Editors' Summary

Brookings-Wharton Papers on Urban Affairs presents new research on urban economics to a broad audience of interested policy analysts and researchers. The papers and comments contained in this volume, the sixth in the series, were presented at a March 3–4, 2005, conference at the Brookings Institution. The papers display a range of issues treated by contemporary urban economists, including a history of the rise and decline of Philadelphia's economic fortunes; the effects of California's Proposition 13 on mobility; an analysis of the effects of the business cycle and Medicaid costs on state appropriations for higher education; interstate migration patterns in the United States; and the role of migration restrictions, economic growth, and foreign direct investment in the development of China's midsize cities.

Philadelphia is the fifth-largest city and center of the sixth-largest metropolitan area in the United States. This relative position represents a considerable decline from the city's preeminent position in earlier times. As Joseph Gyourko documents in his historical survey, *Looking Back to Look Forward: Learning from Philadelphia's 350 Years of Urban Development,* the city was the largest and economically most important in British North America throughout most of the eighteenth century. New York supplanted Philadelphia as the leading U.S. trading and merchant center in the early nineteenth century, but Philadelphia successfully reinvented itself as a center of highly skilled manufacturing. The city was America's most important source of manufactured textiles in the period from the Revolutionary War through 1850. New technologies and industrialization also permitted Philadelphia to produce metals and machinery, chemicals, and a variety of chemical-related products. The shift from trading to manufacturing was possible because of entrepreneurs' ability to exploit the city's large pool of local capital and skilled artisans as well as the development and pioneering use of steam power in production. Philadelphia had survived a major economic shock—its

diminished importance as a trading and merchant center—by reinventing itself and developing a new set of comparative advantages.

Philadelphia's second challenge came with the rise of rail transport in the middle of the nineteenth century. Railroads lowered the value of Philadelphia's central location along the North American coast by sharply reducing shipping costs. Ultimately, however, the city's entrepreneurial class was able to convert this new form of transportation into an important asset, taking advantage of the city's proximity to major coal fields in western Pennsylvania. For the first time since the completion of the Erie Canal, Philadelphia was able to compete with New York in the scale of domestic commerce. It was also in the late nineteenth century, however, that Philadelphia developed a well-earned reputation for political corruption. Vote fraud, bribery, favoritism, and graft became hallmarks of municipal governance.

The most recent peak in Philadelphia's fortunes occurred in 1920. At that time the city faced four new challenges: the rise of the automobile, which favored the suburbs and newer cities over older central cities; the relocation of manufacturing outside central cities; intense racial and social conflict; and much higher mobility, which allowed firms and households to take greater advantage of warmer and lower-cost places. In contrast to its earlier experience, Philadelphia failed to remake itself in response to these challenges. Gyourko examines a number of hypotheses to account for the failure. One key difference between Philadelphia's situation in the late twentieth century and its position in earlier times is the scarcity of relatively highly skilled and well-educated workers. Local access to a talented and flexible labor force allows entrepreneurs to enter and succeed in new lines of business. Growing firms are helped if there is a cost-effective and transparent local business environment. Compared with cities that continue to reinvent themselves, such as Boston and New York, Philadelphia has a poorly educated workforce, a more shortsighted governing class, and political institutions that favor highly parochial and sometimes corrupt interests. The most serious shortcoming is the relative dearth of local human capital. Philadelphia policymakers failed to invest in upgrading the skills of the city's workforce as well as in a first-rate education for young residents. Nor have they adopted policies that make the city attractive to well-educated workers or the employers of highly skilled workers.

Property Tax Limitations and Mobility: Lock-in Effect of California's Proposition 13 analyzes the lock-in effect of the initiative on California owners and renters, using Texas and Florida households as controls.

