
THRIVING CITIES ENDOWMENT BRIEF



The Prosperous

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Thriving Cities is an initiative of the University of
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AUTHORS' NOTE

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THE TRUE
Human Knowledge



THE GOOD
Social Mores and Ethics



THE BEAUTIFUL
Aesthetics



THE PROSPEROUS
Economic Life



THE JUST AND
WELL - ORDERED
Political and Civil Life



THE SUSTAINABLE
The Natural Environment

COMMUNITY ENDOWMENT EXECUTIVE SUMMARY

Much like biologists think of an ecosystem as a community of living and non-living things working together in the natural world, Thriving Cities uses a framework we call “human ecology” to help us envision a city. The human ecologies of a city contain and depend upon an array of different, but fundamental endowments. Such endowments: (a) give expression to long-standing and universally-recognizable ends that are essential to human thriving (e.g., intellectual life, aesthetics, sociality, play, health and security, transcendence); (b) become actualized within specific social practices and institutional settings (e.g., universities, theaters, social media, soccer clubs, health care, and places of worship); (c) have distinctive histories that shape their present and future possibilities; and (d) interact dynamically with one another, creating both virtuous cycles when robust and healthy, and vicious cycles when depleted and weak, but also generating synergies with unintended consequences and tensions between competing goods.

The language of endowments is highly intentional. It stands in direct opposition to the language of “capital,” used by most standard and many cutting-edge approaches. Where capital denotes abstract, a-temporal, and amoral value that is at once fungible and fluid, which is to say unfixed (which is precisely the source of its conceptual strength), the language of endowments brings the dimensions of particularity and temporality back into view—endowments are the products of investments made over time and they must be maintained in the present if they are to remain available in the future. Also, attached to the language of endowments is a sense of fiduciary responsibility and obligation. Where capital functions as a medium of value and exchange irrespective of context, endowments function as a reservoir of wealth held in common—as a trust within very definite contexts. Despite its obvious strengths, the language of capital is not able to capture these essential qualities of community life, and not surprisingly, they remain empirically elusive in approaches that rely on it.

Our distinctively cultural approach, with its emphasis on the normative dimensions of common life in cities, invites us to see them in terms of six interactive (and ever-evolving) formative contexts in which we routinely see the exercise of moral agency and practical reasoning across human communities. The first three of the six endowments build on the classical ideals of “the True,” “the Good,” and “the Beautiful;” the last three are what we might call the modern ideals of “the Prosperous,” “the Well-ordered and Just,” and “the Sustainable.” Together they form some of the most recognizable horizons of the human experience.

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I. INTRODUCTION

We are a collection of business scholars working individually and collaboratively on issues of economic growth, entrepreneurship, innovation, and sustainability. We have come together to examine the current methods of measuring prosperity in metropolitan areas and to recommend alternatives for practitioners, scholars, policymakers, and citizens who are seeking improved methods of governance and sustainability.

Our recommendations are for those who intend to be thoughtful and purposeful about how they choose to act, especially in times of economic change and uncertainty. We share a belief that metropolitan areas play an increasingly central role in Americans' lives, and that a focus on the health of the nation's cities is an important concern for business, government, and community leaders. In our scholarship and teaching with executive and student groups, we engage the thorny questions of how to make cities better places to live for all of their residents. Because we bring a diverse set of perspectives to this question, grounded in part by our varied research areas (and in part the by the community members we encounter in the classroom and in our work in the field), the purpose of this Endowment brief is to share our views of what it means to prosper in a metropolitan context.

We have come to believe that current economic measures of progress and prosperity¹, such as the ubiquitous *gross domestic product* (GDP), do not encompass the full measure of metropolitan economic progress; nor do they speak to the integration of economic progress with other endowments a city may possess. Instead, we call for a holistic, integrated view of metropolitan progress that achieves a more comprehensive understanding of progress in metropolitan areas beyond purely economic measures.

The Thriving Cities Project is meant to lead us to a more comprehensive understanding of what it means to prosper, or thrive, within cities. Our group's task was to examine the role and relevance of prosperous endowments in cities and metropolitan areas, to critique the current discourse on economic progress, and to assist in developing a more integrated notion of what it means to progress, economically and otherwise.

II. PROSPERITY IN AMERICAN POPULAR CONCEPTION: AN ANALYSIS OF DISCOURSE²

In discussions of the state of our metropolitan lives, economic performance looms large. In this section we apply the methods of sociological discourse analysis to examine the relative popularity over time of economic concerns in books published in the United States since the mid-1800s. In the manner of scholars who analyze the frequency and usage of concepts in language as a reflection of these concepts' institutionalization in a society, we use counts of a small set of words and phrases dealing with the economy to chart rising interest in Americans' changing levels of collective attention.

One way of examining whether there is an increasing presence of economic concerns and concepts in the American collective conception of prosperity is to examine the frequency of occurrence of specific language in American books. Using Google Books Ngram Viewer, we first created a set of words and search terms relevant to economic concerns: *money*, *income*, *wealth*, *productivity*, *stock market*, *balance of trade*, *gross domestic product*, and *GDP*.³ Google's Ngram Search feature allowed us to examine the relative popularity of this set of words and phrases over time, and to compare it to the popularity of other sets of words over the same period.⁴ The method of using the frequency of words and phrases as representative of underlying concerns of a social group is common in Foucauldian discourse analysis methods. In the figures that follow, we attempt to visually illustrate the rise and fall of various word streams. In these charts, the x-axis is the period in years, and the y-axis represents the total number of words and phrases in all books published in the United States since 1850.

FIGURE 1
National Income, GDP, and Related Language Discourse Popularity in Books (1850–1920)

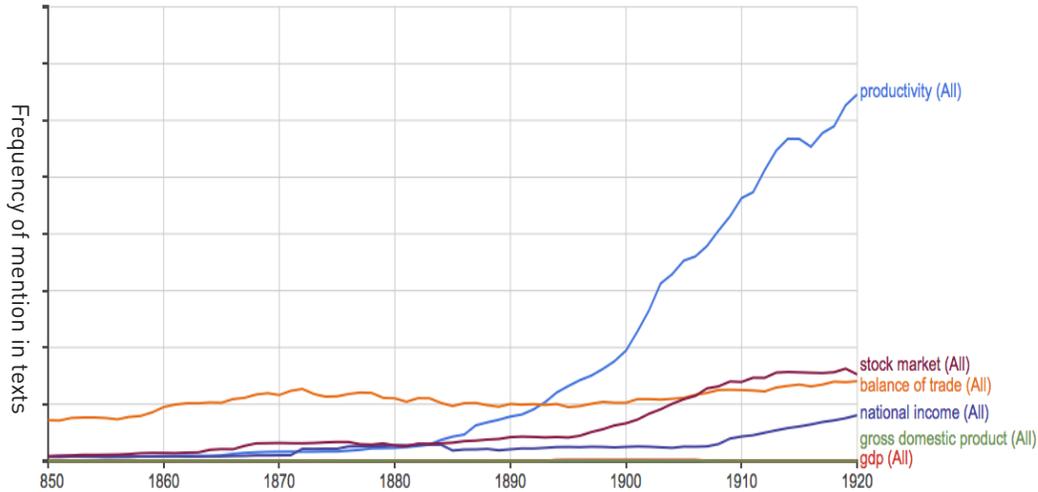
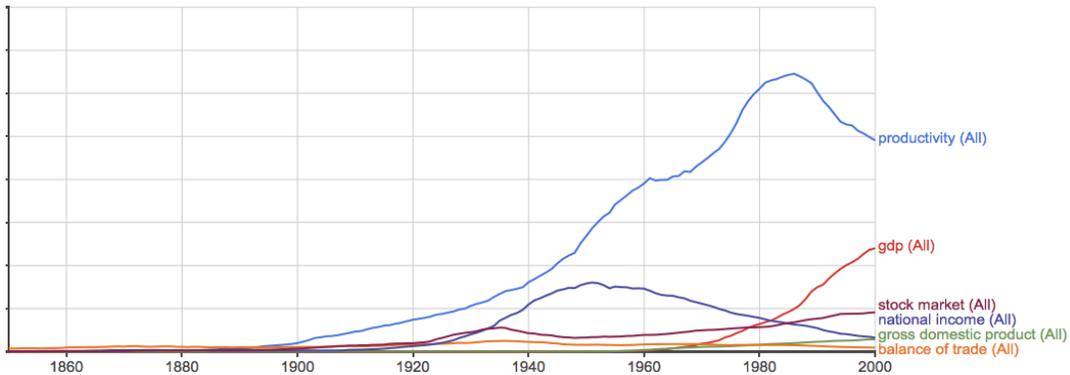


Figure 1 visually supports the notion that the use of words and phrases related to the balance of trade was relatively consistent over the seventy-year period from 1850 to 1920, but that discourse related to national income and the stock market increased considerably over the last two decades of this period. After 1890, there was an expansion of scientific management and an increasing economic efficiency and labor productivity in firms. The movement that later became known as Taylorism also represented a rising acceptance of the notion that scientific principles could be applied to manufacturing, and even to daily life. Words and phrases signifying productivity and related concepts began to appear in books during the late 1800s.⁵

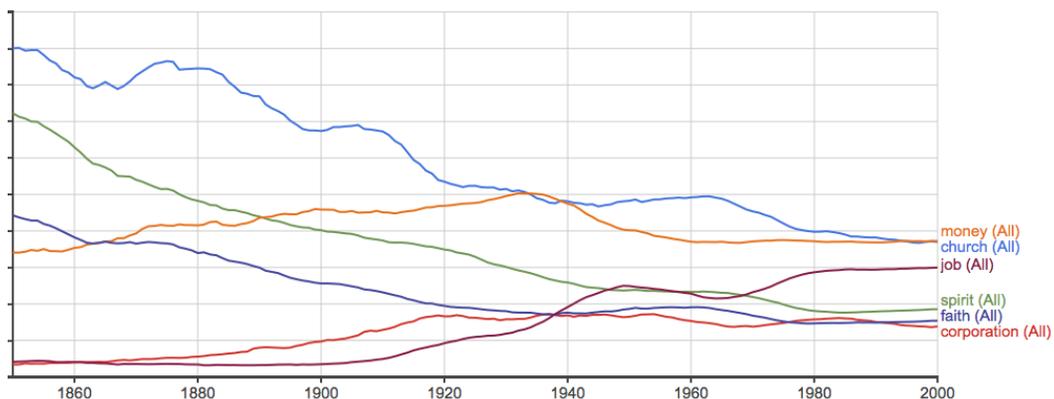
Figure 2 extends the analytical time period an additional eighty years, to the turn of the twenty-first century, and illustrates an even greater expansion of discourse regarding economic growth and productivity. The frequency of occurrence of language relevant to GDP and productivity rose considerably above that of all other represented discourse streams, especially after 1950. On the basis of the work of sociological scholars of discourse, it is our sense that rapid economic growth was reflective of and mutually reinforced by discourse during this period. As the middle class expanded, rises in national productivity, factor productivity, per capita incomes, and a host of other indicators mirrored the popularity of these topics in the fiction and nonfiction books published during the period.

