

A Fresh Take on an Old Reliable: Milwaukee and Manufacturing

January 2013, Vol. 26, No. 1

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Executive Summary

This report assesses a critical juncture in the future of Milwaukee as a city, namely, the fate of its sizable manufacturing sector within the city's diversifying economy. Milwaukee currently occupies a sort of *via media* between declining manufacturing prowess and a vibrant technology hub. The future of its manufacturing base and how to build off it in diverse ways that attract college-educated workers are the driving issues of this paper. This report commends many of the positive steps Milwaukee has taken already, but it also goes beyond them to examine the additional steps that Milwaukee ought to implement. It also lays bare the unmet challenges and seemingly intractable problems staring Milwaukee in the face.

In outlining the future of Milwaukee's manufacturing sector, this report synthesizes research on urban development economics, urban planning and other social-scientific traits and applies it to Milwaukee's economy, outlining several daunting challenges facing the city. To remedy some of these problems, the paper urges Milwaukee to do the following:

Raise and cultivate an educated middle class to facilitate greater cultural consumption

Milwaukee is deficient in the types of consumption opportunities prized by college-educated workers, namely, restaurants, bars, museums, theaters and the like. Milwaukee currently has the income distribution and demography similar to a 20th century city in the 21st century. In other words, it has a large class of people stuck in stagnant wages, many of whom never gained the proper upward mobility to become solidly middle-class residents. In the 1990s, despite macroeconomic growth, wages stagnated.

This is consistent with the sort of dumbbell shape that characterizes some cities: a narrow middle class, an upper class of managers and creative types leading innovation and entrepreneurial activity, and a plentiful lower class yearning for upward economic mobility, rising wages and job security. Far too many of Milwaukee's people live in poverty, including many of its African-American residents. Milwaukee would do well to look at "majority-minority cities," such as Atlanta, which has a thriving middle class composed of African-Americans, Hispanics, Asians and Caucasians.

Create a new narrative for manufacturing

Milwaukee's manufacturing sector suffers from a national disease in that it lacks a compelling narrative of what manufacturing employment is like and what it could be, how one can get there,

and what one does once there. Recent “open house” events at several local plants, sponsored by the Fabricators & Manufacturers Association International, National Institute of Standards & Technology, and Manufacturing Extension Partnership, ought to be commended.

Yet, Milwaukee ought to do more to pique students’ interest. Students should not be left wondering what happens within the walls of their community businesses. A new narrative should not shy away from explaining the macroeconomic trends working against American manufacturing, but it should also note that one can combat the ebbs and flows of the industry largely through educational attainment. A recent poll found that 70 percent of the American people thought manufacturing was the economy’s most important industry, yet only 17 percent identified it as their top choice for a career. This is precisely the disconnect and undersupply of quality interest that we ought to address as a nation and that Milwaukee ought to address as a city with a sizable manufacturing presence. This new narrative should include graduates of high schools, technical colleges and traditional four-year bachelor’s programs, and it should emphasize education as a means to employment flexibility, adaptability and resilience in the event of an economic downturn.

Milwaukee, specifically, should work to connect graduates of four-year bachelor’s programs with the industry, marketing itself as a place of forward-looking, high-tech innovation, especially on the managerial and entrepreneurial side of the fence — precisely where creative types are likely to reside. This new narrative must present itself to all age groups and classes, students and parents alike, including those currently employed in manufacturing. To remain competitive and up-to-date, a “back to school” option ought to be more compelling.

Attract and retain creative types

Milwaukee has creative types working in various industries. However, by no means is Milwaukee a technological hub of innovation like Seattle, San Francisco or Austin. Nor is Milwaukee a former manufacturing star in decline like Detroit, Akron or Gary. It is likely in a third category, a city in a position to combine its industrial base with many sectors in the new service-oriented economy. Looking at the organic and spontaneous development of innovation hubs, particularly in the decision of one or two major investors to move a firm’s headquarters, Milwaukee can learn from this paradigm. Milwaukee’s move to attract the leading talent in the water technology industry is a prudent move, but this green-technology industry is untested and nascent.

Milwaukee would do well to make a major push to attract even a regional office (of several hundred workers) from a tried-and-tested company in a proven industry. This could spur the movement of other creative types to the Milwaukee metro area, as well as multiply exponentially the number of capital investment firms (often attracted to high-tech businesses because of their rate of profit and potential for growth), much as Microsoft’s spontaneous move to Seattle created a concentrated cluster of high-tech innovators there.

Create and invest in skills certificate programs for workers

The furthering of skills certificates, obtainable through one- or two-year courses at area technical schools, will be imperative to increasing the number of manufacturing jobs in Milwaukee that qualify as “very high-tech” or “moderately high-tech.” In some ways, Milwaukee must bend to the contours of broader macroeconomic fundamentals, which point decisively to the dominance of so-called STEM jobs — those related to science, technology, engineering and math. An increase in graduates of post-secondary or skills programs will mean greater job security and flexibility in the event of an economic downturn. Greater job security is a prerequisite for any industry like manufacturing poised to serve as the bedrock of an urban area’s economy. The harsh reality of today’s economy is that there is increasingly little room for the unskilled. As is the case with many other recommendations, *much of the solution turns on education.*

This report also makes use of a sample of five other metro areas to which it compares Milwaukee, to point out deficiencies, but also to point out strategic strengths and things Milwaukee has done correctly. One thing that becomes apparent in these metro comparisons is Milwaukee’s anemic consumer spending. Many urban economists agree on the importance of consumption opportunities, especially cultural consumption, to the attraction and retention of college-educated, creative workers for which most cities vie. The percentage of these creative types concentrated in an urban area is one of the most reliable predictors of a city’s economic performance and prospects. Utilizing data from the U.S. Commerce Department’s Bureau of Economic Analysis (BEA), the report breaks down Milwaukee’s consumer spending, especially its cultural consumption, into digestible subcategories in order to parse out areas of competitive advantage and inadequacy alike.

Milwaukee is the undisputed economic engine of Wisconsin. Its future is of commensurate importance to residents within its metro area and residents of the state of Wisconsin alike. To a certain extent, as Milwaukee rises and falls, so does the economic prospect of the rest of the state. Nothing is inevitable, and this includes Milwaukee’s decline. With the proper mix of policy and leadership, Milwaukee can revitalize its economy and restore its future. Unequivocally, this starts with assessing the future of its largest industry by employment percentage — the manufacturing sector.

Introduction

Milwaukee is at a critical juncture in its development as a 21st century city. It faces a clear tipping point that will shape its identity for the next decade, half-century or longer. After undergoing development strategies from Mayor John Norquist’s “walking city” to the redevelopment of the RiverWalk and the Historic Third Ward, several important questions remain about the future of Milwaukee.¹ Like yin and yang, Milwaukee exudes confidence as a city reborn and revitalized with a vibrant downtown, growing restaurant scene and excellent economic development initiatives like FUEL Milwaukee for young people. Yet it remains plagued by many urban woes like high levels of poverty, minority unemployment and infant mortality. The most obvious uncertainty, however, remains the future of Milwaukee’s economy — specifically, what to do with its large manufacturing base. Will Milwaukee push its manufacturing sector backstage as a new sector emerges in its stead, or will it remain protective of its most prominent industry, even while it faces many macroeconomic challenges to growth?

The demise of Milwaukee as a city is far from inevitable; with strong leadership and prudent decisions, many things are possible. We must first recognize that while Milwaukee has made great progress, it also faces serious problems. Glossing over the problems Milwaukee must address and the critical decisions it must make about its future is a guaranteed prescription for disaster. Significantly, we should be thankful that Milwaukee is not Gary or Detroit, but wonder why it is neither Seattle nor Austin, both of which are included for the sake of comparison in this paper's sample of cities. The goal of this paper is to commend — and yet go beyond — Milwaukee's RiverWalk, the apartments and condominiums lining the lakeshore and the flora occupying its parks.