Proposition 13, adopted by California voters in 1978, mandates a property tax rate of 1 percent plus the cost of interest on locally approved bonds. It also

requires that properties be assessed at their market value at the time of purchase and allows assessments to rise by no more than the inflation rate or 2 percent a year, whichever is lower. Reassessment to full market value occurs only when the property is sold again. This means that as long as property values increase more than 2 percent a year, homeowners gain from remaining in the same house because their taxes are lower than they would be on a newly purchased house of the same value. Proposition 13 thus provides an incentive for owner-occupiers to remain in their current homes longer than they otherwise would (the lock-in effect), an incentive that becomes stronger over time. Proposition 13 also affects renters indirectly, because it may boost the price of owner-occupied homes and cause some cities to adopt rent control.

Nada Wasi and Michelle J. White base their empirical work on the O'Sullivan, Sexton, and Sheffrin model of the effect of property tax limitations on the mobility of owner-occupiers, and they extend the model to account for renters' tenure. The authors examine three hypotheses: Proposition 13 will cause California owner-occupants to increase their tenure length by more than owner-occupants in states that are unaffected by property tax limitations; households that immigrate into California will respond more strongly than native-born Californians to the tenure incentives in Proposition 13; and the lock-in effect of Proposition 13 will depend on the size of the subsidy, implying that tenure duration will rise faster in areas where housing prices are high and rapidly increasing. Proposition 13 may also affect renters' tenure, but this effect is indirect and less certain.

Wasi and White first estimate their model without any control variables. They find that in 1970 the average tenure lengths for homeowner residents of California, Texas, and Florida were virtually identical (slightly less than eleven years in all three states). By 2000, a sizable difference in average tenure length had opened among the states. Average homeowner tenure was 13.4 years in California versus 11.7 years in Texas and Florida. For renters, the average tenure length in 1970 was 4.3 years in California and 4.1 years in Texas and Florida. By 2000, the tenure gap had increased from 0.2 years to 1.3 years, with average renters' tenure rising to 5.3 years in California. When control variables are excluded, the statistical results also support the authors' prediction that migrants to California from other states responded more strongly to Proposition 13 than native-born households.

In more elaborate analyses, the authors take account of a number of variables to correct for differences between California and the control states. Including these variables reduces, but does not eliminate, the estimated impact of Proposition 13 on homeowners' tenure. When control variables are

included, the estimated effect on tenure in 2000 is 0.7 years versus an estimated effect of 1.7 years when control variables are excluded. Nor does the addition of control variables change the pattern of statistical significance. The more elaborate statistical analysis also confirms that migrant households responded more strongly to the tenure incentives in Proposition 13 than native-born Californians.

The value of the Proposition 13 tax concession depends on the value of a home and the rate of change in home prices. The authors compute a household-specific measure of the Proposition 13 subsidy based on information in microcensus survey files. They use these data to examine how tenure length responds to changes in the subsidy level. For comparison purposes, hypothetical Proposition 13 subsidies for Texas and Florida were also computed. In order to examine how Proposition 13 subsidies vary, subsidy distributions for California homeowners in 1980, 1990, and 2000 were divided into quarters. In 1990 the average household in the highest quarter of the subsidy distribution received a tax concession of $3,500, while the average in the lowest quarter was just $117. By 1990, average tenure length also became strongly related to the subsidy level. The average tenure was 8.2 years in the lowest quarter, compared to 17.9 years in the highest.

Because these figures may be influenced by other factors that affect mobility, the authors performed regressions to explain tenure length as a function of the household-specific Proposition 13 subsidy. Their regressions include the same control variables mentioned above. For California households the subsidy variable is highly significant in explaining increases in average tenure. The biggest increases in tenure occurred in San Francisco, Santa Barbara, and San Jose, where average subsidy levels ranged between $1,700 and $2,000. The increases in tenure in those cities ranged from two years to more than three years. In Fresno and Riverside, where the average subsidy was only $250, the average increase in tenure was just 0.3 years. These results suggest Proposition 13 induced a large decline in the mobility of owner-occupants in California's high-priced coastal cities.