FIGURE 2
National Income, GDP, and Related Language Discourse Popularity in Books (1850–2000)



At least one limitation of Figures 1 and 2 is that they focus purely on words and phrases from the field of economics. We considered whether the expansion of economic discourse was evidenced in other streams of language that reflected life during the twentieth century. In Figure 3, we compare three economic word streams (*money*, *job*, and *corporation*) to three religious word streams (*faith*, *spirituality*, *church*). We chose to compare economic discourse to religious discourse because of the historically central role of religious institutions in Western civilization, and particularly in American life. In the early years of the English settlement of North America, publishing was almost completely focused on religious topics. Indeed, the first book printed in English in North America was the *Bay Psalm Book*, in 1640. However, over time, other topics began to find interest among publishers and their customers. The rise and fall of discourse streams in Figure 3 shows both the aggregate and relative decline of concern with religious matters over time.⁶ There is arguably a substitution pattern in which economic matters assume predominance after 1940. Taken together, these three figures suggest that economic matters have become more popular, at least relative to matters of faith.

FIGURE 3
Economic and Faith-Related Language Discourse Popularity in Books (1850–2000)



Readers familiar with Foucauldian discourse analysis, which can employ the use of word counts as we have done here, will also recognize that these methods can reveal underlying systems of power and knowledge within a society. If economic matters have indeed established a central presence in our conception of modern life, then is this cause for concern? Wouldn't relatively clear-cut, quantitative measures of progress like per capita income, corporate profitability, and productivity provide clarity of purpose and direction for our nation and our communities? Isn't economic growth something we can all objectively agree about? Perhaps. Yet we feel that although these metrics tell us a great deal, there is

much they don't adequately capture, a topic we will address in more detail below. We also caution that if purely economic targets take the lion's share of policy energy and the popular conception of prosperity, then policymakers may be overemphasizing their role and benefits when attempting to develop strategies for community welfare.

Much like the discourse in books, arguments in support of public policy decisions, even at local levels, increasingly include economic language and concepts. Our observation is that the *proof*, or yardsticks, we use and compare across time and communities tends to be relatively economic in nature. If the topic is our collective progress as a nation or community, the metrics that are frequently mentioned have their origins in the fields of economics and finance (e.g., housing starts, gross output, consumer confidence, rise and fall of major stock market indices). Even though these measures originated in relatively closed academic and professional circles, they have diffused into the vernacular.

For example, it is common to find community arts and environmental sustainability programs recommended on the basis of their potential to increase local tourism revenue or housing values. Educational reform initiatives have been advocated on the basis of their potential to attract employers and build the local tax base. Humanities scholars in the universities are challenged to substantiate the value of their fields in terms of influence on students' job prospects. Justifications for big-city expenditures on public safety and policing are sprinkled with the language of housing values, increased tourism, and attractiveness to employers.

It is reasonable to question whether the rationale for projects like community beautification, community-based policing, or infrastructure investments should be conditioned on economic merits alone. What about pursuits or programs for which economic benefits are unclear, difficult to measure, or fleeting? Might they still have value? If so, how should they be accounted for? Is there a value to sprucing up our local parks beyond the potential increases in housing values? Is there a benefit to better early childhood education for all our cities' residents beyond the potential for progress in global economic competitiveness? What if an arts program produced content that repulsed some residents but provided opportunity for deep reflection? Surely, the appropriate summation of our efforts can be measured in more than economic terms.

The remainder of this Endowment brief is divided into four sections. The next section, the literature review (Section III), charts the history of our understanding of national and metropolitan prosperity, telling the story of the rise and legitimation of what is now the hegemonic metric of growth, GDP. This section includes a review of the scope and practice of measuring GDP and its metropolitan-level derivatives. The section includes discussion of elements of economic life that GDP-like measures do and do not capture. The review also includes some of the prominent critiques of GDP. We review leading scholarship on measuring prosperity and encouraging its expansion, offer critiques, and share a few tentative suggestions.

In Section IV, on the Endowment of "The Prosperous" in context, we discuss reasons why urban metropolitan areas are central places for economic growth and development, and will continue to outpace the economic growth of outlying areas in the future. In Section V, we provide our thoughts on connections to existing metrics and the other Thriving Cities Endowments. In Section VI, the conclusion, we lay out a recommended path forward, including the development of alternative measures to those most commonly used. We also offer some suggestions for diffusion and application of the approaches we recommend.⁷

III. LITERATURE REVIEW

In this section, we review what we know about metropolitan prosperity. We first begin with a detailed review of the models used to measure prosperity, with a deep focus on GDP and its derivatives. This is followed by a review of other popular models of metropolitan development.

A. THE RISE AND LEGITIMATION OF “GROSS DOMESTIC PRODUCT”

In the next paragraphs, we will draw the arc of economic history to chart how the conception of “national prosperity” has come to be known and understood, and how this conception has diffused to influence the measurement of state and metropolitan prosperity. We chart the growing importance of a singularly influential metric of national and metropolitan growth, gross domestic product (GDP), and its smaller derivatives: gross state product (GSP), gross metropolitan product (GMP), and gross city product (GCP).⁸ Our objective in this subsection is not to provide a comprehensive review of the critical debates or competing algorithms that emerged over time. Instead, we illustrate how a series of global economic and political crises created demand for metrics that would facilitate the planning and execution of national-, state-, and metropolitan-level policy. At these critical junctures, the need for an aggregate, generally accepted metric of progress spurred GDP’s rise, even though its architects acknowledged its limitations from the very beginning.

1. A Demand for Measurement

The first efforts to measure prosperity at the national level focused on income, and originated in the need to increase flagging tax revenues in the Great Britain during the 1700s. Other initial national measurement efforts included the creation of the US Bureau of Labor Statistics (BLS) in 1884, with the explicit goal of measuring indicators of labor market participation—joblessness, job seekers, and the population currently employed. The BLS was created in the aftermath of the depression of 1873, which was known as the Great Depression until that name was enduringly applied to the events of the 1930s.⁹ The BLS’s task was to focus on working people and the “means of promoting their material, social, intellectual, and moral prosperity.”¹⁰ One of the BLS’s primary tasks was to collect information that would promote broad national work-force participation.

The path to the measurement of national productivity, rather than labor-force participation or taxable income, begins with input-output modeling. Input-output models, shortened to “IO models” in economic vernacular, were originally developed by Nobel laureate Wassily Leontief to capture the efficiency or productivity of individual firms or industries.¹¹ IO modeling examines the degree to which one part of an economic system influences other elements and the overall economic output of the system as a whole. At the national level, IO modeling focuses on the linkages between industries and these connections’ influence on overall economic output.

IO modeling began to find its way into national planning discourse in the 1930s. Academic theorization about the potential utility of IO models in government planning existed before then, although they were not widely considered for use by government practitioners. Spurred by the Great Depression, academic efforts drove the creation of systems of national income and product accounts (NIPA), by Simon Kuznets in the United States and Richard Stone in the United Kingdom.¹² Nobel Prizes would later be won by both Kuznets (1971) and Stone (1984). Other nations (e.g., Australia, France) concurrently developed similar IO accounting measures. NIPA and the derivative metric, GDP, reflected “new Keynesian” theories and ushered in two important elements of theorizing about growth: First, these theories were macro in orientation (as opposed to the focus on industries and firms typically found in neoclassical economics); second, they focused on the demand for labor rather than the price of labor to explain (un)employment.

With the onset of what we now call the Great Depression, an international economic crisis descended, requiring leaders like Winston Churchill, Herbert Hoover, and Franklin D. Roosevelt to build new models and flex new muscles to manage their nations’ flagging economies. Drawing on Keynesian theories, they conceived an expanded role for government, aimed at intervention to foster a return to economic stability. Leadership framed around symbolic goals like “a chicken in every pot and a car in every garage” (as proposed by Herbert Hoover in his 1928 presidential campaign) had created a pressing demand for diagnostics that would establish a means of measuring overall productivity and progress over time. This imperative to measure productivity precipitated the transition of Keynesian theory from relatively isolated academic texts and journals to concrete application in national policy. Prior to this period, the notion of “national economy” was not recognized beyond academic circles, so the wide-

spread acceptance of national productivity measurements was a landmark achievement. If attaining the mere acceptance of national measurement was a momentous task, then the assembly, collection, and analysis of the data necessary to complete these measures was a no less significant accomplishment. Overcoming the challenges, Kuznets and his colleagues at the National Bureau of Economic Research provided the first set of United States national accounts in 1937, covering the period 1929–35.¹³

With the adoption, during the Great Depression, of GDP as the measure of national productivity in policy circles and the executive branches of government, there was a post hoc recognition that these national measures across nations could have been useful in planning for the Great War (as World War I was then known). At the time, poor economic productivity was considered responsible for that war.

