, the information requirements to operate sound and efficient markets are met by a wide variety of professions, two noticeably missing ones being valuer-appraisers and developers. The transition to markets will also require profound changes in the role and skills of urban planners.

1. Urban Planning Practice in Russia

71. The reality of urban planning and development differed substantially from its principles in the Soviet city. The basis for socialist city planning derives from decrees on land, home ownership, and nationalization of industry during the period 1917-1920. Two distinct types of planning emerged from the first five year plan (1928-1932): with "planirovaniia" or socio-economic planning by industrial development ministries dominating over "planirovka" or physical planning. Key principles of urban planning included: (1) the nationalization of land; (2) normative rather than market determined land use; (3) standardization of urban service provision to reduce residential segregation and increase the role of public transport; and (4) centralized economic planning. Despite reform efforts during the 1950s and 1960s, local physical planners and municipalities had little or no power in shaping urban planning, plant location, or housing allocation. The distribution and character of housing followed central bureaucratic industrial planning.

72. As was shown in Part II, Soviet cities were not planned as entities and their layout hampers rather than enhances their efficiency and livability. The reasons for the shortcoming of Soviet urban planning throughout the Union have been cogently summarized as follows almost 15 years ago:


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"Despite voluminous writings on the ideal socialist city, no viable theory or set of principles emerged to provide a coherent set of guidelines for the future;"

"Although cities since 1971 have been required to produce plans for their orderly development, they have generally lacked adequate staffs to elaborate such plans, relying instead upon special contracting agencies in Moscow and Leningrad whose personnel usually have little knowledge or sensitivity concerning local planning problems;"

"Planners whether from the local governments, or from the national contracting agencies, must make decisions without adequate data on demographic trends or future investments by central ministries that will have fundamental impacts on their communities;"

"Completed plans are not implemented because local authorities lack their own finances for capital construction and they also lack political authority to compel industrial ministries and other agencies that have funding resources to build in conformity with their plans;"

"These central bodies have their own priorities for constructing factories, worker's housing, and utilities in a given community, and in seeking to balance their own budget have felt free to overlook both local planning objectives and even nationally set norms for auxiliary retail and service facilities;"

"The staff assigned by these central bodies to develop factory housing complexes are too unfamiliar with urban planning needs and problems and are prone to serious errors in siting decisions;"

"Because of a chronic shortage of housing there is a reluctance to tear down existing accommodations."

Some people familiar with urban affairs might very well argue that there does not seem to be so much difference between urban planning as still frequently taught or attempted in countries of Western Europe or North America and the shortcomings just ascribed to socialist urban planning. The Athens Charter of 1936 could be cited as supportive evidence. However, in the cities of advanced market countries, several forces usually restrain normative impulses and correct tendencies toward any omniscient arbitrariness on the part of urban planners in position of authority. In addition to broadly available land values, two in particular are: the publicity of decisions which facilitates the financial and broader evaluation of planning decisions; and, administrative and legal processes allowing injured parties and the public to challenge government actions considered harmful.
or unwarranted. The devolution of urban planning powers over all public and private owners to elected local governments is a third important factor.21/

2. The Current Urban Planning Process

74. Russian physical planning is based on master or structure plans and local plans. Master plans provide the main directions for future development on a scale of 1:10,000 and remain valid for 25 years; while local or site plans, usually very detailed at 1:600 are often prepared for a single project. In practice, master plans are often obsolete by the time they are prepared and local plans are prepared on a case-by-case basis following project completion. Concepts such as floor-area ratios, servitudes and easements did not exist in Soviet planning practice. Modern zoning techniques which focus on local notice and dispute resolution procedures are entirely absent.

75. Second, no reference is made to the notion of infrastructure cost. Infrastructure construction and maintenance were considered to be social services such as health or education. No specific accountability for infrastructure was required of municipal authorities, nor were costs apportioned among specific projects or between initial investment, maintenance, or improvement costs. There are now no procedures for calculating the implicit subsidies being transferred to privatized households or enterprises in well-serviced areas, nor are there procedures to allocate costs and responsibilities for provision and production of new infrastructure between the public sector and private developers.

76. A third problem area of current socialist planning practice is the absence of clear rights and procedures for conversion of agricultural land to urban uses. Many countries experience severe disruptions in urban land markets because of policies which overly restrict such agricultural land conversion. Cities and oblasts previously negotiated for conversion of oblast-controlled raw land at the urban fringe. Cities compensated oblasts, but not the kolkhozes, for the supposedly free land by making contributions to regional funds for agricultural development under the Ministry of Agriculture. These contributions were implicit prices, which should be clarified, made explicit, and paid to current right-holders in the land. Newly privatized farmers at the urban fringe are now in a precarious position because they can not alienate their land for a minimum of ten years.

3. Direction of Reform

77. First, local governments will need to ensure the availability of land for new housing construction in areas where there will be the highest demand. While this new demand has not yet manifested itself, the rough outline of its characteristics can be anticipated: land consumption per unit of floor space should increase from the center toward the periphery. This new trend could be summarized as: high rise in the center, medium density in the close periphery, low rise (town

21/ Another important development in improving Western urban planning practice has been the development of the fields of urban economics, real estate development and urban planning with resulting improvement in relations between the professional and academic fields of urban planning and economics. Urban planners and economists too frequently ignore or even dismiss each other at great cost to their urban work. The work by William Fischel already cited represents a very significant contribution in this regard.
houses and individual houses) in the far periphery. As can be seen, most of the new demand for land will be located in the existing built-up area. Making this land available will require the following simultaneous actions by local governments:

(1) Establishing a legal framework to allow present land users to trade the land they occupy and retain a large part of sale proceeds; this would require streamlining the legal land registration system;

(2) Amending zoning and building laws to allow the maximum of flexibility in land input and land use;

(3) Identifying areas by urban planners which are more likely to be transformed in the near future; inventorying land and infrastructure upgrading required under different density scenarios; and

(4) Close monitoring of land use changes and land prices, formal and informal, in order to anticipate infrastructure investment and upgrading which will be needed to support changes.