In *Higher Education Appropriations and Public Universities: Role of Medicaid and the Business Cycle,* Thomas Kane, Peter Orszag, and Emil Apostolov examine long-term and cyclical trends in state spending on higher education. Public spending on higher education varies widely across states and may play a crucial role in determining regional patterns of economic growth. Over the past twenty years, state government support for higher education has gradually declined, resulting not only in a rise in tuition at public institutions but also a widening gap between public and private insti-

tutions' per pupil spending and faculty salaries. Roughly three-quarters of college students are enrolled at public institutions, so any decline in their relative quality can have important implications for regional well-being, particularly in states where public institutions educate an overwhelming fraction of students enrolled in college.

The authors are particularly interested in the interactions between appropriations for higher education and state spending on other budget items, including Medicaid, and the impact of the business cycle on state higher education spending. Between 1977 and 2003, state appropriations for public colleges and universities fell from an average of roughly $8.50 per $1,000 in state personal income to an average of $6.80 per $1,000 of income. The resulting drop in state funding implies a reduction of $15 billion in higher education appropriations compared to the level that would have been allocated if state spending patterns had remain unchanged. State appropriations have also declined as a share of public university revenue. State funds accounted for approximately one-half of public university budgets in 1980, but the share fell to about one-third by 2001. One side effect of the loss of state funds was a substantial hike in tuition charges. Measured in constant dollars, in-state tuition jumped 47 percent between 1980 and 2001.

The decline in state appropriations for higher education was driven by a trend decline in spending for this function as well as a cyclical pattern linked to the condition of the local economy. Constitutional balanced-budget requirements force states to curtail spending in recessions, when state tax revenues decline. The analysis by Kane, Orszag, and Apostolov shows that higher education spending is a particularly attractive target for budget cutters when state revenues fall. A major competitor for state funds is the federal-state Medicaid program, which accounts for a growing percentage of state budgets. The federal government's financing policy for the Medicaid program and higher education provides very different incentives for state spending in the two areas. The federal matching-grant formula for Medicaid means that federal Medicaid dollars are reduced whenever a state reduces its own Medicaid spending. In contrast, states that reduce subsidies for their public universities and force them to boost tuition can see part of the budget cut offset by larger federal student aid payments to state residents who must pay higher tuition. When the authors regress state spending levels on the local unemployment rate they find that a 1 point rise in unemployment is associated with a 2.6 percentage point decline in higher education spending, but a 1.4 point increase in state Medicaid spending.

Falling state appropriations combined with political restrictions on higher tuition have produced a decline in spending per full-time equivalent student

at public schools relative to private schools. While it is hard to measure the quality of educational institutions, several indicators suggest a relative decline in the performance of public institutions compared with private colleges and universities. There has been a decline in faculty salaries at public universities relative to private ones. The drop in relative salaries at public institutions began in the 1980s and accelerated in the 1990s. The authors also find that average salaries of public institution faculty are affected by the business cycle, while private institution salaries are largely immune to business cycle effects. Using College Board data on the quality of the student body at public and private universities, Kane, Orszag, and Apostolov find that math and verbal Scholastic Assessment Test (SAT) scores declined between 1986 and 2000 at public universities relative to private institutions. The number of years required to complete a degree has also risen at public colleges and universities while remaining essentially unchanged in private institutions. In short, the decline in state appropriations for higher education has had a tangible impact on the relative performance of public institutions compared with their private counterparts.

As discussed in *Effects of Urban Rail Transit Expansions: Evidence from Sixteen Cities, 1970–2000,* huge investments were made by federal, state, and local governments in new urban rail systems and costly improvements of existing rail lines during those decades. In spite of these investments, urban transit ridership declined substantially over the period. Combined ridership on urban bus and fixed rail systems fell from 12 percent of metropolitan area commuters to just 6 percent of commuters in the 1970–2000 period. Nonetheless, urban policymakers continue to make ambitious plans to add new commuter rail lines.