Milwaukee currently occupies a middle ground between declining manufacturing prowess and a vibrant technology hub. The impetus for this paper is the future of its manufacturing base and how to build off it in ways that attract college-educated workers. This paper seeks to answer two critical questions. First, is manufacturing the future of Milwaukee's economy and should its leaders do what is within their power to promote this industry? Would such policies represent a step in the right direction or a doubling down on the city's inherited past as an industrial town? This is a difficult question of priority and identity often glossed over by political types extolling the virtues of a potential manufacturing renaissance. Second, and related, part of any potential industry "reset" is the migratory pattern of people, particularly the young, college-educated people for whom metro areas compete. How has the role of the city changed since Milwaukee's rise and subsequent decline as a manufacturing powerhouse and how does this new role of the city impact the future of Milwaukee's manufacturing industry?

The organization of this paper proceeds in three main parts. First, it examines the manufacturing history of Milwaukee to place the paper's overarching questions within the proper historical context. Second, it explores the new formula of urban success offered by many urban economists and applies it to Milwaukee. Third, it explores the effects of growth in both manufacturing and more service-oriented industries on urban development. It concludes with policy recommendations for fixing several of Milwaukee's urban travails, as well as sustaining the city's positive momentum going forward.

Milwaukee's Manufacturing Prowess

Milwaukee's story as a manufacturing powerhouse begins in the post-bellum era. By the 1860s and 1870s, Milwaukee had the immigrant population and skill set required to "do more than buy, sell and trade the farm products of its hinterland," says historian John Gurda. Soon, Milwaukee was no longer an agricultural society, and the industrial sector had exploded, growing from 558 manufacturers in 1859 to 2,879 by 1889.² At the macro level, "The factory became the nucleus of this new urban complex," says urban historian Lewis Mumford.³

Flour-milling, meatpacking, iron production, steel producing, leather making, and the city's best known trade, brewing, all dominated the industrial economy of *fin de siècle* Milwaukee. The incredible concentration of manufacturing in Milwaukee contributed to early urban sprawl and the sprouting of several suburbs in honor of their industrial founders — West Allis and Cudahy, to name two. Many industries, particularly brewing, went so far as to link place and product in an attempt to augment its reputation and quality. Both Pabst and Schlitz sought to link their beer

with Milwaukee and its famous brewing prowess. “Milwaukee Beer is Famous — Pabst Has Made It So,” Pabst Brewing proclaimed; similarly, Schlitz claimed ostentatiously that it was “The Beer That Made Milwaukee Famous.” Even 100 years later, “despite the loss of all but one major producer, Milwaukee’s image as a beer capital still has enormous power.” The mental nexus between locale and product engendered by these advertisements has remained.⁴

Milwaukee also became the so-called “Machine Shop of the World” when its economy turned from mere processing of resources like iron or cattle to metal-bending and steel producing. Even though buyouts by Andrew Carnegie and U.S. Steel eventually relegated Milwaukee’s steel industry to a minor holding of the world’s largest corporation (previously, it was a surprisingly sizable industry), Milwaukee remained robust in its retention of entrepreneurs, inventors and skilled labor, especially in the metal-bending industry. This meant that Milwaukee produced some of the new prime movers of early 20th century society — namely the electric motor, the gasoline engine and the steam turbine. Milwaukee was fertile ground for turn-of-the-century mechanical ingenuity. For example, the Edward P. Allis Company — later Allis-Chalmers after a merger — became the world’s leading manufacturer of locomotive steam engines.

Milwaukee’s manufacturing industry arose organically alongside earlier dominant industries. It sprang up side-by-side with meatpacking, flour-milling and leather-making. “Milwaukee was engaged in manufacturing *and* processing, in producing durable goods *and* perishable commodities.... Milwaukee’s prosperity depended on industry of all kinds.” Output of manufacturing goods in Milwaukee increased from \$106.3 million in 1890 to \$174.4 million in 1900. In 1910, with output at \$329.5 million and employment of working-age Milwaukee males in manufacturing at nearly 60 percent, the *Milwaukee Sentinel* boasted: “The hum and roar of her monster engines and massive machinery is heard in every civilized land.” From the mines of South Africa to the fields of China — and on every continent in between—the Milwaukee name carried a reputation for quality and affordability.⁵

Fast-forward 75 years to the beginning of the close of the 20th century, and the trajectory of Wisconsin’s manufacturing sector has experienced a significant about-face. Gurda notes that three trends stand out in the remaking of Wisconsin over the last quarter century: “The catastrophic decline of manufacturing, the globalization of Wisconsin’s populace, and the growing gap between government and the governed.” From 1979 to 2008, a period of roughly a quarter-century, Wisconsin lost over 100,000 manufacturing jobs; manufacturing employed 583,000 Wisconsinites in 1979 and only 476,000 in 2008. After the Great Recession, Wisconsin has 451,600 residents employed in manufacturing (as of May 2012). Zooming in on the Milwaukee metro area — which experienced a more dramatic level of manufacturing decline — it had 220,200 manufacturing jobs in 1979 and just 115,000 in 2009, nearly halving its total in the period. In 1990, the metro area had 22 percent of its employment in manufacturing, but by 2008, that number had declined 20 percent to 15.6 percent of total employment.⁶

During the period from 1960 to 1999 — a major era of stagnation and then decline for American manufacturing — Milwaukee lost 150,000 of its residents. Milwaukee fell victim to a “massive restructuring of the national economy,” seeing manufacturing jobs move “away from central cities of major northern metropolises and relocate...either in cities of the South and West...or abroad, in foreign countries.”⁷ A 2008 WPRI report indicates, “Its manufacturing sector, while

still a significant element of the city's economy, is only one-third of what it was in 1970.”⁸ Milwaukee's experience was representative of a broader decline for many American industrial cities.

In the vicinity of 30th Street, one could spot companies with serious and respected global reach, as well as small enterprises in niche markets — Harley-Davidson, A.O. Smith, Evinrude, Cutler-Hammer, Master Lock, Fuller-Warren, Koehring and Interstate Drop Forge, to name just a few. Several remain, but many have shuttered. After the rapid decline of Wisconsin's manufacturing industry, one encounters “deer and songbirds in this urban no-man's-land as nature quietly reasserts its dominion.... As the buildings decay...the 30th Street industrial corridor has a post-apocalyptic feel. *An old order has vanished; a new one has yet to materialize.*”⁹ Nobel-winning economist Paul Krugman notes that unemployment in the manufacturing sector hit the industrial Midwest the hardest. Riffing on the former term “Rust Belt,” he calls the industrial Midwest the “Slump Belt.”¹⁰

A Palpable Decline...Especially in Minority Communities

Wisconsin's economy, despite an unemployment rate well below the national average at 6.2 percent (as of June 2012), continues to see disappointing growth in its major city. Lightbourn and White note that as of 2008, manufacturing was just shy of 16 percent of Milwaukee's economy, contributing more than one-third of the income for the metro area's economy.¹¹ Manufacturing declined to 13.8 percent of all jobs in Milwaukee by 2010. To make matters worse, a new report from the University of Chicago indicates that the nationwide housing boom obfuscated the loss of many manufacturing jobs gone as early as the 1990s, providing a false sense of wealth and respite for low-skilled workers.¹²

The Great Recession hit Milwaukee's manufacturing industry especially hard, and the city continues to have discomfiting employment statistics, especially regarding minority employment, where a manufacturing renaissance may cut into unemployment figures among Hispanic and African-American young men. According to a recent study by University of Wisconsin-Milwaukee's Marc Levine, Milwaukee's economy employs fewer than 50 percent of working-age African-American men, defined as those between 16 and 64 years old. Only Buffalo and Detroit have lower black male employment rates. For black males in their prime working years — defined as 25 to 54 years old — employment reached a historical nadir at 52.7 percent in 2010 — the lowest of any metropolitan area in the United States, even lower than Detroit. By comparison, almost 40 years ago, Milwaukee employed 85 percent of its black males.¹³

On a macro level, no metropolitan area witnessed more “precipitous erosion” in black employment during the last 40 years than Milwaukee — once a city with higher black employment than the national average. Nationally, “with the exception of health and education, blacks are under-represented in the sectors that have experienced the greatest job growth during the recovery, including manufacturing and professional and business services,” notes a recent U.S. Department of Labor special report. It also notes that during the Great Recession, black employment in the manufacturing sector took the deepest hit.¹⁴

Lags in manufacturing growth account for a good deal of black unemployment. In 1970, 54.3 percent of Milwaukee's black males found employment in manufacturing, at the time more than double white employment in that industry. By 2009, however, the disparity in manufacturing employment disappeared, with only 14.7 percent of black males working in Milwaukee factories, roughly the same percentage as white males.¹⁵ Many of the manufacturing jobs that do remain, in such areas as brewing, automation, and especially machinery, suffer from declines in both number and wages.