78. Second, better planning practices are not the most important factor for improving land use efficiency in Russian cities. Rather, the most important factor will be establishing tradable land property rights. When those rights are established and a real estate market starts functioning, the role of urban planning will again become important. A new role for planning will consist mostly in monitoring and anticipating land use changes triggered by demand, and in designing infrastructure and a new set of urban rules which will allow the new land uses emerging from the market to function effectively.

79. Third, the government will need to support new or improved infrastructure and social facilities required by land use changes under market conditions. Provision of this new infrastructure must be guided by the reference to land market forces, so that investments are made in areas where they will provide maximum benefits in a short period. For example, from the analysis above it appears that the reinforcement of infrastructure and reclaiming of a number of railroad right-of-ways in areas immediately adjacent to the center will provide high economic rates of return. The temptation to run away from urban problems by investing heavily in new peripheral areas and satellite towns should be avoided.

80. Fourth, in the area of the urban environment, new regulations and tax incentives will have to be drawn quickly to protect the limited amount of land occupied by historical monuments and valuable traditional neighborhoods whose economic value to the community is greater than the financial return that private owners of individual properties could expect in the short run for various reasons such as dilapidated neighborhood conditions, or a shortage of central commercial space. In addition, Moscow and St. Petersburg contain some valuable natural features such as forests, lakes, river, or sea shores which should be clearly protected. The slight decrease in the supply of land involved in the protection of natural environment and historical monuments may increase the market pressure on obsolete land use within the built-up area and therefore contribute to the acceleration of recycling land toward a better land use efficiency.
4. New Role of Urban Planners in Russian Cities

81. Land use planners will have to upgrade their skills considerably to monitor and forecasts land use trends and infrastructure needs in a manner consistent with the anticipated medium-term growth of the city and its financial capabilities. They would have to be trained in modern methods of joint public-private development. In short, they would have to be trained for a completely new approach to their job combining urban planning, real estate finance, and legal negotiating skills under both public and private hard budget constraints. Instead of "designing" new areas with the sole supply constraints of a monopolist developer, they will have to:

1. Monitor land use trends brought by households and enterprise demand.
3. Monitor the supply of developable land and the recycling of already developed land.
4. Review the affordability of land use standards in relation with land prices and construction cost.
5. Relate the cost of primary infrastructure with the value, the type and intensity of use of the land it serves.
6. Analyze the spatial, economic and financial consequences of land development alternatives.

This needed evolution of the job content of urban planners parallels that of the new urban professions emerging in Russia such as property valuers, bankers, land developers, and real estate developers.

VI. CONCLUSION

82. The absence of land markets has profoundly impaired the internal efficiency, productivity, environmental quality, and liveability of the socialist city. The reference to the "failed socialist experiment" in the title of this paper was not intended in a polemic or ideological sense. Rather, the magnitude of land use misallocation and the degree of rigidity caused by the absence of land markets in the Soviet city is startling. The consequence for the national economy is that the socialist city tends to have very high capital/output ratios. The well meaning attempt to socialize the collection of the land rent through total public ownership and public allocation of land has not achieved the intended results. This paper has not presented direct evidence on the distributive impact on various social groups of state ownership and municipal administration of urban land. Yet, the analysis reveals the internal distortions within the socialist city and the differential economic impact of the transition to markets on urban residents and enterprises according to their location in city centers or at the periphery.

83. The socialist city has suffered from what might be called an "ideology of means" not from an ideology of goals. There is nothing presented in this paper that would call into question the social goals of any community. Rather, it is the allocation of land by administrative means to assure equitable and productive use of this truly basic resource which has demonstrably failed on an inordinate scale. A broad variety of social goals can be accommodated under market conditions. What is most valuable in market mechanisms is their pricing ability to show how
the current and future use of land is valued by individuals and society — and to reveal how site valuation shifts up or down over time. In order to move to markets, the main components of the needed urban land reform are: clear and tradable property rights; efficient market-oriented information systems; a taxation system coherent with efficient land use; and, the publicity and contestability of urban planning decisions.

84. The findings of this paper raise two critical issues for the transition cities. First, what are the privatization decisions required to initiate the process of competitive land allocation and recycling at the city level? In other words, what should be done in order to release land from state control and have it allocated on a competitive basis among prospective efficient users? Second, what are the appropriate institutions and processes needed to sustain sound urban land markets? In its last section, the paper points at the general direction to take and provides the outline of urban land reform and its main components. Yet, a separate paper is required to present and document adequately operational answers to these two key questions. Otherwise, blanket proposals may be misunderstood or prove too simplistic and not well suited to each country’s national and local context. This is particularly true for the Russian Federation which is by far the largest country in the world and one of the most diverse with 21 ethnically-based republics, ten autonomous districts, one autonomous region, six territories, and 51 other regions.
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