With these basic facts as background, Nathaniel Baum-Snow and Matthew E. Kahn analyze the effect of rail transit improvements on new ridership under a variety of circumstances. Their analysis is based on a far richer data set than has been used in previous studies of this issue. The authors examine three major issues: the heterogeneous responses of commuters within and between metropolitan areas to the existence of new rail lines; the influence of variations in metropolitan area structure on increased use of rail; and the longevity of increases in ridership after new rail lines have been completed.

Baum-Snow and Kahn find that an important reason for the decline in transit ridership (rail and bus) is the change in the spatial distribution of the population away from transit-accessible areas. The public transit share of commuters in all metropolitan areas, by the authors' estimates, would be 4 percentage points higher in 2000 had the distribution of population remained the

same as in 1970. Closely related to the spatial distribution of the population are trends in access to new rail transit. Cities building rail systems after 1970 have generally required more rail transit construction to reach a given fraction of commuters than cities that had rail systems before 1970.

The authors' model suggests that most commuters who switch from car to rail are likely to live far from the city center. The probability that a given commuter will switch from auto to rail depends heavily on travel speed along the rail line relative to the speed of driving. The authors also note that while some new rail commuters were formerly drivers, most are likely to be drawn from the ranks of bus riders. Thus an important shift following the introduction of a new rail line will be from one form of public transit to another. The empirical analysis supports these conjectures.

Also predicted by the model and supported by the empirical evidence: rising wages and the associated higher value of time over the period make rail speed even more critical if it is to capture a significant share of the commuting market. If transit takes significantly longer than driving, only the poor will use it. From this it follows that transit riders are likely to be poorer in less centralized cities.

Population density, income, and cost are all important predictors of the location of new rail transit. Using detailed demographic explanatory variables, the authors find that census tracts with higher population densities, closer to the central business district, and containing a demographic mix with a high proportion of senior citizens, men, blacks, and the poor are more likely to have improved rail transit access.

The authors estimate welfare gains of new rail by calculating the marginal change in a worker's commute time if rail rather than a bus or car were used for commuting. Among all cities, Washington stands out as having the largest estimated time value associated with new rail transit infrastructure (50,000 commuting hours saved per day). The implied welfare gain from its subway system is well over $1 million per day. The authors also measure welfare gains associated with declines in vehicle use, including the reduction in negative externalities such as pollution and traffic congestion. They find little evidence of trend breaks in pollution or congestion levels after the construction of new rail transit lines. Thus the most important measurable welfare gain is the value of time saved. As with the costs of each new rail system, the benefits vary.

The policy implications of this analysis suggest there may be noticeable gains from improved rail transit in cities with a significant employment share downtown if the potential rail speed allows a fixed rail system to be a competitive alternative to the automobile. Despite largely negative results,

new rail lines continue to be built because they are funded largely by the federal government, which has funding formulas that favor more capital-intensive transit projects over other types of projects that might draw more riders. The distributional consequences from expanding rail transit depend on whether the poor switch to rail from bus, in which case rail transit expansions are progressive. However, where the poor are more likely to take bus rather than rail transit, transit expansion could be regressive public policy if it causes a deterioration of existing bus lines.

In *Migration within the United States: Role of Race-Ethnicity,* demographers William H. Frey and Kao-Lee Liaw examine the role of race and ethnicity on migration. Economic models of migration emphasize the importance of labor market variables (such as unemployment and wages), differences in local amenities (such as climate), and housing costs as important determinants of geographical mobility. Historical patterns of U.S. migration make it obvious that race and ethnicity also play an important role, both in attracting migrants and inducing outward migration from particular regions and urban neighborhoods. To analyze these issues, the authors look at the influence of "cultural constraints" on the interstate migration decisions and destination choices of different racial and ethnic groups; they assess the impact of low-skilled immigration on domestic out-migration from urbanized, high immigration states; and they also investigate race-ethnic interactions with the standard labor market and climatic factors associated with internal migration.