The Region as a Whole

As always, through these vicissitudes, Milwaukee has experienced a rocky relationship with its southern neighbor, the metropolis of Chicago. Milwaukee is approximately 90 miles from Chicago, which placed sixth overall in a recent ranking by *Foreign Policy* magazine of the top global cities (in the company of New York, London, Tokyo, Paris and Hong Kong).¹⁶ The Chicago "tri-state metro area" stretches into Wisconsin, encompassing Kenosha and Racine counties, and the city of Milwaukee, and east to include portions of Indiana. With three large American cities — Chicago, Milwaukee and Indianapolis — within relative geographic proximity of one another, this tri-state metro area has the potential to be one of the most dynamic in the world. The Paris-based Organization for Economic Cooperation and Development argues that Chicago is at a critical juncture in its economic development regarding its ties to neighboring cities: "As one of the richest regions in the world, the Chicago metropolitan area has all the ingredients for a vibrant economy. It's now essential that all players work together to develop better policies for better lives in Chicago," says Angel Gurría, secretary general of the OECD.

Even though the tri-state metro area is one of the largest metropolitan economies in the OECD, economic growth has fallen for most of the century and lagged well behind the U.S. average. Between 2001 and 2007, annual GDP growth averaged 1.6 percent lower than the OECD average for metro regions (at 2.6 percent) and per capita growth was 56th out of 84 OECD metro regions. A weak productivity growth rate is also of concern, particularly in the manufacturing sector, precisely where labor productivity typically increases due to mechanization and innovation. "If employment in the Chicago tri-state metro region had grown at the national rate over the past 20 years, the region would have almost 600,000 additional jobs today," the OECD report explains.

The tri-state metro area ranked 22nd out of 29 U.S. metro regions and grew slower than both the Los Angeles and New York metro regions, despite having a similar population size. If the tri-state region had performed at parity with aggregate U.S. growth over the last decade, i.e., at about 3.4 percent of the national economy, the aggregate U.S. GDP growth for the decade would have been 0.4 percent higher, a palpable effect.¹⁷ Thus, the tri-state region, of which Milwaukee is a part, is important to the U.S. economy — and it is underperforming.

Although the area is rich with research universities and young talent, knowledge-intensive companies recruit from outside the region, and local graduates leave for other metropolitan areas. In one rank used as a benchmark of technological progress, Chicago stands at 23rd among OECD metro regions and 11th among U.S. metro regions in terms of patents per capita, with 162

patents per 1 million inhabitants. To compare, Cincinnati, a far smaller city, has 231 patents per 1 million inhabitants, Boston has 518 per 1 million, and San Diego, a hub of high-tech jobs, a whopping 912 patents per 1 million inhabitants.¹⁸

To be sure, Milwaukee benefits in some ways from its proximity to Chicago, but it also loses something. Chicago's central location relative to Milwaukee and Detroit allows manufacturers to consolidate easily there, siphoning off talent from both metro areas. For too long, many political figures and urban planners have viewed the relationship as that of a zero-sum game and have failed to forge the necessary cooperative ties between agencies and governments in the region. And on a macroeconomic level, the area is underperforming relative to the U.S. economy and within the manufacturing sector, specifically.

Looking Forward

Not all is rueful in the manufacturing data, however. After the Great Recession, 121,500 manufacturing jobs remain in metro Milwaukee (as of July 2012), a slight uptick from the aforementioned low in 2009.¹⁹ Even at the nadir of Milwaukee's manufacturing slump, it remained second — behind only San Jose — among the nation's largest metropolitan areas in concentration of manufacturing jobs, and significantly above the national average of 10 percent employment in the manufacturing industry. Urban planners use "location quotient," or L.Q., which compares a region's specialization in a given industry to that of the nation as a whole, to indicate a region's reliance on any one industry. The Milwaukee metro area has a manufacturing location quotient of 1.62 (a L.Q. of 1 indicates a region is at the national average). This means Milwaukee's concentration of manufacturing employment is 62 percent more than the national concentration of manufacturing employment. The number of manufacturers classified as "very high-tech" or "moderately high-tech" is 40.6 percent.²⁰ The *Wall Street Journal's* "Market Watch" ranked Milwaukee's general business climate as the 20th best place to do business in the United States among the 101 largest metro areas. Measurement consisted of the number of companies per capita in a metro area for a company-concentration score, and of the employment picture, GDP, and growth potential for an economic stability score.²¹

For the manufacturing sector specifically, a recent Boston Consulting Group report argues that global economic trends indicate that the United States is on the verge of a "manufacturing renaissance." China's wages will continue to rise by about 17 percent per annum due to supply and demand imbalances for labor. Economists agree that wage rates account generally for 20 to 30 percent of a product's total cost. With rising wages, manufacturing in China will be only 10 to 15 percent cheaper than in the US, excluding inventory and shipping costs, which, when factored in, bring the total cost advantage of Chinese manufacturing to a negligible amount.²² The Boston Consulting Group foresees this manufacturing boom occurring in coastal and Southern states, namely, South Carolina, Mississippi and Alabama. Conspicuously absent from this report is Wisconsin — or any states of the so-called "rust belt," for that matter, despite the fact that Wisconsin is the No. 1 one state in per capita manufacturing employment.

²³ Further, Wisconsin is below the national average in new income generated since the Great Recession and has the second-highest percentage of state income derived from manufacturing, behind only Indiana (24 percent), with 23.3 percent of state income coming from the

manufacturing sector.²⁴ Recent calls for Wisconsin to play a part in this manufacturing boom are plentiful and vociferous, including one from Wisconsin Department of Workforce Development Secretary Reggie Newson.²⁵

Timely Questions

With the macroeconomic fundamentals in place for a potential manufacturing “reset,” Milwaukeeans need to ask tough microeconomic questions. Despite the urban sprawl and flight to the suburbs of the 1960s and 1970s, the Brookings Institution reports that as of 2010, 80 percent of all manufacturing jobs and more importantly, 95 percent of all high-tech manufacturing jobs in America are located in metro areas.²⁶ Thus, any “reset” of manufacturing is linked inextricably with the repositioning of the city as the preeminent driver of the economy.²⁷ The high number of manufacturers located in metro areas reflects the limits of the suburban model of development in channeling the full innovation and productive capabilities of the new creative economy. High-tech manufacturing relies on the existence of creative entrepreneurs and innovators, people found largely in urban settings. Indeed, what is most promising about Richard Florida’s “rise of the creative class” is the preference of these young, college-educated and skilled workers to work and live in cities, a preference that could lead to the city’s revival as the epicenter of economic growth.

To be sure, resets in any industry are organic processes involving a series of events. But it would be naïve to think public policy does not have a catalyzing impact. We live in a world of incessant technological advancement, and the ability to employ it in a workable economic system can engender gains in output and efficiency. Significantly, our present situation — coming out of a nearly unprecedented economic recession — may bode well for high-tech manufacturing growth, as innovation often reemerges with greater force than hitherto permissible during economic downturn. The reason is that entrepreneurs and inventors allow as-yet-unexploited ideas to accumulate during a downturn.²⁸

Thus, Milwaukee is at a critical juncture and must ask the accompanying critical questions. First, is manufacturing the future of its economy and should its political officials do what they can to promote this industry? Would such policies represent a step in the right direction or a doubling down on the city’s inherited past as an industrial town? This is a difficult question of priority and identity often skipped by political types all-too-quick to extoll the virtues of a potential manufacturing renaissance. Because part of any potential industry “reset” is the migratory pattern of people, particularly the young, college-educated people for whom metro areas compete, the second critical question concerns the role of the city. How has this changed since Milwaukee’s rise and subsequent decline as a manufacturing powerhouse and how does this new role influence the future of Milwaukee’s manufacturing industry? This paper tackles the second question first, and concludes by turning to the first.