As the early rumblings of what would become World War II grew stronger, many policymakers of the period viewed rising GDP as beneficial to national security. The use of national productivity measures proliferated globally following the Bretton Woods Conference in 1944 and the subsequent creation of the International Monetary Fund and the World Bank.¹⁴ During the Bretton Woods discussions, a discernable intellectual connection was made between the austere economic conditions that had preceded World War II and the eventual hostilities. The belief around the time the war drew to an end was that economic instability enhanced the likelihood of political instability, and, thus, a nation's willingness to consider military action as a remedy. This path of reasoning is at least partially evident in the notion, popular today, that economic growth will be associated with other positive effects (e.g., greater access to health care, wider dissemination of the arts and culture, reduced crime). After World War II, the United States and a select group of Western nations experienced one of the longest sustained periods of economic growth in history. GDP rose to prominence as the go-to metric indicative of economic and political stability.

As GDP was being embraced by a growing number of Western “market” nations during this period, the Soviet Union and its partners were calculating national production using different methods. There were clear reasons grounded in different conceptions of the state-market relationship that limited the diffusion of metrics between the two superpower blocs of influence. In the Soviet bloc system, the primary purchaser of goods and services was the government, private property was “restricted to the government,” and the economy was planned in revolving five-year increments. Although it was desirable for scholars and policymakers to produce assessments of the relative merits of each system, comparison of the communist and capitalist measures was difficult. Another set of issues involved global trade: Under the system of diffusion practiced by the Western economies, methods of measurement focused on imports and exports, while the Soviet bloc nations generally had a closed set of trading partners, and currencies that were not convertible on international markets. The divergent efforts to assess and compare national productivity and progress found their way into the discourse of the Cold War, with each side denigrating the other's approach.

GDP's sway continued throughout the remainder of the twentieth century, even as prominent critiques arose. For example, in 1959, economist Moses Abramovitz prominently questioned whether there was a spurious conceptual linkage between economic growth and collective welfare, stating that “we must be highly skeptical of the view that long-term changes in the rate of growth of welfare can be gauged even roughly from changes in the rate of growth of output.”¹⁵ From an equally prominent source, a response in favor of GDP came in the form of Okun's Law, named after Arthur Okun, staff economist for President John F. Kennedy's Council of Economic Advisers. Using past GDP and employment data, Okun was able to show a long-term negative correlation between GDP growth and unemployment.¹⁵ Given Okun's position of authority, his perspective had a greater influence on policy thinking than Abramovitz's.

In this subsection, we have briefly charted a historical linkage between emerging demands on government officials to manage crises and the diffusion of approaches to measuring progress through GDP and its derivatives. We have shown how those demands fueled such widespread adoption of GDP as a metric that alternatives were “crowded out” of serious consideration. This barrier was a bounded rationality in government planning, in which leaders were constrained by the information before them, the pressing need for a response, and the power of the institutions recommending the use of GDP. The

eventual fall of the Soviet Union supported the broader adoption of GDP by the former socialist republics. We suspect that overall intellectual and political inertia played a stronger role in propelling the adoption of GDP than an explicit rejection of alternative measures. In the next subsection, we chart the path from these problematic national productivity measures to those, no less limited, that are applied to smaller jurisdictions such as states and metropolitan areas.

2. From National to State and Metropolitan Measurement

As the concepts of IO modeling found currency in national policy and economic discussions, they eventually began to diffuse to the state level. In part, this process was spurred by attempts to align the measurement of local progress with the national metrics. Rigorous efforts to measure productivity at the state level began in the 1960s, when John Kendrick and Milton Jaycox were among the first to develop and publish notions of a *gross state product*.¹⁷ Kendrick and Jaycox argued that the measure had prescriptive value in that it allowed for a closer linkage of economic policy among and across states. One early criticism of GSP approaches to measurement was the greater openness or porosity of state borders relative to national boundaries, and the difficulty in capturing all the activity within a state. That is, state boundaries did not contain labor and product markets as much as national boundaries did. Further, state-level policymakers and executives lacked the autonomy of their federal counterparts, wielding far less autonomy against national policy in efforts to adjust economic plans in accordance with the new information. Despite these concerns, GSP began to diffuse as an important measure.

Even as debates about the accuracy and utility of GSP raged, Norman Glickman was among the first to propose the use of regional- and metropolitan-level measurement by regional planners. Glickman noted data challenges in one of his earliest papers proposing a regional analysis of the Philadelphia Standard Metropolitan Statistical Area (SMSA). “Analysts contemplating the construction of small-area econometric models should be prepared to face a severe shortage of data. Although employment data are generally available... for many SMSAs, output, wage and other important series must be constructed from fragmentary data. Even if observations are available for each variable in a model, significant statistical problems are likely to abound.”¹⁸ Notwithstanding, the demand for regional aggregate models that could be used for forecasting was viewed as greater than the limitations in the data.¹⁹ In his original proposals, Glickman had recommended some statistical techniques to adjust for these limitations (i.e., two-stage least squares regression, simulations), yet acknowledged that these provided only rough approximations of what he envisioned GSP could measure. Despite these concerns, the measurement of national, state, and then regional accounts diffused, using GDP-like approaches.

During the 1980s, the notion of relative contribution by nested geographic levels to growth became part of the dialogue. Duobinis²⁰ and others argued that much of the nation’s economic growth was originating in metropolitan, as opposed to outlying, areas. In some ways, this was a component of the shift from an agricultural-manufacturing (i.e., land, labor) industrial composition in Western society to a service-based one (i.e., knowledge, networks, systems). Though these arguments took hold in the 1980s, it was far later that measures of gross metropolitan product were collected systematically, in part as a consequence of the very real pressures of funding data collection across areas. In 2006, the Bureau of Economic Analysis, an agency of the US Department of Commerce, began providing GMP estimates.

To this point, we have discussed why cities and their surrounding metropolitan areas have had an influential role in the economic growth of their nations, and why that influence is predicted to expand over time. We have provided a historical sketch that may help explain how we arrived at the deep conceptual linkage between national progress and economic output. We have shown how the demand for measurements that could be used diagnostically and prescriptively by government executives and policymakers fueled the diffusion and adoption of GDP and its derivatives (and have also shown that there were acknowledged limitations). We have been silent to this point in our historical review on what GDP does and does not reveal. In the following subsection, we delve deeper into the manner in which GDP is measured, and the limitations of data collection and the analytical approach.

B. THE DETAILS: HOW NATIONAL PRODUCTIVITY IS MEASURED

In the construction of what became known as GDP, Simon Kuznets's leadership and perspective had an enduring impact on the framing of the concept of economic productivity, in terms of what should be included and excluded in the measurement and accounting systems. In 1971, reflecting on the early period of this work, he defined the task: "A country's economic growth may be defined as a long-term rise in capacity to supply increasingly diverse economic goods to its population, this growing capacity based on advancing technology and the institutional and ideological adjustments that it demands."²¹ In framing the objective as being to measure efficiency and productivity, Kuznets connoted an emphasis on labor and technology rather than the economic returns they generated. The wish of the "Father of GDP" was that the measure give an accounting of productive capacity, not the level of material prosperity produced by that capacity. In this subsection, we provide a brief summary of the primary limitations of GDP as a metric: calculation, accuracy, and exclusions.

1. Calculation

As the notion of national productivity measurement took hold as an important metric for use by government officials, three basic approaches to the calculation of GDP diffused: expenditure-based, income-based, and value-added. Each required its own methods and unique compilation of data inputs to calculate. The first, the expenditure-based approach, sums all purchases by final users (aggregate household consumption, investment, government spending, and exports, minus imports). The second, the income-based approach, rests on the assumption that a producer's income equals the value of the products it offers, which allows analysts to sum all income (also known as gross national income). The third, the value-added approach, takes the sum of all output (gross sales less change in inventory), and subtracts all intermediate inputs used during the production process. Obviously, each approach produces different paths to similar results. As noted by Landefeld and his colleagues, "These three measures of the size of an economy are conceptually identical. However, they are estimated using separate combinations of public- and private-sector source data."²²

2. Data Accuracy

If there are indeed challenges in the calculus of GDP, a secondary measurement issue was (and still is) the availability and accuracy of data. First, government officials acknowledged from the onset that most of the data that became components of GDP were collected for alternative uses. Second, there was limited integration across the governmental and non-governmental agencies that collected the data.²³ Thus, data structure and form were not always complementary. Third, policymakers' need to be timely was viewed as more pressing than the requirement of data integrity.

An example of the potential negative impact of this data demand and supply cycle is the continuing gap between the time when data is collected and when it is analyzed. Collection does not always occur within the year or quarter GDP estimates are released, so these measures are approximated at the time of collection rather than measured directly. Recognizing that many data integrity challenges arise at the time GDP is measured, each summer the Bureau of Economic Analysis revisits its estimates for the most recent calendar year and the two preceding years. This reconciliation adjusts for any errors at the time of measurement, and includes updated data from partners like the US Census Bureau and the Internal Revenue Service. Typically, these more accurate measurements account for 47 percent of GDP at the time of the first annual revision, and monthly revisions account for an additional 47 percent. In the two decades between 1982 and 2002, the nominal level of GDP was revised an average of 1.1 percent, and the growth rate between benchmark years was revised an average of 0.26 percentage points.²⁴

Much like GDP, what became known as gross state product (GSP) faced challenges related to data availability and integrity in its initially proposed format. Early efforts recommended proxies where possible, but recognized that these data were not systematically available across states or across periods. In fact, many states did not have the funds or data collection capabilities to compute these measures, which thus were initially applied to only a few states. In addition to the costs of data collection, another prominent critique of systematic state measurement was the widely different industrial composition of various states. For example, the degree of government spending in states like Virginia and Cali-

ifornia, or the natural resource endowments of oil-producing states like Oklahoma and Texas, could heavily characterize the gross figure.