Frey and Liaw view cultural constraints as shaping potential migrants' attitudes toward the desirability of living near large numbers of people who share the same racial or ethnic background. Cultural constraints can act as a brake on out-migration for people who currently live in racially or ethnically homogeneous areas, and they can act as an attracter for inward migration by making some destinations desirable to people with particular racial and ethnic backgrounds. Earlier research on U.S. migration patterns suggests that cultural constraints may be particularly important for minority groups recently arrived in the United States, especially immigrants with Hispanic and Asian backgrounds. A great deal of evidence suggests that many newly arrived minorities follow channelized migration patterns, shaped by racial and ethnic attachments and well-worn migration networks. Moves to particular destinations are aided by the availability of local employment information and social support provided through ethnicity-based networks.

The recent dispersion of minorities more broadly across the United States shows that the influence of cultural constraints can be tempered by industrial shifts, which affect employment prospects and wages, and by individuals'

desire for higher social status outside their ethnic or racial community. Spatial assimilation of a racial or ethnic minority occurs when members of the minority group move to a new destination that does not contain a large concentration of the migrants' ethnic group. In translating this concept of spatial assimilation into a usable measure of interstate migration patterns, the authors assume that assimilation occurs when a minority-group member moves out of a state that has a large same-minority concentration and into a state where the minority's concentration is lower. This kind of move presumably takes place when the destination area offers better prospects for economic advancement, improved quality of life, or lower housing prices.

Demographers who study internal migration are also interested in what effect immigration into the United States has on domestic migration patterns, particularly when domestic migration offsets or reinforces the effect of international migration on the overall distribution of the population. Research on migration patterns in the 1980s showed that low-skilled international immigration exerted an important effect on domestic out-migration from areas receiving a large number of low-skilled foreign immigrants. Domestic out-migration from states receiving low-skilled immigrants seemed to reflect working-class and middle-class flight of all race-ethnic groups that compete with the low-skill immigrants. This flight may represent migrants' response to increased competition for jobs and housing or to a perceived erosion in local amenities.

Much of the evidence presented in the paper describes trends in the spatial distribution of immigrant and nonimmigrant households over the 1995–2000 period. The authors show that states gaining the most immigrants from abroad are, with two exceptions, among the states losing the most domestic out-migrants. The analysis focuses on people between twenty-five and fifty-nine years old, people who have largely completed their schooling and are most likely to move across state lines in search of good jobs and better amenities. Some of the states gaining the largest numbers of native migrants are the states surrounding California, which received spillover migration from this high-immigration, high-housing-cost state. At the other extreme are states in the Northeast, Midwest, and Great Plains, which experienced substantial domestic out-migration as a result of the long-term population movement toward Sun Belt states. Some states in these regions, however, also gained large numbers of foreign immigrants.

The net domestic migration patterns of racial and ethnic groups is a major focus of the paper. The fast-growing states in the Southeast show up among the top five gaining states for most race-ethnic groups. Non-Hispanic whites

were more inclined to move to western states, whereas non-Hispanic African Americans heavily favored migration to the South. Hispanic net migration is distinguished by its relative dispersion. Internal migration patterns among Asians differed most from the patterns of other racial and ethnic groups. The descriptive analysis also shows that the influence of cultural constraints remains strong. States with high concentrations of a particular race-ethnic group show low rates of out-migration among that race-ethnic group. Furthermore, the descriptive findings lend some support to the idea that the major destinations of migrants leaving a given state are states with high same-race concentrations.

The descriptive analysis shows that, compared with migrants who have less education, migrants with a college degree tended to be more focused in their destinations. This generalization is true for college graduates in all the race and ethnicity groups, though the preferred destinations differed for each race-ethnic group. Less-educated migrants from a given race-ethnic group are far more dispersed than college graduates in their choice of destination. Among both well-educated and less-educated migrants there is a general tendency to prefer destinations in the Southeast.