The New City and Consumer Spending

It is important to note general changes in the purposes of cities and their formula for success before delving into Milwaukee’s specific situation. As economist Richard Florida notes, “locations rise and fall based on their ability to attract, retain and productively use talent of all

sorts — from brilliant innovators to unskilled laborers.”²⁹ This means that we can no longer view cities as a product of the structures they build or the façades that line their myriad architectural accomplishments. Invariably, “cities are people” consisting “of flesh, not concrete,” and a connected mass of humanity with a “diversified portfolio of employers.”³⁰ In post-industrial economies, cities battle intensely for their share of the new drivers of economic growth, members of the “creative class” — a college-educated, sophisticated, mobile and unfettered, and largely economic class of people.

Florida came to this understanding through the correlation between college graduates in a city and per capita income (whether their presence is causative is a different argument altogether).³¹ He defines it as an economic class, most importantly, because economic commonalities inform its members’ social and cultural penchants, consumption habits and lifestyle choices. The emphasis on class underlies how common interests drive people to organize into social groups, but Florida employs this category in a resolutely anti-Marxist way: namely, the emergence of a demographically similar group of people with similar tastes and preferences, rather than any sort of economic class that owns the means of production in society.³² In fact, what is most distinct about the members of the “creative class” is not their ownership of property in any physical sense of the term, but their creative capacities — property that is, literally, attached to their bodies. Which factors help cities attract and retain such talent?

One uniting preference of the creative class in the era of the new city is consumer-driven desires and a focus on cultural activities. Members of the creative class value consumption opportunities for leisure activities like going to the movies, theater performances, museums and sporting events.³³ (It is important to note that these activities lack non-spatial substitutes, making them difficult to duplicate even with modern technology.) So-called “consumer sovereignty” is different from “what our parents wanted, and even from what many of us once thought we wanted.”³⁴ Since the 1970s, “culture is more and more the business of cities — the basis of their tourist attractions and their unique, competitive edge.”³⁵ Sharon Zukin refers to this more abstract economy as the “symbolic economy” that controls the aesthetic and cultural offerings of a city.³⁶ What is different about the symbolic economy of today’s cities is not the patricians or philanthropists who make up a large portion of its ranks (and always did), but *the ability of this sector of the economy to speak for or represent the city in toto* — in other words, the “cityness” or identity of a metropolitan area. In short, “the identities of places are established by sites of delectation,” the innovative enjoyments that urban economies can provide.³⁷ Demand for such activities has engendered supply, in turn sculpting and molding the identities of urban areas.

A strong identity, shaped in part by opportunities for leisure and hospitality consumption, both attracts and retains the creative class — the latter being especially important because college-educated people demonstrate a greater willingness to uproot themselves (and their families) for greater prosperity or sense of community elsewhere. Entertainment, then, has a bigger draw than heretofore possible because cities have the requisite density and “agglomeration effects” to attract and retain diverse, sophisticated and cosmopolitan scenes lacking elsewhere. After all, “density” is not the word that comes to mind when we envision modern suburban living with its reliance on automobile usage and insistence on copious amounts of space. Yet, suburban living and modern telecommunications have not made the notion of agglomeration obsolete. To be sure, globalization spreads out economic activity, but the world is not flat, as much-ballyhooded

New York Times columnist Thomas L. Friedman once declared. In fact, the reality of the global economy is that, arguably, place matters now more than ever and creative types know it.³⁸ The paradox is that as the cost of connecting across distances has declined, the value of proximity has increased. Despite technological breakthroughs that “have caused the death of distance, it turns out that the world isn’t flat; it’s paved,” says Harvard economist Edward Glaeser.³⁹ We ought to eschew the naïve view that technology reduces our desire for or the advantages of close physical proximity with other human beings. In fact, it may do just the opposite. Glaeser notes that residents of metro areas make telephone calls disproportionately higher than residents in rural areas, despite geographical proximity with those they call, because face-to-face interactions increase the demand for electronic communication.⁴⁰

The rise of such phenomena as reverse-commuting demonstrates the attraction of urban areas, and indeed as of 2010, more than 243 million Americans reside currently in urban areas for a multitude of reasons, including the 30 percent higher average yearly salaries.⁴¹ A 2007 story in the *Economist* quipped, “Homo sapiens have become Homo urbanus.”⁴² The types of “human capital externalities” — i.e., the benefits of a clustering of talented, ambitious people — that Nobel laureate Robert Lucas describes are only possible in metro areas, and the recent growth evinced by urban areas belies the flat-world hypothesis.⁴³

Many economists argue that the power of the cultural economy and opportunities for consumption mark a new paradigm in the competition between cities. To be sure, cities will always serve as places of employment, production and abode. However, they now serve as dynamic centers of consumption for educated workers. The amenities and opportunities for consumption now hold a higher place in a city’s equation for success than ever before, a paradigm shift brought about in part by the consumption proclivities of the new creative class. In short, “Traditional cities will only succeed when they provide amenities that are attractive to high human capital residents.”⁴⁴ A provocative April 2000 story in *The Economist* titled “The Geography of Cool” asserted that cities such as New York, long considered the leaders in fashion, the arts, music and other forms of entertainment, emerged as top places attracting young talent specifically for this reason.⁴⁵ Educated workers place a higher premium on opportunities to enjoy restaurants, live music, theater performances and sporting events, among other things. Florida notes that this accounts for a large share of the preference shown by the “creative class” for urban settings, generally, over rural ones.⁴⁶

More importantly, specialized consumption opportunities, such as ethnic restaurants, theaters, art museums, sporting events and other retail, rely on the economies of scale and support of dense urban areas to have a critical mass of consumers. The fixed costs of theaters, museums and restaurants become more affordable when spread among strands of museum visitors and theatergoers, for example. Density enables markets and connects the most important market, the labor market, with firms and people with financial capital. Cities with more restaurants and live performance theaters per capita have experienced greater economic growth in both the United States and France over the past 20 years, according to an analysis by Glaeser, Kolko and Saiz. In that same analysis, “amenities appealing to less-educated workers — bowling alleys and movie theaters — are both negatively associated with county population growth,” a proxy for economic decline.⁴⁷ Underlining the importance that culture, programming and “coolness factor” play in the attraction of talent to a metro area, economist Terry Clark dubs the city an “entertainment

machine.”⁴⁸ Similarly, Glaeser uses the terms “pleasure zones” and “urban theme parks.”⁴⁹ It is a nexus that would have appeared tenuous in a previous generation — a city’s artistic and cultural creativity has a strong bearing on the attraction of people who also make the emergence of technology-driven industries and businesses more probable.

So Is Milwaukee a Creative-Class City?

At the time of Florida’s original analysis of the creative class — 2002 — Milwaukee placed 35th overall against other large metro areas in its attraction and retention of talent and failed to place in the top 100 in terms of diversity and the quality of its creative class. It also failed to place on Florida’s list of top cities for technology, talent and tolerance — what he posits as the “three Ts of economic development.” By comparison, Madison placed seventh on the list of the “three Ts.”⁵⁰ Despite increased efforts by city leaders, such as the redevelopment of the Historic Third Ward into glitzy apartments and condominiums, and a successful challenge to the Census Bureau of its total population, Milwaukee has a very low percentage of its population actually living downtown — less than 1 percent — even though downtown living is a sign of the vibrancy of the core city and the ultimate level of commitment to a city.⁵¹ Florida’s rankings examine cities vis-à-vis other metro American cities, yet the economy competes globally. One area where we can extend Florida’s analysis of Milwaukee’s creative class is an examination of its consumer spending habits. As we just noted, creative types have a proclivity for bohemian cultural consumption in large urban settings.

To perform such an analysis, we can use the Bureau of Economic Analysis’ data on leisure and hospitality by metro area, a measurement that includes the arts, entertainment, recreation, hospitality and food service industries. Utilizing the most recent data from the BEA for the year 2010 and dividing it by the total population of metro Milwaukee as identified in the 2010 U.S. Census, we can see the average per capita expenditure on leisure and hospitality activities. Without any pretense of being a complete study, repeating this calculation for five other metropolitan areas will serve as an example of where Milwaukee fares relative to other major cities in the United States.