3. Exclusions: What's Missing from GDP?

In addition to the challenges of accurate data collection and integrity, another key measurement issue regarding GDP is what is included and what isn't. We note at least five key areas that are overlooked in traditional GDP measurement: (a) service industries and industries with limited technological inputs, (b) informal market activity, (c) negative spillovers from market activity, (d) distribution across areas, and (e) non-market investment.

First, there is an explicitly pro-technological bias in the measurement of GDP. For example, natural resources and extractive industries that may be valuable in developing countries and trade are not captured. (In 1971, when he gave his Nobel Lecture, Simon Kuznets noted that making calculations on this basis effectively excluded the production of nearly three-quarters of the world's population.²⁵) This exclusion is understandable to some degree. During the periods in which GDP and similar metrics were developed, the economy was based primarily on manufacturing and agricultural; this influenced the decision to emphasize labor, land, and manufacturing technology in these measures. In addition, the degree to which national productivity measurement omits or includes service activities is strongly associated with a nation's degree of industrialization and global competitiveness. Relatively speaking, the service sector is difficult to measure; establishing relevant market prices for service work also is difficult. This was recognized as a limitation at the outset, but has become a larger issue as the service sector has increased in representation over time.²⁶

Second, informal market activity—vending by growers or merchants in bazaars, traditional artisans selling their wares, the toil of low-level service laborers—is not included. Even current approaches fail to capture many of the efforts of organizations, institutions, and individuals in integrated communities of practice and service that fall outside the ambit of the marketplace. In an already complex measure, including behaviors that did not fall within a transaction was simply too great a task at the time when GDP was developed, and path dependence has persisted. Recently, a number of nations have made revisions to their GDP measures that explicitly include informal and even black-market activity. In a prominent example, the United Kingdom Office of National Statistics has determined that prostitution and commerce in illegal drugs will be counted as components of GDP calculations.²⁷

Third, the potentially detrimental effects of some elements of technological progress—pollution, for example—are not captured in these measures at all. The health effects of eating poor-quality or non-nutritious food—e.g., diabetes, high cholesterol, and hypertension—are not captured. The negative impact on familial wealth and mental health of a financial crisis caused by excessive speculation is neither accounted for nor even considered.

A fourth general concern with GDP and other national productivity measures is that they are typically provided as aggregates, rather than evenness measures. As we discussed in the preceding paragraphs, there are substantial differences within and across nations, states, and even metropolitan areas on a number of economic indicators. Certainly, one can recalculate GDP by population size, and produce per capita measures. Yet even these per capita measures are generally silent on the issue of dispersion of growth and prosperity, or what is otherwise known as inequality. We believe that comprehensive measures of progress and prosperity should also provide insight into the question of dispersion across sectors.

Even more concerning, non-market production that contributes to societal progress is largely absent from any of these measures. How, for example, is the time spent educating one's own children, volunteering to cook meals for the indigent, or working in a neighborhood cleanup effort captured in these models? Likewise, how are forms of basic research and development that are not directly applied to commercial or governmental efforts captured? These are certainly productive and wealth-building activities, but they are not processed through a financial transaction. Thus, they are invisible to an accounting of progress on the basis of GDP. If we were to take an expansive view of what business

scholars call the “value chain,” we would recognize that a community’s net delivery of such goods and services involves many small investments that fall outside the market. Robert F. Kennedy noted as much in a speech at the University of Kansas in 1968:

Yet the gross national product does not allow for the health of our children, the quality of their education or the joy of their play. It does not include the beauty of our poetry or the strength of our marriages, the intelligence of our public debate or the integrity of our public officials. It measures neither our wit nor our courage, neither our wisdom nor our learning, neither our compassion nor our devotion to our country. It measures everything, in short, except that which makes life worthwhile. And it can tell us everything about America except why we are proud that we are Americans.²⁸

A journalistic critique and review of GDP by Jon Gertner appeared in an article in the *New York Times* in 2010. In the article, Gertner describes the condition of being “Low-GDP Man” or “High-GDP Man” as a way of explaining what GDP does and doesn’t capture:

High-GDP Man works hard, spends hard. He loves going to bars and restaurants, likes his flat-screen televisions and adores his big house. . . . By economic measures, there’s no doubt High-GDP Man is superior to Low-GDP Man. His salary is higher, his expenditures are greater, his economic activity is more robust. . . . What we can’t really say for sure is whether his life is any better. In fact, there seem to be subtle indications that various “goods” that High-GDP Man consumes should, as some economists put it, be characterized as “bads.”²⁹

Another significant limitation of GDP and its associated metrics is that they are not well understood by many outside economic policy circles. Rank-and-file citizens, workers, and voters do not attend to it. Can you ever recall a mayor or other local elected official noting her impact during her administration in terms of improvements in GMP? It is far more likely that residents of metropolitan areas attend to measures that are proximal to their personal experiences—job growth, unemployment, poverty, and household income. A measure’s ability to communicate prosperity in the popular conception is an important consideration for those interested in reaching and engaging a broad base of stakeholders.

In this subsection, we have shown that there are long-recognized issues in the measurement of national productivity, yet in the absence of any robust alternative approaches GDP has persisted as the default measure. The health of any community certainly involves market institutions and their efforts, but prosperity is based on an elaborate web of personal, familial, and non-market investments that accumulate and are mutually reinforcing. Human beings are complex, and those who propose perspectives that exclude the fabric of human communities are missing the depth and breadth of these communities.

4. The Usefulness of GMP to Civic and Business Leaders

To this point, we have been relatively silent on the practical use of GMP as a prescriptive tool for practitioners. That is, do movements in GMP levels (total, per capita, or per worker) provide useful information to practitioners on how to adjust policy in specific ways to achieve valued economic and societal outputs? Let us begin by stating that GMP is at best a blunt yardstick, an instrument constructed at too high a level of aggregation and with too little sensitivity to influence specific policy or business decisions that affect the prosperity of residents of modern cities. So if we find GMP limiting on many grounds, what do we recommend? In the next set of paragraphs, we discuss some of the proposed alternatives to GDP, and how each presents challenges to application.

C. ALTERNATIVES TO GDP

In this subsection, we briefly review the work of others who have recommended alternatives to solitary measures of economic progress like GDP. This is not meant to be an exhaustive review. Instead, we

attempt to touch on the primary approaches other skilled analysts have suggested. We have roughly collapsed these efforts into three groups: (a) measures that attempt to correct the current indices, (b) direct measurements of well-being, and (c) composites that combine approaches.

1. Corrective Measures

One of the most prominent corrective approaches is the United Nations' Human Development Index. Amartya Sen and Martha Nussbaum developed the HDI to reflect a capabilities approach that emphasizes means over ends. The measure extends beyond financial metrics, and includes elements such as access to basic needs (e.g., health care, education), in addition to the economic measures common to metrics like GDP. This metric includes a number of elements that have proven difficult to measure, including human rights, political freedom, and personal respect.³⁰ Similarly, in their essay "Beyond GDP: The Need for New Measures of Progress," Robert Costanza and Maureen Hart openly question the assumed positive correlation between economic growth and societal health: "Useful measures of progress and well-being must be measures of the degree to which society's goals (i.e., to sustainably provide basic human needs for food, shelter, freedom, participation, etc.) are met, rather than measures of the mere volume of marketed economic activity, which is only one means to that end."³¹ One form of contribution has been to augment the current measures with ones that provide a greater focus on sustainability of systems. These include so-called Green GDP measures, like the Chinese government's recent efforts to capture the costs of depletion of resources used in commercial production. Daly and Cobb have proposed the genuine progress index. The GPI builds on GDP by including an accounting for current environmental and social issues.³²

2. Well-Being and Happiness

A second approach has been to call for the inclusion of self-reported and subjective measures, like personal well-being and happiness. For example, examining the psychic costs of recessions and other financial downturns, Di Tella and MacCulloch measured a discernible "fear cost" of a business downturn for a single year and placed the magnitude necessary to compensate for this fear at \$200 per year, per citizen. They argue that "macroeconomics matters. People's happiness answers en masse are strongly correlated with movements in current and lagged Gross Domestic Product per capita."³³

At the same time, the positive relationship between economic growth and happiness may be tenuous. A number of scholars have noted this and have largely examined the relationship using notions developed in the "Easterlin Paradox," which notes a correlation between economic measures of growth and indicators of happiness in the short run, and a lack of correlation between them in the long run.³⁴

Subjective well-being is a concept popularized in positive psychology and is meant to address the cognitive view people have of their lives, including work-life balance, community and personal relationships, time and costs of recreation, and matters of faith.³⁵ A number of scholars in this field have noted that although wealthier nations tend on the whole to report higher levels of happiness, there seems to be a ceiling effect in which the wealthiest nations are not happier. At least one reason for this may be the tendency toward disproportionate accumulation of wealth. If the most affluent members of a society are receiving the lion's share of the economic gains, the overall income numbers may rise, but the day-to-day lives of many may not show discernable changes. These measures of well-being are generally used in a survey format. For example, in a typical method, a random sample of respondents is interviewed each year and asked whether they are happy and satisfied. These scores are aggregated by the geographic or demographic base of interest and compared to quantitative measures like median family income.