In more elaborate statistical analyses, the authors examine the interaction between migrants' racial and ethnic identity and the economic and other factors that influence migration. Their findings suggest that the impact of racial similarity on the departure of migrants is present for each race-ethnic group, but it is not affected by education or nativity. The findings also support the view that cross-state migration patterns are partly the result of middle-class flight. The effect of low-skilled immigration into a state has a smaller influence on outward migration of college graduates than it does on outward migration of people with less schooling. Members of race-ethnic groups are more likely to select destinations with large numbers of people with the same ethnicity, especially if they have only a high-school education or less. Destinations where there are many low-skilled immigrants and where housing prices are high are unattractive to migrants who have below-average schooling, but these factors are less important for migrants with a college degree. Climate also plays an important role in migration decisions. Domestic migrants tend to move toward states with warm winters.

In *Growth of China's Medium-Size Cities,* J. Vernon Henderson examines the effects of migration, economic expansion, and other factors on the country's medium-size cities. From the perspective of China's policymakers, accelerating the growth of these cities is seen as a way of absorbing surplus labor that is moving out of agriculture, while at the same time deflecting this

migration away from already overcrowded big cities. Because of institutional restrictions on migration in China, population movements may not always be toward destinations with the highest average productivity. Partly as a result of government restrictions on mobility, China has enormous urban-rural income and consumption differentials that have grown since 1980. This means that population growth will not always serve as a reliable indicator of productivity differences in the case of medium-size cities. China's regional economic development also differs in another way from development in other fast-growing economies. Chinese policymakers have long emphasized rural-area, small, and medium-size city industrialization along with large city industrialization. Unlike many developing countries, China already had a rural and small city industrial base at the time that rapid growth began in the early 1980s.

China's city system hierarchy consists of provincial cities at the top, followed by provincial capitals and prefecture-level cities. Below this level are county cities, the medium-size cities that are the focus of Henderson's study. Urban and rural residents in China are kept in place by the *hukou* system, which provides citizens with internal passports granting them right of residency in a village, town, or city. Permanent changes in permitted residency are rare. As a result, most migration in China is local. The *hukou* system is used to enforce an urbanization policy that emphasizes the absorption of rural surplus labor by smaller cities, while strictly limiting population growth in bigger cities. Rural areas and medium-size cities are nonetheless disadvantaged by their relative lack of capital, limited access to foreign direct investment, and poor transport access to larger markets. The restrictions on migration almost certainly mean that China has relatively undersized cities. Most cities have substantial unexploited advantages that would come from increased scale economies.

Larger Chinese cities, like provincial-level cities and provincial capitals, are richer on average than medium-size cities. Despite the government's official restrictions on migration, the key destinations of internal migration are provincial capitals and provincial-level cities. The populations of higher-level cities have risen faster than county cities. Gross domestic product per capita in larger cities is also growing faster than in smaller ones. Furthermore, medium-size cities at a greater distance from larger cities and consumer markets are smaller, have lower output per worker, receive less foreign direct investment, and have fewer manufacturing workers relative to service workers. In view of these patterns, it is not surprising that rural migrants who live near big cities prefer to move to those cities, bypassing medium-size cities that are even closer.

Although residents in larger cities receive higher incomes on average than residents of medium-size cities, the difference is mainly explained by differences in the allocation of capital across cities and the highly unequal distribution of foreign direct investment, which strongly favors bigger cities on the Chinese coast. Henderson concludes that per capita incomes are lower in medium-size cities primarily because they suffer from capital market discrimination. In spite of this disadvantage, medium-size cities have the same rate of total factor productivity growth as larger cities. For individual cities, the growth of average income seems largely to be determined by the size of nearby markets and the rate of investment in physical capital. Growth is less affected by average educational attainment in the local workforce. Population growth of medium-size cities in China is not a clear indicator of productivity differences as is the case in, say, the United States.