Figure 1

As we can see, Milwaukee is deficient compared with other metro areas in average spending on leisure and entertainment — a measurement that encompasses museums, live performances, recreation, the hotel industry, tourism and the restaurant industry — in all, the types of things demanded often by individuals in the creative class. Milwaukee even trails metro Detroit in spending per capita on entertainment and cultural events. Seattle tops the selected list at \$2,176 spent on a yearly basis. Austin also has a high per capita spending on leisure and hospitality, given that its metro population is the second smallest — behind Milwaukee — of any in this sample.

Milwaukee also lags behind its metro competitors in the percentage of total GDP the leisure and hospitality industry occupies. Using the most recent statistics from 2010, we can calculate this using BEA statistics on the GDP of the leisure and hospitality industry in a metro area and taking it as a percentage of total GDP of that metropolitan area. At slightly over \$2 billion, the leisure and hospitality industry in Milwaukee represents about 2.7 percent of metro Milwaukee's overall GDP. Austin's leisure and hospitality sector occupies the highest percentage of any metro in our sample, at 3.74 percent of total GDP. Even Detroit, which spends only slightly more per capita on leisure and entertainment than Milwaukee, has the third highest percentage of total GDP in leisure and hospitality in our sample, at 3.36 percent, higher than metro Milwaukee, Seattle and Minneapolis/St. Paul (though only slightly).

Figure 2

As Harvard economist Edward Glaeser notes, cities with low levels of consumption in this sector experience significant difficulty closing the gap — a vicious cycle of under-consumption that reinforces itself. “It seems clear that some cities are managing to be successful consumer havens, but many will not. *This suggests a widening disparity across urban areas.*”⁵² Milwaukee must act quickly to avoid becoming a victim of such a widening disparity.

One interesting objection is that a metropolitan area’s cost of living affects an inhabitant’s ability to spend on consumer activities. The idea is that in expensive metropolitan areas — say, where inhabitants spend a third or more of their monthly income on housing — city dwellers may have less disposable income and thus a predisposition against consumer spending on leisure activities. However, the data simply do not bear this out. Richard Florida finds that the most expensive metro areas to live in are also those where the average inhabitant has the most left over to spend (on both a monthly and yearly basis). The key is that in economically advantaged metropolitan areas, living costs are high, but “average wages and salaries are substantially higher,” too, enabling them to “more than compensate.”⁵³ In other words, greater salaries eviscerate the higher cost of living as expressed in terms of housing, food and other amenities. Using 2010 average wage and salary figures from the Bureau of Labor Statistics and average monthly expenditures on housing from the 2009 American Community Survey, expensive metropolitan areas like New York, Boston, Seattle, Denver and Washington, D.C., still provide their residents with at least \$3,000 on average of disposable income per month. This represents a formidable level of disposable income with which to engage in consumer spending.

Figure 3

Source: Bureau of Labor Statistics and 2009 American Community Survey (ACS)

How does Milwaukee fare in Florida's rankings? Its residents have an average of \$2,775 remaining after housing expenses. Milwaukee's average housing expenses in 2010 were also the lowest of the five groups in our sample. Thus, even if the data demonstrated that cost of living has a negative effect on consumer spending — and it does not — Milwaukee's low cost of living coupled with relatively high wages means its inhabitants have plenty of disposable income for consumer spending. Florida finds a higher correlation between both the amount of people in knowledge-based occupations (.75) and the number of college graduates (.53) and average disposable income remaining after housing expenses. Essentially, these factors mean more people in high-tech industries and greater levels of innovation.⁵⁴ The data show that, generally, people are better off in knowledge-based, large metropolitan areas, even after taking housing costs into account.

Figure 4

Source: Bureau of Labor Statistics and 2009 American Community Survey (ACS)

Another objection arises precisely because of Milwaukee's relatively inexpensive cost of living. Milwaukee's low cost of living, the argument goes, means its spending per capita on leisure and entertainment *ought to be* lower than other cities, where the cost of living is higher. Just as housing and other goods are cheaper, overall, so is consumption of leisure and entertainment in monetary terms. The real figure at which we ought to look, then, is not spending as a figure, but the percentage of spending on leisure and hospitality relative to disposable income after housing prices. We can calculate this by multiplying average monthly disposable income after housing costs by 12 (to achieve average yearly disposable income) and dividing the yearly per capita expenditure on leisure and entertainment by this number. This yields an average percentage of disposable income after housing spent on leisure and entertainment on a yearly basis.

Figure 5

Again, Milwaukee fares worse than other cities. For, if the inexpensive cost of living affected per capita figures on consumption of leisure and entertainment in Milwaukee, making them appear below normal, then the percentage of Milwaukeean's disposable income after housing spent on leisure and entertainment ought to be similar to that of other cities. It is not. On a yearly basis, Milwaukeeans spend about 4.5 percent of their disposable income after housing on leisure and entertainment, while Chicagoans and Seattleites spend almost 6 percent. Metro Detroit is the only city in our sample that comes out below Milwaukee — and not by much.

To be sure, monthly housing costs do not represent the sum total of cost-of-living expenses, but they represent the bulk of them. A more comprehensive study would include food costs, automobile costs, access to public transportation and the like. A comprehensive account may also factor in the cost of housing per square foot, as inhabitants of some metro areas, for example, where space is not in as high of a demand, may have less disposable income after average monthly housing expenditures but larger homes on average. However, the point here is that the average Milwaukeean has ample disposable income every month, but does not engage in consumer spending on leisure and entertainment to the extent of his counterparts in other metro areas.

To put Milwaukee's closest company in greater context, we must examine Detroit, which places near Milwaukee in nearly every category. Detroit suffers from a serious talent drain; it is a poster child of urban decline. Just 10 percent of the city's residents have a college degree and 30 percent are on food stamps. Detroit ranks as the single hardest-hit metro region in the Brookings Institution's MetroMonitor Index in the wake of the Great Recession. Detroit also became the first city in U.S. history to eclipse the 1 million mark in population and then lose the same mark due to outmigration.⁵⁵ Land vacancy in Detroit covers an area close to the size of Boston, a

Reuters analysis estimates.⁵⁶ Milwaukee has a ways to go in pulling away from the likes of Detroit — and it should seek to do so immediately.

Because leisure and hospitality figures from the Bureau of Economic Analysis are broad-stroke measurements, however, we must break down Milwaukee's consumer spending in order to parse out where exactly it is deficient within that large category. For instance, BEA allows a breakdown of leisure and hospitality figures into the following useful categories: performing arts, spectator sports and museums; arts and entertainment; and accommodation and food services. To be sure, some of these categories have sizable overlap, but analysis of the subsections of leisure and hospitality figures should provide us with a more lucid image of Milwaukeeans' consumption on things valued by creative types.

Subsection 1: Performing Arts, Spectator Sports and Museums

One area in which Milwaukee is not deficient — nay, quite sufficient — is in the performing arts, spectator sports and museums subsection. Although the most recent data is from 2009, and not every city in our sample has data registered for this subsection with BEA, Milwaukee comes out on top of all of those for which data is available at about \$316 per capita spending per year in this subsection. Detroit finished last at about \$279 per capita spending per year. Unfortunately, BEA does not have data available for Minneapolis/St. Paul, Chicago or Austin metro areas (reflected in the bar graph below).

We can calculate a figure for the estimated national average using BEA data, however, by dividing the total GDP value of performing arts, spectator sports and museums for all major metropolitan statistical areas for which BEA has statistics by the total U.S. population living in metro areas, which stands at 83.7 percent according to the Martin Prosperity Institute of the University of Toronto.⁵⁷ Doing so yields a per capita national average of about \$260 per year spent on this subcategory of leisure and entertainment. Milwaukee's place above this estimated national average should not surprise us, however, as it has more than enough consumption opportunities for a city of its size. Milwaukee has two major sports teams, a professional (indoor) soccer team, two universities competing in NCAA Division I athletics, a world-class art museum (renowned as much for its architecture as for the works it houses), two symphony companies (the chorus and the company), a professional ballet, and various theaters. We may suspect that if BEA had data for the outstanding metro areas, Milwaukee would fare quite well.