Oswald and Wu examined the levels of happiness of Americans, developing a ranking of the "best" and "worst" states to live in in terms of residents' satisfaction with their lives. (Hawaii was ranked first, with New York and Connecticut at the bottom of their list.) They combined self-reported assessments of happiness with objective measures like annual precipitation, temperature, wind speed, sunshine, presence of national parks, hazardous waste sites, level of local taxes, local spending on education and highways, and cost of living. Oswald and Wu concluded that self-reported happiness levels closely correlate with a number of objective environmental factors (e.g., commuting time, violent crime, air qual-

ity, student-teacher ratio).³⁶ National-level measures of happiness have also been proposed, including one devised by the tiny Himalayan kingdom of Bhutan, which now measures gross national happiness. A related measure some economists have suggested is the U-index, or proportion of time people spend in an unpleasant emotional state.³⁷

3. Composite Approaches

After launching the HDI, Amartya Sen joined his fellow Nobel laureate Joseph Stiglitz and the French economist Jean-Paul Fitoussi on a commission established by President Nicolas Sarkozy of France to consider alternatives to GDP. A high-powered collection of researchers, the Commission on the Measurement of Economic Performance and Social Progress, worked on the project. They have created an index that measures a group of elements: health, education, environment, employment, material well-being, interpersonal connectedness, and political engagement. Though the suite of academic talent working on this particular alternative to GDP is formidable, the group has encountered some challenges in its search for the data needed to create their index.

The Calvert-Henderson Quality of Life Indicators were developed in a collaboration between the socially responsible investment firm the Calvert Group and economist and futurist Hazel Henderson. They engaged in a six-year study and returned with twelve areas of focus that constitute a suite of indicators rather than a single measure. The areas are education, economy, energy, environment, health, human rights, income, infrastructure, national security, public safety, recreation, and shelter.³⁸

In the paragraphs above, we have attempted to review the primary alternatives that have been proposed to measure economic progress. On the whole, these methods share a foundation based on the need for a measure capable of providing a more comprehensive accounting of the products and experiences of our daily lives as workers and as citizens. The methods differ, and have received varying degrees of criticism. We agree with these scholars that the status quo is insufficient. In the next paragraphs, we review some of the prevailing prescriptive approaches to metropolitan economic progress.

D. PRESCRIPTIVE MODELS OF METROPOLITAN DEVELOPMENT

At least since Kuznet's first efforts in the 1930s, there has been considerable interest among policymakers in generating expansive economic growth in cities. A number of local efforts have been launched to find ways to transform "our town" into the next center of technological development, another Silicon Valley or Route 128 corridor. Jane Jacobs, the iconic scholar of cities, recognized that density and diversity play a substantial role in creating vital cities and neighborhoods, and, long before globalization became taken for granted, she argued that exports and trade were key to the growth of cities.³⁹

Global competition is also a central theme in the metropolitan development theories of business guru Michael Porter. Following the logic that theories that work for firms would work for metropolitan areas, Porter developed a metropolitan variant of his influential thesis of firm competitive advantage, arguing that locations have key factor endowments—natural resources, human and financial capital, technology—and that these drive the economic outputs of cities. This, in turn, brings externally sourced income to the area, which then spurs additional development. A primary element of Porter's thesis is that clusters of related firms within an industry vertical—suppliers, investors, competitors—can create a shared space of intense economic development.⁴⁰

Echoing one of Jacobs's observations about the role of artists in transforming former ghettos, Richard Florida's prescriptive approach to development urges that cities attract the "creative class" of educated, artistic residents that can provide the intellectual capital to develop quality-of-life goods and services that are appealing to other residents, especially the affluent.⁴¹ Economists Edward Glaeser and Enrico Moretti argue that density is a key factor in the development of cities, but take the position that density enables *friction*, creating opportunities for a diverse set of residents to interact with each other. This resulting friction creates a higher velocity of interactions and through this produces a larger number of innovations, which in turn lead to the development and production of goods and services in high demand in a global economy.⁴²

All of these theories share a sense that density looms large in enabling the innovations that drive cities. This is a structural advantage that cities have over rural areas, and arguably this notion was a central theme in writing on national productivity in the early post-World War II period. However, density has been a feature of evolving attractiveness in the popular conception in recent decades. The proximity found in urban centers, especially proximity to diverse demographic groups, has not always been perceived as an advantage of metropolitan areas, but, rather, as a limitation. Thomas Sugrue has charted the evolution of the desirability of living in cities. After the 1940s, suburban locations offered a lifestyle that was increasingly attractive to American families, especially those seeking to improve their status.⁴³ This trend continued and intensified as the conflict that attended the civil rights movement of the 1950s and 1960s brought televised scenes of urban turmoil into the nation's living rooms and the racial composition of neighborhoods began to change, in part because of the passage of fair housing laws and the enactment of other policies that ended *de jure* segregation. The 1970s saw many cities lose population, especially affluent and educated residents, in what was termed a "white flight" to the suburbs. This exodus wreaked havoc on municipal budgets and resulted in a few prominent municipal fiscal crises (e.g., New York City's brush with bankruptcy in 1975). There was an effort on the part of many cities to annex surrounding suburban areas (and capture their tax revenues).

What drove these trends was a change in the popular conception of what prosperity entailed—the notion of the white-picket-fence home, with a yard that needed mowing and a car in the driveway, supplanted the desire to live in a dense area composed of high-rise apartment buildings and condominiums. Living in a multifamily building became a mark of lower status, and in some areas, gated communities became highly sought-after real estate. The production of single-family homes became a key indicator of economic fitness, tracked and publicly reported quarterly. The flight from the cities became such a dominant trend that sociologists Douglas Massey and Nancy Denton reported that residential segregation by race in major US metropolitan areas rivaled housing patterns in South Africa under apartheid.⁴⁴

These trends were all elements of an evolving "sense of place." Demographers, sociologists, and psychologists have described the development of a psychological attachment to a neighborhood or parts of a city.⁴⁵ Whether urban or suburban, neighborhoods begin to have meaning to residents beyond their geographic location. Some of this meaning is conferred through the value of housing stock; some through the relative affluence, education, or ethnicity of residents; some through the quality of schools. In the last quarter of the twentieth century, recognizing the influence of these factors on consumer choices and preferences, the real estate industry responded to this phenomenon with a chain of measures— appraisals, tax regimes, and mortgage lending and- brokerage practices—to assist in the protection and development of valued real estate "places" within cities. These areas became protected spaces, with demographically customized amenities and processes of inclusion and exclusion that guided where different types of residents came to live.⁴⁶

Recent anecdotal accounts suggest that the flight from the cities to the suburbs is reversing, and recent findings support this notion.⁴⁷ Young, educated, and relatively affluent singles and families are moving into cities, and into erstwhile ghettos that prior generations avoided. These trends seem to bode well for the continuing economic development of cities. Scholars like Glaeser and Katz and Bradley have charted a resettling of the urban core, and see little chance of a resurrection of the suburbanization pattern of the 1970s.⁴⁸

IV. THE ENDOWMENT OF "THE PROSPEROUS" IN CONTEXT

In this section we begin by examining how two seemingly innocuous factors, population density and industry composition, contribute to the increasing competitive advantage of metropolitan areas from an income and labor market perspective. We then review the types of challenges faced by contemporary leaders in metropolitan areas, including business leaders.

A. THE ECONOMIC ADVANTAGE OF METROPOLITAN AREAS: DENSITY AND NETWORKS

In this subsection, we discuss recent demographic and social trends that point to the increasing centrality of metropolitan areas to economic growth, and reasons why this small number of factors contribute to what economists have termed positive network externalities that persist and will strengthen in importance over time. The economic concept of network externalities involves the benefits a system enjoys as an increasing function of the number of other users.⁴⁹ The sheer population size, density, and connectivity of cities contribute to a number of these positive externalities, reversing a significant portion of the perceived negative externalities of dense urban areas of the past (e.g., crowding, crime, property deterioration). Relative to rural and even suburban areas, cities and their surrounding metropolitan areas are increasingly preferred by Americans when they choose where to live and work. According to the US Census Bureau, urban areas—which it defines as densely developed residential areas and commercial and other nonresidential areas—had 25 percent greater population growth than the national average from 2000 to 2010.⁵⁰ By 2010, over 80 percent of the US population lived in an urban area, and these residents tended to be younger, better educated, and more affluent than those living in non-urban areas.⁵¹

1. Size and Density

The transaction costs of “getting together” are far less in high-density areas. This proximity reduces the friction that can slow the transformation of ideas and technology into institutions of growth. Despite the popular notion that “distance is dead,” the clustering of economic activity in keeping with the limitations imposed by geographic space and political boundaries persists, and may be even more important given the orientation toward technology and service that characterizes developed economies. Metropolitan labor and product markets are increasingly the engines of economic growth in the US economy and around the globe. Leading economists have noted the relationship between cities and economic growth. Glaeser and Resseger have written that “the connection between area size and per worker productivity and income is a core fact at the center of urban economics.”⁵² According to a report by McKinsey & Company, a mere 600 cities will generate 65 percent of the world’s economic growth by 2025.⁵³ The density of metropolitan areas is a key advantage they enjoy over other areas that contributes to their increasing attractiveness as places to start and build businesses, to attract workers, and even to find a mate. In the coming decades, these trends are likely to persist. We believe that the density of metropolitan areas provides enhanced opportunities for network connections and learning in commercial and non-commercial pursuits; for the diffusion of innovations; for immigration and diversity; and for assortative matching in labor, dating, and marriage markets among those who are affluent and highly skilled. We discuss each of these in the remainder of this subsection.

2. Learning and Thickness

The field of agglomeration economics takes the view that within a geographic area, density provides a “thickness” of relationships that lower the costs of doing business.⁵⁴ In this line of thinking, as population density increases there is a network effect created by the availability of relationships. Physical proximity provides greater access to relationships, which contributes to a greater likelihood of ideas spreading from one person or firm to another. The greater opportunity for meetings facilitates enhanced opportunities for learning and innovation through social or work interactions.