Figure 6

Subsection 2: Arts and Entertainment

Milwaukee places in the middle of the pack in the arts and entertainment subcategory. This subsection includes live music performances, exhibits, historical sites and recreational activities dealing with hobbies or leisure interests. At about \$472 per capita per year, Milwaukee places fourth in our sample of six, ahead of Detroit (about \$462) and Austin (about \$333), but behind Chicago (about \$522), Seattle (about \$572) and Minneapolis/St. Paul (about \$632). This should surprise us, given that Milwaukee is home to what Guinness World Records calls “the largest music festival in the world,” attended by nearly 1 million people and with annual revenues of \$30 million: Summerfest.⁵⁸

Figure 7

Subsection 3: Accommodation and Food Services

Although Austin is a major outlier in terms of per capita spending on arts and entertainment, it makes up for its weak spending there in accommodation and food services. This BEA subsection includes lodging, food and beverage spending from the year 2010. Milwaukee finishes last in this category, at just over \$1,000 per capita spending per year. Detroit is not far ahead of Milwaukee at \$1,087. Residents of Chicago, Seattle and Austin spend an average of nearly \$1,500 per capita per year on accommodation and food services.

Figure 8

The last subsection of leisure and hospitality — accommodation and food services — is subject to the same objection that we dealt with earlier regarding cost of living (though, notably, not the other two subsections). Because inexpensive cities like Milwaukee have trickle-down effects to aspects of life other than housing, it is the percentage of yearly disposable income after housing spent on accommodation and food services (per capita) that ought to matter for comparison, rather than the quantitative measurement of dollars spent. As for the calculations in the previous section, we multiplied average monthly disposable income after housing by 12 and divided per capita spending on accommodation and food services by that number to yield a percentage. Again, Milwaukee comes out near the bottom at just 3.13 percent of disposable income after housing spent on this subsection, tied with metro Detroit. Although metro areas like Austin and Chicago do well in numerical terms, they do even better when matched against other metro areas in terms of the percentage of disposable income spent in this subsection.

Figure 9

One explanation of these trends may be that we have entered, thanks to the Great Recession, an era of “new frugality.” People no longer define themselves via their consumption habits or trumpet their successes through them. Reduced consumption in all of America means lower demand and a lower rate of growth, in turn affecting disposable income and looping back to affect consumption patterns.⁵⁹ It is a paradox many economists often point out: capitalism produces more goods than any one society can consume. However, the decline in spending on entertainment was manifest well before the Great Recession ate into disposable incomes and depleted savings accounts. On a macro level, the percentage of Americans’ household budgets spent on entertainment declined from 5.8 percent in 1950 to 3.9 percent in 2000.⁶⁰ This means that macro-level effects are reflected in the preceding charts and spread across all the urban areas in our sample. Yet Milwaukee continues to fare worse than comparable cities.

The new formula for urban success includes a consumer class with a predisposition for consumer spending on bohemian cultural products like theaters and other live performances. The new city is an “entertainment machine.” The foregoing is a profile of the average Milwaukeean’s consumption vis-à-vis other metro areas, showing that Milwaukee, with its sizable employment in the manufacturing sector, is deficient and frustratingly frugal in the type of consumption imperative for attracting and retaining creative types. If manufacturing remains a source of middle-class income, especially high-tech manufacturing jobs, which constitute 40 percent or more of Milwaukee’s manufacturing industry, our analysis moves to an examination of the effects of income and income distribution on consumption. Exactly who consumes bohemian cultural products central to an urban area’s success, and do manufacturing workers fit such a profile?

Where is Milwaukee’s Middle Class?

Manufacturing employment was once a ticket to middle-class prosperity and job security. In the old paradigm, high schools in America provided the skills for young men to make the school-to-work transition relatively seamlessly. The four-year college degree was a rarity and in most cases, unnecessary. Job security was like cement, as most companies employed workers for life and included nice pension plans to boot. As Milwaukee's economy transitions from its industrial base and the travails of employment in the manufacturing industry become manifest, Milwaukee's lack of a middle class also becomes apparent. We have just seen the consumption woes from which Milwaukee suffers, woes that are non-existent in cities with a prosperous and plentiful middle class. Milwaukee's dwindling middle class has many causes, but one of the most important is the hollowing out of its manufacturing sector and with it the death of manufacturing's once-attendant paradigm that included job security, middle-class paychecks and guaranteed pension plans for retirement security.

Milwaukee has a staggeringly high number of residents living in poverty, ranking near the likes of Detroit with nearly one in three of its residents below the federal poverty line. According to U.S. Census figures, Milwaukee's 2011 poverty rate stood at 29.4 percent — only a 0.1 percent decrease from 2010 U.S. Census figures — making it one of America's 10 most impoverished big cities. Numerically, 171,500 city residents live below the federal poverty line of \$23,350 per year for a family of four, including 41 percent of the city's African-American population and 35 percent of its Hispanic population.⁶¹ Thus, significantly important in Milwaukee's manufacturing decline are the travails of its increasingly contracting black middle class. Milwaukee ranked 47th out of 50 major urban areas in a recent analysis of the percentage of African-American middle-class homes.⁶² The number of Milwaukee's African-American residents living below the federal poverty line in 2010 dollars makes it the second highest of any city in our sample, behind only Minneapolis/St. Paul.

Figure 10

Source: 2010 U.S. Census Bureau Data and 2010 American Community Survey (ACS)

For comparison's sake, median incomes in Milwaukee's surrounding counties such as Waukesha, Washington, Ozaukee, Racine, and Kenosha counties exceeded Milwaukee's by about \$10,000 on average. Milwaukee County's median income in 2011 was slightly over \$40,000. The state of Wisconsin's household median income was \$50,395.⁶³ Marc Levine, executive director of the Center for Economic Development at the University of Wisconsin-Milwaukee, states, "Our analysis of employment data shows that Milwaukee has had among the worst job creation records of any big city in the U.S. for over a decade, so it is not surprising that poverty numbers have worsened."⁶⁴

Figure 11

Source: 2011 U.S. Census Bureau Data

On a macro level, major trends act to stymie manufacturing growth in Milwaukee and thus limit middle-class incomes for many within the metro area. Wisconsin's Department of Workforce Development estimates that just 3,700 new manufacturing jobs will open over the decade from 2004 to 2014 in the Milwaukee metro area; this occurs against the countrywide backdrop where we lose an average of 370,000 jobs per year — and not just during recessions. Of all manufacturing openings in the Milwaukee metro area, 86 percent will be to replace someone who has died, retired or abandoned the labor force; only 14 percent will be new jobs. However, the nature of high-tech manufacturing is that "replacement" actually requires an upgrade. Many of today's manufacturing workers will require some sort of post-secondary education. Educated workers, with their adaptability and creativity, are the linchpin of economic transition to high-

tech manufacturing.⁶⁵ This narrative, however, of college-educated workers going into the manufacturing sector, does not exist.

Our dominant paradigm contends that college-educated workers ought to go into service industry jobs — a paradigm that has showered prosperity on college graduates. Such prosperity serves only to reinforce the strength of the narrative and paradigm. Over the past three decades, the American economy created over 28 million new service jobs and just 1 million new manufacturing jobs. The Internet alone grew by 634 percent over the last decade, more than 200 times the growth rate of the rest of the economy during the same period.⁶⁶ Science, technology, engineering and math jobs, generally — often noted by the acronym STEM — grew at a rate three times faster than non-STEM jobs, and have average wages 26 percent higher than their non-STEM counterparts.⁶⁷ This paints a picture of service sector jobs, which rely primarily on analytical skills and social intelligence, as more resilient economically; in a sense, they are anchored more to place and thus more removed from global competition.⁶⁸ Thus, macroeconomic trends point in the direction of more sustainable service-sector jobs, as opposed to manufacturing jobs.