In a social sense, the higher proportion and density of a relatively educated populace supports a relatively intellectual quality of life that can allow for a broader and more sustained period of learning. The arts, restaurants, and other services that these relatively affluent and educated residents demand contribute to a “smart cities” and “creative class” characterization of some metropolitan areas. In terms of commercial learning, the types of enterprises that tend to be located in cities—e.g., advertising, banking and investment, consulting, law, and software design—require workers to have higher average levels of education. The clustering of these activities in physical space in metropolitan areas allows for enhanced opportunities for even casual interactions outside the workplace that contribute to the development of a commercial idea. These network benefits are not a recent phenomenon. Thomas

Bender retells the story of Thomas Edison's early work as an inventor, and the advantage of "direct access to the capital and financial services, corporate leadership, and professional knowledge—especially law and engineering—that was available in Manhattan."⁵⁵

3. Diffusion of Innovations

The clusters of industries and educated workers in cities also provide access to resources that can facilitate development of an innovative idea commercially and technologically. The economic historian Robert Allen describes a process in which sustained technological advancement is not due to the labors of a single person or firm pushing things ahead but to a process of "collective invention" in which one learns from another's innovation and takes things a step further.⁵⁶ This virtue of density may be evident in places like Silicon Valley and in the software industry, but the ability of cities to foster the development and spread of innovations also has a long history. One example comes from Ross Thomson's account of the diffusion of Elias Howe's sewing machine, an essential technology in the textile mills that sprang up in many metropolitan areas during the expansion of the textile industry that occurred in the United States in the late nineteenth and early twentieth centuries. In Thomson's retelling, Howe's lockstitch mechanical stitcher of 1846 was but one in a long line of similar inventions introduced over a period of at least sixty years. Howe's advantage in having his machine diffuse ahead of others was not his engineering superiority. In fact, many of the other stitchers that preceded his were technically viable, even exceptional in their design and operation. However, none of these prior inventions succeeded commercially. What differentiated his efforts was that his machine was introduced into a web of complementary skills and technologies, in which a network of innovators in Massachusetts and London built on each other's progress, a process that led to the diffusion of Howe's machine.⁵⁷

4. Immigration and Diversity

Whether they arrive from outlying areas or from abroad, migrants seeking to make improvements in their relative position, even those without wealth, education, or valuable intellectual property, tend to settle, at least initially, in cities rather than rural areas or suburbs. This circumstance initiates a virtuous cycle in which later migrants from the "old country" tend to seek out places where they can feel some affinity with the residents.

It is thought that immigrants are not likely to accept the status quo and will have a tendency to create revolutions that can lead to new opportunities. If they are also relatively well educated and desired by high-skill firms, as required for H-1B visas, their clustering in a smaller number of locations provides those places with a talent advantage. Overall, immigrants tend to enhance rather than dilute the labor market. For example, for some time Census Bureau data has indicated that the rate of labor-force participation of foreign-born workers is higher than that of native-born workers; that rates of unemployment among foreign-born workers are lower; and that foreign-born workers' rates of self-employment are higher.⁵⁸

This clustering of immigrants seeking greater opportunity in metropolitan centers has been seen at some points as a detriment to community health, and is certainly unattractive to some. In the late 1800s, one concern was the tendency of high-density urban areas to concentrate the spread of disease, the presence of undereducated people, crime, and other social ills. The concomitant costs of preventive or prescriptive efforts made the cost of living in cities problematic in terms of taxes and frictions. These worries certainly persist. However, it appears that the recent trend is that cities are attracting a diverse set of residents—the most educated and best resourced, as well as the least. This diversity is a factor in the high degree of inequality and segregation in cities, which we will explore in our discussion of alternative measures below.

5. Assortative Matching in Labor, Dating, and Marriage Markets

The term *assortative matching* (synonym: *assertive matching*) describes the economic notion that people tend to make residential choices that complement their career and social goals, and that, correspondingly, employers make location choices based on the availability of the kind of labor they most need. For example, young people interested in entertainment careers on stage or on camera move to Los Angeles or New York, while aspiring songwriters settle in these cities or perhaps in Nashville. There is an

informal yet powerful “sorting and matching” across areas in terms of labor market demand and career goals. Over time, the greater likelihood of matching in these areas will become institutionalized, and may represent a durable labor market inequality between metropolitan areas.⁵⁹ The cluster of similar businesses in these areas also lowers the risk to workers of losing their job in one company, since there will likely be demand for their skills in another firm in the area.

A similar process seems to be prevalent in dating and marriage markets. The greater tendency of metropolitan areas to attract highly educated, affluent populations for work is buttressed by the desire of these workers to find mates with similar educational, career, and wealth profiles. For single people who are affluent and highly educated, cities will tend to have a larger supply of the people they are most likely to seek for dating and marriage.

This desire to partner with someone with a similar educational background has existed for some time. However, what has become different in recent decades is the linkage of educational attainment of women with enhanced labor-force participation. Analysis of educational attainment and income from marriage markets is beginning to show the additional advantage metropolitan areas have in this regard. An analysis by economists Costa and Kahn is illustrative. They found that in 1940, the wife worked in only 18 percent of couples in which both spouses held a college degree. By 1970, the proportion of college-educated working wives had grown to 39 percent, but the jobs these women held were “gendered” and generally paid less than college-educated men’s jobs. By 1990, the majority of college-educated wives were in the labor force, with jobs in a broad range of sectors and at a variety of salary levels.⁶⁰ Increasingly, highly educated couples are seeking employment in the same cities, where job opportunities can be maximized relative to those available in small cities. Once these couples are settled in these relatively rich labor markets, their ability to generate dual-career incomes contributes to their economic power. An abundance of “power couples” contributes to higher tax values, and tends to influence other factors that affect the quality of life, such as the school system, policing, and parks and other public spaces.

There is a virtuous cycle in which the composition, density, and networks of metropolitan areas have given them advantages that smaller cities and rural areas do not enjoy. The relative attractiveness of urban areas was noted by the Nobel laureate who developed the concept of GDP, Simon Kuznets, in his Nobel Lecture: “Urban life, with its denser population, provided amenities and spiritual goods that were not available in the ‘dull and brutish’ life of the countryside; and the new skills, once learned, were often a more adequate basis for a richer life than the old.”⁶¹

Thus far, we have reviewed the factors spurring growth in metropolitan areas. In the next portion of our review of the Endowment of The Prosperous in context, we discuss contemporary challenges to the management of growth in metropolitan areas.

B. CONTEMPORARY CHALLENGES FOR METROPOLITAN LEADERS

In our review of prosperity in metropolitan areas, we feel that it is important to recognize some of the recent challenges that have been faced by metropolitan centers. We note here four that we see as continuing challenges: shifting sources of revenue; markets without geographic boundaries; gentrification, displacement, and resegregation; and competition for resources from the other Endowments.

1. Shifting Sources of Revenue

A contemporary challenge faced by many metropolitan areas is the recognition that their revenue models (or taxation plans) are based on assumptions of economic growth that have not been realized. For example, during and following the severe recession of 2007–09, many municipalities found that the expectations and algorithms applied to housing tax revenues were inaccurate. That is, few leaders anticipated dramatic declines in property values, waves of foreclosures, or decimating short sales to banks before they occurred. These changes dramatically influenced the capacity of many jurisdictions to continue to offer planned goods and services. Given the centrality of housing values in household

asset levels, these declines in revenues also influenced philanthropic giving and consumer spending. The phrase “a new normal” began to seep into the vernacular. Many communities, reliant on spending by the federal government, experienced a similar vulnerability during the federal budget sequestration that began to be implemented in fiscal year 2013. From this observation, we argue that metrics need to have flexibility in design that enables not only continual tracking of household income but also alteration of the means used to assess the factors that drive economic output as economies evolve.

2. Markets without Geographic Borders

Markets are responsive to demand. Consumers and employees will relocate to find the products and jobs they desire, and their movements don’t consider municipal boundaries. In practice, the prevailing reality is that consumer, labor, and investment markets are regional. Unfortunately, a zero-sum logic prevails among many communities in which one municipality’s gain is another’s loss. The persistence of this logic is strengthened by declining and uncertain tax revenues, and creates a “mine-yours” approach by leaders when “we” would more accurately reflect the shared development of areas. A decrepit central city does eventually cost the residents of its verdant suburbs, although this isn’t immediately evident to many residents or elected officials. Where possible, we recommend metrics that accurately reflect the underlying regionality of markets, rather than city-suburb boundaries.

3. Gentrification, Displacement, and Resegregation

Who are our residents? To which should we give preference? These are thorny, long-standing questions that have created novel challenges for leaders as the city-to-suburbs trend of past decades has begun to reverse itself. For example, after Hurricane Katrina devastated New Orleans in 2005, the city’s population declined and its demographic composition changed dramatically. The now smaller New Orleans has a younger, more affluent population with a higher percentage of white residents. A similar trend seems to be occurring in certain neighborhoods in Detroit, whose population has shrunk sharply in recent decades because of deindustrialization and outmigration. To some, these might look like positive developments. Yet these changes raise difficult questions about the choices leaders make in deciding which services and amenities to offer—new schools, green spaces, subsidies, changes to tax policies, etc. They also cause us to question what happens to incumbent residents displaced by development, which sometimes transforms historic neighborhoods and the long-standing social connections that have formed along with them. We recommend that metrics take into account the reality of rapidly shifting demographics in cities. This likely would require direct collection of data from residents and perhaps greater reliance on qualitative methods (for example, considering the content of public events that allow leaders to “hear” from a broad base of residents).

4. Competition for Resources from Other Endowments

As metropolitan areas experience demographic and political changes, leaders are finding that the clash of preferences—old versus new residents, young versus old, native-born versus immigrant—is creating demands to divide the pie of resources in ways that please one group over another. For example, many communities are experiencing growth among two disparate groups. One consists of relatively well-educated, affluent retirees seeking more parks and community arts projects, and even investments in alternative energy. The other consists of relatively youthful families, many of them immigrants, seeking better schools, improved mass transportation, and affordable housing.⁶² These differences in preferences gain power and force through two different factors: spending power on the one hand, and numerical advantage on the other. We feel that measures should capture the preferences of a broad base of residents through methods that allow them not only to express their own desires but to account for the implications of their preferences for other residents of their area. One of the limitations of the current planning process is that residents are not always asked to account for their preferences in light of the impact on others or on their community’s long-term growth.

V. CONNECTIONS TO EXISTING METRICS AND THE OTHER ENDOWMENTS

From the outset, we intended this brief to go beyond critique. Having spent some time reviewing the efforts of those that came before, we now provide some of our own perspective on metrics that might be useful to leaders hoping to foster a more fruitful process. As is the case for the critiques of GDP that we have reviewed, we recognize that our recommendations about what should and shouldn't be included reflect our beliefs in how our society should progress. To develop our own set of preferred metrics, we first reviewed a large body of economic prosperity measures and have selected from these measures based on three considerations: First, we recommend measures that have proximity to the lived experience of metropolitan residents rather than intervening measures. (For example, instead of changes in the amount of tax revenue, we are most interested in measuring the impact of these changes on the communities in which families reside.) Second, rather than recommend a single measure, we propose a basket of metrics that will be familiar to most readers, and some novel measures that we cannot find in wide use today. Third, we call for measures that provide a mirror to businesses and how they can function as institutions within communities. These measures should allow a feedback loop to form that can provide some sense of the manner in which the business sector is perceived to support the communities in which it operates. These measures should be prescriptive, in that they should give business leaders a sense of their role as civic actors and community members.

In the paragraphs below, we first review some existing measures we feel are particularly useful for measuring the progress of a metropolitan area. The third portion of this subsection provides some novel approaches that may give some suggestions for practice to those interested in a more salutary experience of prosperity for a large number of residents.

A. MEASURES OF HOUSEHOLD PROSPERITY

In keeping with our desire to assess prosperity in ways that are relevant to average households, our first set of recommended measures include those that give a sense of the economic health of individual households in a metropolitan area. These include measures of income and savings (median household income, metropolitan poverty rate, level of household savings, level of household debt, homeownership rate). We feel that these measures provide a sense of the outcomes of economic pursuits. By this, we mean that we can better understand the collective health of households by examining not just their incomes but their resource accumulation. Of these measures, household or per capita income has drawn the most popular interest. However, one of the collective lessons from recent recessionary periods is that measures of wealth—net asset and debt levels—are important indicators of household health. The level of assets, or net assets, available to households is a far better measure of the ability to withstand large-scale economic shocks than the income a household can generate. These measures of wealth generally can serve as proxies for cash valuation in forms such as savings, investments, loans, or indebtedness. We also feel that homeownership rates are an important measure not so much because home equity is an asset that can be collateralized but because homeownership is associated with a sense of personal investment in a neighborhood or community.

B. MEASURES OF BUSINESS AND EMPLOYMENT DEVELOPMENT

The second set of recommended measures capture the level of business development in the metropolitan area. These include measures of labor market engagement (unemployment, employment, and labor-force participation) because these provide a sense of the capacity of the collective set of employers to absorb and employ the working-age population. Although full employment is highly unlikely, higher levels of participation are an indicator of daily engagement with the institutions in a community, while lower levels are associated with idleness and, in some cases, a greater incidence of crime. In addition to measuring the level of engagement with the labor force, we recommend measuring the diversity of employment across educational and professional levels. Does the local economy have a diversity of business sectors—for example, service, technology, retail, and manufacturing?

Diversity across sectors may be an important asset for a metropolitan area not only because of the provision of a broad spectrum of employment opportunities; it may also provide resilience when economic downturns occur. This notion borrows from the common knowledge in finance that over-reliance on one set of assets leaves an investor vulnerable. This notion of diversity might also be applied to other elements of a metropolitan area's business development. For example, rates of self-employment can serve as proxies for innovation and the development of new firms, while changes in the median employer size can indicate a shift in the working population toward small employers. We are also interested in these measures as they relate to the demographic subgroups, which we discuss in more detail below.

C. METROPOLITAN AREA MEASURES

Investment in communities is an important factor in understanding the potential for a metropolitan area to convert one set of assets into a valued set of outcomes. Without continuing investment, a metropolitan area loses the capacity for continued growth in a globally competitive marketplace. Our interest is less in measures of investment within firms than with the investments in infrastructure that will enable communities to create value in the future. Of course, many of these investments are deployed by governments and financed with tax revenues. However, our interest is in metropolitan-level investments from the business and nonprofit sector as they relate to infrastructure and services that will enable future economic activity—for example, investment in areas such as schooling, telecommunications, transportation, and arts programs. We propose that communities begin to measure the extent of revenue from locally based philanthropy and to assign value to in-kind and volunteer time in a metropolitan area. We feel that these are important indicators of the extent of collaboration across the public, private, and nonprofit sectors in a metropolitan area.

D. EVENNESS MEASURES

We also recommend that investigators try to determine the evenness of their measures across communities. So, for example, we recommend determining not only median levels of savings in households, but also the range and variation of this measure across a metropolitan area. We further recommend that analysts conduct evenness measurements examining various demographic subpopulations, such as those identifiable on the basis of household status, presence of children, education level, racial or ethnic group, and age cohort. These analyses would provide important information about how the effects of economic progress were playing out across a metropolitan area. Many of these analyses could be spatially plotted, showing changes across neighborhoods within a metropolitan area. Even visual inspection of these maps could provide revelations about the pockets of relative development and underdevelopment within an area.

E. NOVEL APPROACHES: QUALITY-OF-LIFE MEASURES

Finally, we recommend the development of mechanisms to allow researchers to “listen” to residents about their experience beyond what can be captured in purely economic indicators. We applaud efforts to assess well-being through the use of self-reported measures developed from social science fields like psychology. We think it would be interesting to compare these measures with those applied to household economic development and cost of living. Perhaps a municipal analogue might be developed to the consumer confidence measures that are formulated to predict spending patterns. These analyses would provide insight into whether economic matters have an outsized influence on the sense of progress in a community relative to other factors.

IV. CONCLUSION: A RECOMMENDATION FOR A NEW MODEL FOR CHAMBERS OF COMMERCE

In this brief, we have attempted to understand how American society came to place such a high value on economic progress, and to question whether this is a promising condition. We worry that the business sector and business proof have an outsized influence on contemporary matters. We recognize the role of economic growth in metropolitan areas and expect that it will continue to have this disproportionate influence as time goes on. We recommend that business leaders partner with others to establish better ways of accounting for progress—ways that would be inclusive of other perspectives and values. In this summary, we make some tentative suggestions that provide a window on our thinking.

The popular conception is that the institutions that represent the interests of a community’s “town fathers,” that is, the chambers of commerce, are largely representing the self-serving and homogenous interests of business leaders. To some degree, local chambers of commerce are seen as exclusive, clubby gatherings of affluent cronies intent on maintaining the status quo. In line with our calls earlier in this document for a greater degree of “listening,” we encourage business leaders to ask themselves *Who are the actors involved in fashioning the economic progress of metropolitan areas? Who isn’t at the table?* The base of actors who influence a metropolitan area’s economic progress certainly includes a larger group of individuals than the chief executives of local firms. We believe that there are institutions and individuals that could form the basis of a new type of chamber—corporations, government actors, and nonprofit organizations—dedicated to economic progress. Such an institution could include representation from intermediary and informal organizations as well. We recommend applying some of the best practices in board governance, such as term limits for leadership, circulating committees, and a sliding scale for dues or fees for less resourced members. One primary initiative for these groups might be to develop public-private-nonprofit partnerships that would create cross-sector investments in communities. Given that chamber membership provides access to the corridors of power, a more inclusive set of voices might provide a space for discourse rather than oppositional rhetoric. The declining levels of public trust in business and government institutions call for an alternative form of voice and discourse.

Implicit in this recommendation is a view that business leaders need to listen more to other voices. In keeping with the spirit of the Thriving Cities Project, we need to take the perspective that although the business sector has considerable and increasing influence over the institutions that propel our society, we should begin to recognize the need for a greater interrelationship with the institutions that influence the other Endowments. Business leaders should be careful to recognize their outsized power, and to leave their wallets at the door when meeting with the leaders of those institutions.

NOTES

(Endnotes)

- 1 Following the lead of the Thriving Cities Project, we use the term prosperity to refer to a set of interrelated economic terms. We recognize, however, that in other contexts this term has other meanings. “The Prosperous” as an endowment of a metropolis is presented here as the facet of life dealing with economic health, wealth, income, and other forms of material prosperity.
- 2 We use the word discourse in a sociological sense. We mean it to describe a way of thinking that is expressed through language. Discourse analysis can involve the examination of texts to discern meanings that are representative of social beliefs and values within a society.
- 3 Readers interested in this tool should visit <https://books.google.com/ngrams/info>.
- 4 Readers interested in learning more about these methods should see Margaret Wetherell, Stephanie Taylor, and Simeon Yates, *Discourse Theory and Practice: A Reader* (London, England: Sage, 2001).
- 5 The movement that later became known as Taylorism was named after the efforts of Frederick W. Taylor (1856–1915), who was an influential mechanical engineer and, eventually, consultant who applied scientific management principles to daily and work life in an effort to increase efficiency and productivity.
- 6 There is no doubt that in the early periods measured, the predominance of faith topics within all books is clear, and that any increase in economic topics would be expected. However, these figures adjust for the relative volume of books published over time. During the period analyzed, both the aggregate and relative growth in books mentioning economic matters is clear.
- 7 In this brief, the term diffusion is meant to refer to the spread of an idea or concept through a social group or institution, or across groups and institutions. Readers interested in the sociological theory of diffusion should see Everett Rogers, *Diffusion of Innovations* (New York, NY: Free Press, 1962).
- 8 The differences between gross city product and gross metropolitan product are minimal, and a detailed discussion of these differences was not considered critical to the primary thrust of this Endowment brief.
- 9 S. B. Saul, *The Myth of the Great Depression, 1873–1896* (New York, NY: Palgrave MacMillan).
- 10 Bureau of Labor Act, 29 US Code, § 1 (1884).