Creative-sector jobs have the additional advantage of greater multiplier effects. UCLA economist Enrico Moretti argues that the multiplier effects for creative-service jobs are much higher than for manufacturing jobs — that is, about five jobs created for every new creative-service job and only one and a half jobs created for every new manufacturing job created.⁶⁹

This should not surprise us after examining the woefully low levels of consumer spending in Milwaukee after housing costs vis-à-vis other metro areas like Seattle and Austin, where creative-service jobs occupy a greater percentage of the economy and workforce. Moretti's insights provide a solid answer to the question of who consumes bohemian culture. Simply put, creative types have more disposable income after housing with which to consume products and services than manufacturing workers, in turn creating a demand for other service jobs like barbers, bartenders and restaurant owners, but also doctors and attorneys. Over time, says Moretti, each new creative, service-sector job engenders the rise of around five other jobs, usually in the sequence of two professional jobs and three lesser-skilled jobs. From the point of view of a metro area, then, a creative-type job is much more than a job. For example, Apple employs about 12,000 workers in Cupertino, Calif., but its presence generates almost 60,000 additional service jobs in the region, of which 36,000 are unskilled, showing that its greatest effect is actually outside of its field of high-tech expertise.⁷⁰ A strong innovative class in America can support skilled and unskilled workers alike with diffuse benefits, in what Harvard economist Lawrence Katz calls the “New Artisan Economy.”⁷¹ Such analyses go a long way to discredit studies like Timothy Noah's *The Great Divergence*, in which he argues that America's growing inequality derives partly from a fundamental difference in economic interests between classes of workers.⁷²

One of Moretti's great insights is that when it comes to urban-development policy, there is no fundamental contradiction between the interests of college-educated workers and non-college-educated ones, in terms of opportunity and further job creation. Yet, there is a difference in disposable incomes and thus patterns of consumption, especially cultural consumption. Because of the aforementioned job multiplier, creative-type workers engender jobs for locals at all skill

levels. More important, though, local service jobs in metro areas with myriad creative types pay more than local ones in cities that are not innovation hubs. For instance, the average yearly salary of a high school graduate is substantially higher both in nominal terms and as a percentage of college graduate's salaries in metro areas with a high percentage of college graduates. In Madison, with 47 percent of workers holding a college degree, the average college graduate's yearly salary is \$61,888, while the average yearly salary for high school graduates in Madison is \$52,542. In a city with one of the lowest percentages of college-educated workers in America, say, Bakersfield, Calif., where only 14 percent hold a college degree, the average college graduate's yearly salary is actually *higher* than those in Madison (reflecting cost-of-living differences); however, the respective yearly salary of a high school graduate is 37 percent lower than in Madison, at only \$34,807.⁷³ On a macro level, the earnings of a high school graduate rise by 7 percent as the share of college graduates in a metro area rises by 10 percent, again highlighting the importance of place and the "networking effect" and debunking Friedman's flat-earth hypothesis.⁷⁴

There are several explanations for this trend. First, creative types tend to increase the productivity opportunities of their communities, both college-educated and non-college-educated alike. Second, a flexible and educated workforce allows technological adaptation and efficiency gains to be realized with less interruption. Finally, third, people learn partly through interaction, with spillover effects due to the proximity of creative types to high school graduates. Hence, contrary to some theories, low-skilled workers and high school graduates benefit from their proximity to college graduates and creative types, rather than being at a competitive disadvantage. Significantly, however, cities cannot simply rely on the attraction of outside talent, for such a development technique would merely displace current residents. Increasing the concentration of college graduates, and therefore all workers' average salaries, ought to be a combination of attracting outside talent and improving the lots of current residents.

Innovation hubs tend to spring up after a single individual moves an anchor company in a key industry to a specific location. This was the development paradigm in Silicon Valley, Hollywood and Seattle. In Silicon Valley, William Shockley started Shockley Semiconductor in 1955 in Mountain View, Calif. In just a few years, it generated offshoots like Fairchild Semiconductor, National Semiconductor and Intel. D.W. Griffith, a popular director of his time, put Hollywood on the map when he shot *The Birth of a Nation* there in 1915. And Bill Gates, of course, put Seattle on the map when he moved an inchoate company called Microsoft from Albuquerque, N.M., to Seattle in 1979. The key to sustainability is to remain an innovation hub at the forefront of the economy, rather than one clinging to an outmoded industry or unwilling and unable to adapt to the changing economy, like static Detroit or Rochester. Thick, specialized labor markets, specialized service providers that serve support roles for key enterprises (such as venture capital in Silicon Valley), and knowledge spillovers that accelerate growth and development also aid sustainability. By some of these measures, Milwaukee's location as a center of water technology is promising.

Paradoxically, manufacturing suffers from the type of innovation on which it relies. American manufacturing output is actually as large as China's, doubling its production since 1970. Yet, the American manufacturing labor force is smaller than it was in 1970, demonstrating that in manufacturing, as well as other areas such as agriculture, with innovation, production increases

as labor becomes less intensive.⁷⁵ The creative, service sector is just 10 percent of the labor force, but with its productivity, it has a disproportionate influence on overall job growth.

Not only does their sizable disposable income engender additional jobs, but the presence of creative types augments the capacities of the firms they join, and the latter have demand for local services, too. While Milwaukee is not a brain hub like San Francisco, San Jose or Austin, it is also not a former manufacturing star in decline, like Detroit, Akron or Gary. It is likely in a third category of metro areas positioned in the middle, whose fate is yet uncertain. Milwaukee has the base of its economy in manufacturing, with many companies operating within the creative and entrepreneurial economy, as well. This highlights the critical point facing Milwaukee regarding the future of its economy: to rest on the future of manufacturing, to chart an aggressive path forward as a city with a concentrated creative class in service sector jobs, or to find a comfortable middle ground where creative-class workers commingle peacefully and productively with manufacturers.

Manufacturing Lacks a Compelling Narrative

We have seen that creative types are more likely to consume cultural products and that manufacturing workers are more likely to lack the sort of disposable income associated with great multiplier effects in urban areas. Perhaps worse yet, the manufacturing sector not only lacks the macroeconomic fundamentals in its favor, but it also suffers from a lack of narrative and vision. The educational system has neglected the manufacturing industry by shuttering shop and tech classes and this neglect has seeped into parental opinions. Too many parents want their children to avoid manufacturing, viewing their child's entry into the field as "a failure on their part if their kids go into a skill set like that, which is really sad because there are high-paying jobs in manufacturing."⁷⁶ There is a clear disconnect: 70 percent of Americans believe manufacturing is the most important industry for a strong economy, but only 17 percent of people view manufacturing as a top career choice, according to a recent poll cited in the *Business Journal*.⁷⁷ This shows the dominance of the current paradigm, which holds that all or most high school graduates ought to aim for a four-year college degree, thereafter going straight into the creative economy. In May 2011 Congressional testimony, Mike Rowe, host of Discovery Channel's *Dirty Jobs*, which traverses the United States and documents skilled labor jobs, said, "In high schools, the vocational arts have all but vanished. We have elevated the importance of 'higher' education to such a lofty perch that all other forms of knowledge are now labeled as 'alternative.' Millions of parents and kids see apprenticeships...as vocational consolation prizes, best suited for those not cut out for a four-year degree."⁷⁸

The vicissitudes of the U.S. manufacturing industry, due to foreign competition throughout the last decade, have not helped with the image problem, and in fact contributed to false impressions of the industry among children and educators alike. Among others, these beliefs are that layoffs and company movements mean jobs are unavailable, or that manufacturing is not "cool" and lacks the sort of wages that can be "family-sustaining." Businesses have not collaborated with local technical colleges to the necessary extent to create the types of area skill certificates necessary to train employees and combat the natural disruptions that accompany employment in today's sometimes-volatile manufacturing industry. In contrast to Milwaukee, companies in Stuttgart, Germany, another manufacturing standout, hold periodic open houses for families with

children to see the inner workings of the factory and to answer questions they may have about such a career. Rather than an opaque relationship from a distance, as in Milwaukee, Stuttgart opens its doors and educates the community in a symbiotic relationship.

While important to our nation's history, exposé or journalistic accounts of factories may have a devastating impact on students' interest in the manufacturing sector. After all, the transfixed images they receive are ones from novels like Upton Sinclair's *The Jungle*, where sweltering, unsanitary conditions prevail, human rights abuses are rampant, and factories are staffed by workers notable more for their brawn than their brain. In sum, students, parents and teachers cannot feel and touch that this is a real industry and always has been in Milwaukee, or that a career in manufacturing, with the right skills, and likely a degree of some sort, is a viable career possibility.