- 11 Late in life, Leontief expressed skepticism about the application of these models to economies, stating that "year after year economic theorists produce mathematical models
without getting any closer to understanding the structure and functioning of the real economic system." See Karl W. Deutsch, Andrei Markovitz, and John Platt, *Advances in
the Social Sciences, 1900–1980: What, Who, Where, How?* (Lanham, MD: University Press of America, 1986), 350.
- 12 Steven J. Landefeld, Eugene P. Seskin, and Barbara M. Fraumeni, "Taking the Pulse of the Economy: Measuring GDP," *Journal of Economic Perspectives* 22, no. 2 (2008):
193–216.
- 13 Landefeld et al., "Taking the Pulse of the Economy."
- 14 Michael D. Bordo, "The Bretton Woods International Monetary System: A Historical Overview," in *A Retrospective on the Bretton Woods System: Lessons for International
Monetary Reform*, ed. Bordo & Barry Eichengreen (Chicago, IL: University of Chicago Press, 1993): 3–108.
- 15 Quoted in Diana Coyle, *GDP: A Brief but Affectionate History* (Princeton, NJ: Princeton University Press, 2014), 113.
- 16 Arthur M. Okun, *Potential GNP: Its Measurement and Significance* (New Haven, CT: Cowles Foundation for Research in Economics, Yale University, 1963).
- 17 John W. Kendrick and C. Milton Jaycox, "The Concept and Estimation of Gross State Product," *Southern Economic Journal* 32 (1965): 153–68.
- 18 Norman J. Glickman, "An Econometric Forecasting Model for the Philadelphia Region," *Journal of Regional Science* 11, no. 1 (1971): 15–32.
- 19 Stanley F. Duobinis, "An Econometric Model of the Chicago Metropolitan Standard Area," *Journal of Regional Science* 21, no. 3 (1981): 293–319.
- 20 *Ibid.*
- 21 Simon Kuznets, "Modern Economic Growth: Findings and Reflections" [1971 Nobel Lecture], Nobel Prize website, accessed May 19, 2015, http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1971/kuznets-lecture.html.
- 22 Landefeld et al., "Taking the Pulse of the Economy," 196.
- 23 Jon Gertner, "The Rise and Fall of the GDP," *New York Times*, May 13, 2010, <http://www.nytimes.com/2010/05/16/magazine/16GDP-t.html>.
- 24 Landefeld et al., "Taking the Pulse of the Economy."
- 25 Kuznets, "Modern Economic Growth."
- 26 Landefeld et al., "Taking the Pulse of the Economy."
- 27 Associated Press, "UK GDP Calculations Will Include Prostitution, Illegal Drugs," *Epoch Times*, May 30, 2014, <http://www.theepochtimes.com/n3/704363-uk-gdp-calculations-will-include-prostitution-illegal-drugs>.
- 28 Robert F. Kennedy, "Remarks at the University of Kansas, March 18, 1968," John F. Kennedy Presidential Library and Museum, accessed May 19, 2015, <http://www.jfklibrary.org/Research/Research-Aids/Ready-Reference/RFK-Speeches/Remarks-of-Robert-F-Kennedy-at-the-University-of-Kansas-March-18-1968.aspx>.
- 29 Gertner, "The Rise and Fall of the GDP."
- 30 Martha C. Nussbaum, *Creating Capabilities: The Human Development Approach* (Cambridge, MA: Belknap, 2011).
- 31 Robert Costanza and Maureen Hart, "Beyond GDP: The Need for New Measures of Progress," *The Pardee Papers* no. 6 (January 2009), 6, <http://www.bu.edu/pardee/files/documents/PP-004-GDP.pdf>.
- 32 Herman E. Daly and John Cobb Jr., *For the Common Good: Redirecting the Economy toward Community, the Environment, and a Sustainable Future* (Boston, MA: Beacon Press, 1989).
- 33 Rafael Di Tella and Robert MacCulloch, "Gross National Happiness as an Answer to the Easterlin Paradox?," *Journal of Development Economics* 86, no. 1 (2008), 41.
- 34 Richard Easterlin, "Does Economic Growth Improve the Human Lot? Some Empirical Evidence," in *Nations and Households in Economic Growth: Essays in Honor of Moses Abramowitz*, ed. P. A. David and M. W. Reder (New York, NY: Academic Press, 1974): 89–125.
- 35 Edward Diener, "Subjective Well-Being: The Science of Happiness and a Proposal for a National Index," *American Psychologist* 55, no. 1 (2000): 34–43. doi:10.1037/0003-066X.55.1.34.
- 36 Andrew J. Oswald and Stephen Wu, "Well-Being across America," *Review of Economics and Statistics* 93, no. 4 (2011): 1118–34.
- 37 Richard W. England, "Measurement of Social Well-Being: Alternatives to Gross Domestic Product," *Ecological Economics* 25, no. 1 (1998): 89–103. doi:10.1016/S0921-8009(97)00098-0.
- 38 Costanza and Hart, "Beyond GDP."
- 39 Jane Jacobs, *The Economy of Cities* (New York, NY: Vintage Books, 1969).
- 40 Michael E. Porter, "Clusters and the New Economics of Competition," *Harvard Business Review* 76, no. 6 (1998): 77–90.
- 41 Richard Florida, "The Rise of the Creative Class," *Washington Monthly*, May 2002, 15–25.
- 42 Edward Glaeser and Joshua D. Gottlieb, "The Wealth of Cities: Agglomeration Economies and Spatial Equilibrium in the United States" *Journal of Economic Literature* 47, no. 4 (2009): 983–1028; Edward Glaeser, "Engines of Innovation," *Scientific American* 305, no. 3 (2011): 50–55; Enrico Moretti, *The New Geography of Jobs* (New York, NY: Houghton-Mifflin Harcourt, 2012).
- 43 Kevin Michael Kruse and Thomas J. Sugrue, *The New Suburban History* (Chicago, IL: University of Chicago Press, 2006); Thomas J. Sugrue, *The Origins of the Urban Crisis: Race and Inequality in Postwar Detroit* (Princeton, NJ: Princeton University Press, 2014).
- 44 Douglas S. Massey and Nancy A. Denton, *American Apartheid: Segregation and the Making of the Underclass* (Cambridge, MA: Harvard University Press, 1993).
- 45 Richard C. Stedman, "Is It Really Just a Social Construction? The Contribution of the Physical Environment to Sense of Place," *Society and Natural Resources* 16, no. 8 (2003): 671–85; Harvey C. Perkins, "The Country in the Town: The Role of Real Estate Developers in the Construction of the Meaning of Place," *Journal of Rural Studies* 5, no. 1 (1989): 61–74.
- 46 Richard H. Schein, "The Place of Landscape: A Conceptual Framework for Interpreting an American Scene," *Annals of the Association of American Geographers* 87, no. 4 (1997): 660–80.
- 47 John Iceland, Gregory Sharp, and Jeffrey M. Timberlake, "Sun Belt Rising: Regional Population Change and the Decline in Black Residential Segregation, 1970–2009," *Demography* 50, no. 1 (2013): 97–123.
- 48 Glaeser, "Engines of Innovation"; Bruce Katz and Jennifer Bradley, *The Metropolitan Revolution: How Cities and Metros Are Fixing Our Broken Politics and Fragile Economy* (Washington, DC: Brookings Institution Press, 2013).
- 49 Michael L. Katz and Carl Shapiro, "Network Externalities, Competition, and Compatibility," *American Economic Review* 75, no. 3 (1985): 424–40.
- 50 "The nation's urban population increased by 12.1 percent from 2000 to 2010, outpacing the nation's overall growth rate of 9.7 percent for the same period, according to the US Census Bureau." See "Growth in Urban Population Outpaces Rest of Nation, Census Bureau Reports," US Census Bureau, March 26, 2012, http://www.census.gov/newsroom/releases/archives/2010_census/cb12-50.html.
- 51 *Ibid.*
- 52 Edward Glaeser and Matthew Resseger, "The Complementarity between Cities and Skills," *Journal of Regional Science* 50, no. 1 (2010), 221.
- 53 Shannon Bouton et al., "How to Make a City Great," McKinsey & Company, September 2013, http://www.mckinsey.com/insights/urbanization/how_to_make_a_city_great.
- 54 See, e.g., Moretti, *The New Geography of Jobs*; Edward Glaeser, *Triumph of the City* (New York, NY: Penguin, 2012).
- 55 Thomas Bender, *The Unfinished City: New York and the Metropolitan Idea* (New York: New York University Press, 2007), 83.
- 56 Robert C. Allen, "Collective Invention," *Journal of Economic Behavior and Organization* 4 (1983): 1–24.
- 57 Ross Thomson, *The Path to Mechanized Shoe Production in the United States* (Chapel Hill: University of North Carolina Press, 1989).
- 58 These findings are based on the authors' own analysis of 2013 Census Bureau data. The relevant files can be found at "Current Population Survey Data on the Foreign-Born Population," US Census Bureau, June 4, 2014, <http://www.census.gov/population/foreign/data/cps.html>.
- 59 Moretti, *The New Geography of Jobs*.
- 60 Dora L. Costa and Matthew E. Kahn, "Power Couples: Changes in the Locational Choice of the College Educated, 1940–1990," *Quarterly Journal of Economics* 115, no. 4 (2000): 1287–1315.
- 61 Kuznets, "Modern Economic Growth."
- 62 William J. Serow, "Economic Consequences of Retiree Concentrations: A Review of North American Studies," *The Gerontologist* 43, no. 6 (2013): 897