Conclusion and Recommendations

The manufacturing industry will remain, as it has always been, an important part of Milwaukee's economy into the future, with a trajectory of around a 12 to 15 percent plateau of the metro area's employment and an upper bound of about 20 percent (although this level of employment in today's macroeconomic situation is highly improbable). This situates Milwaukee in a middle-ground position between being a city with declining manufacturing prowess and becoming a vibrant technology hub. There is room for Milwaukee to build off the old economy and prepare for the new one. Manufacturing will therefore remain a possibility for employment for Milwaukeeans. But the more germane question is will its presence coexist with a city looking to attract creative types to live and mingle? The answer is nuanced, and it depends on several factors. Manufacturing cannot elevate Milwaukee's profile to a creative-class city unless the city commits to do the following:

Raise and cultivate an educated middle class to facilitate greater cultural consumption

Milwaukee in the 21st century has the income distribution and demography of a 20th century city. In other words, it has a large class of people stuck in stagnant wages, none of whom gained the proper upward mobility to become solidly middle-class residents. In the 1990s, despite macroeconomic growth, wages stagnated because healthcare costs eviscerated them.⁷⁹

Milwaukee's income distribution is consistent with the sort of dumbbell shape that characterizes some industrial cities: a narrow middle class, an upper class of managers and creative types leading innovation and entrepreneurial activity, and a plentiful lower class yearning for upward economic mobility, rising wages and job security. Nearly 30 percent of Milwaukee's residents had yearly incomes below the federal poverty line in 2011 (the actual figure representing only a 0.1 percent decrease from 2010 figures); 41 percent of these were African-Americans and 35 percent were Hispanics, ranking second worst in African-American poverty in our city sample.⁸⁰ African-American household incomes in Milwaukee declined drastically over the decade from 2000-'10. Upwards of 90 percent of African-Americans live within the city limits, with little access to the suburbs or exurbs of the broader metro region due to poor public transportation availability.⁸² The creation of a sustainable post-industrial middle class has massive implications

for members of minority communities, many of whom gained employment historically in the declining manufacturing industry.

Milwaukee would do well to look at “majority-minority cities,” such as Atlanta, which has a thriving middle class composed of African-Americans, Hispanics, Asians and Caucasians. A recent article mused whether Atlanta has become the “Home to America’s Black Wealth.”

Middle-class African-American families in Atlanta have virtually the same mean income as their white neighbors, are largely suburbanites, and live in areas considered previously as “white areas.”⁸³ This offers a window into why Atlanta’s metropolitan area grew by 1.12 million people between 2000 and 2008, more than any metro area in the United States, notwithstanding Dallas.⁸⁴ By contrast, Milwaukee ranked 47th out of 50 major U.S. cities in the percentage of middle-class African-American homes.⁸⁵

Solving this will hinge largely on education and fixing Milwaukee schools, as well as containing the exploding costs of higher education. Former Mayor John Norquist went far in his advocacy for parental school choice and a proliferation of schooling options, as he was convinced of the benefits it would have for minority families and Milwaukee’s middle class.⁸⁶

Create a new narrative for manufacturing

Milwaukee’s manufacturing sector suffers from a national disease, i.e., it lacks a compelling narrative of what manufacturing employment is like and what it could be, how one can get there, and what one does once there. Recent “open house” events at a number of local plants, sponsored by the Fabricators & Manufacturers Association International, National Institute of Standards & Technology, and Manufacturing Extension Partnership, ought to be commended. Yet Milwaukee ought to do more to pique students’ interest. Students should not be left wondering what happens within the walls of their community businesses. A new narrative should not shy away from outlining the macroeconomic trends working against American manufacturing, but it should also note that one can combat the ebbs and flows of the industry largely through educational attainment. A recent poll found that 70 percent of the American people thought manufacturing was the economy’s most important industry, yet only 17 percent identified it as their top choice industry for a career. This is precisely the disconnect and undersupply of quality interest that we ought to address as a nation and that Milwaukee ought to address as a city with a sizable manufacturing presence. This new narrative should include graduates of high schools, technical colleges and traditional four-year bachelor’s programs, and it should emphasize education as a means to employment flexibility, adaptability and resilience in the event of an economic downturn. Milwaukee, specifically, should work to connect graduates of four-year bachelor’s programs with the industry, marketing it as a place of forward-looking and high-tech innovation, especially on the managerial and entrepreneurial side of the fence — precisely where creative types are likely to reside. This new narrative must present itself to all age groups and classes, students and parents alike. “Back to school” programs may suit those employed currently in manufacturing and requiring skills updates.

Attract and retain creative types

Milwaukee has creative types working in various industries. However, by no means is Milwaukee a technological hub of innovation like Seattle, San Francisco or Austin. Looking at the organic and spontaneous development of those innovation hubs, particularly in the decision of one or two major investors to move a firm's headquarters, Milwaukee can learn from this paradigm. Milwaukee's move to attract the leading talent in the water technology industry is a prudent gamble, but this green-technology industry is untested and nascent. Milwaukee would do well to make a major push to attract even a regional office (of several hundred workers) from a tried-and-tested company in a proven industry, such as Google, Facebook, Amazon, eBay or the like. This could spur the movement of other creative types to the Milwaukee metro area, as well as multiply the number of capital investment firms (which are often attracted to high-tech businesses because of their rate of profit and potential for growth), much as Microsoft's move to Seattle created a concentrated cluster of high-tech innovators there. It could also help Milwaukee retain many of its own creative types from its flagship state university, often lost to more creative neighboring metropolises, like Minneapolis/St. Paul and Chicago, and beyond. (A 2008 WPRI study showed that only 20 percent of University of Wisconsin-Madison graduates call Milwaukee home, despite a large portion of graduates who attended Milwaukee area high schools.)⁸⁷ This highlights that Milwaukee cannot simply rely on the attraction of outside talent, for such an urban development strategy would merely displace current residents, shift populations and neglect Milwaukee's residents in greatest need. Increasing Milwaukee's concentration of college graduates, and therefore all workers' average salaries, ought to be a combination of attracting outside talent (including creative types in Wisconsin *not* living in Milwaukee) and improving the lots of current residents via education reform and access to higher education. The only way Milwaukee will boost its cultural consumption vis-à-vis other cities is by attracting and cultivating more creative types with disposable incomes conducive to bohemian consumption. This key component of urban development is weak in the Milwaukee metro area. It is obvious that recommendations one and three are mutually reinforcing.

Create and invest in skills certificate programs for workers

The furthering of skills certificates, obtainable through one- or two-year courses at area technical schools, will be imperative to increasing the number of manufacturing jobs in Milwaukee that qualify as "very high-tech" or "moderately high-tech." In some ways, Milwaukee must bend to the contours of broader macroeconomic fundamentals, which point decisively to the dominance of so-called STEM jobs — those related to science, technology, engineering and math. A Georgetown University study predicts that between 2008 and 2018, the need for workers with some kind of post-secondary training or education will grow by 139,000 jobs in Wisconsin, while jobs for high school graduates will grow by a miserly 52,000.

By 2018, fully 61 percent of all jobs in Wisconsin will require some sort of post-secondary education, skills training or more.⁸⁸ An increase in graduates of post-secondary or skills programs will mean greater job security in the event of an economic downturn. Greater job security is a prerequisite for any industry poised to serve as the bedrock of an urban area's economy. The harsh reality of today's economy is that there is increasingly little room for the unskilled: "Virtually everyone whose job is touched by computing...[is] forced to find new, more efficient ways to learn as retooling becomes increasingly important not just to change careers, but simply to stay competitive on their chosen path."⁸⁹ What's more, more graduates of

certificate programs could lead to higher incomes, in turn affecting consumption patterns in the city for the better. The expansion of such programs will require input from both employers and experts alike, and a greater and more effective partnership between manufacturers and higher education institutions in training schemes and responsibilities.⁹⁰ As is the case with many other recommendations, *much of the solution turns on education.*

Pay appropriate attention to old models of urban development

This paper analyzed the dominance of the new formula for urban success, centered largely on the attraction of talented, creative types to places occupied by like-minded people and filled with opportunities for cultural consumption created by urban density dynamics. Perhaps it goes without saying, but the new formula for urban success is more of an addendum to previous formulas than it is a replacement. Attraction of skilled residents through Florida's "three Ts," the arts, or a "happening" downtown ought not replace such priorities as safe streets, efficient commutes and ample educational opportunities. Further, the new formula for urban success appeals differently and with a different intensity to different age demographics of the population. While the young may value, above all, the opportunity for cultural consumption, the middle-aged professional with children may value reliable public schools, above all, followed only then by consumer opportunities. As Glaeser notes, "there are roughly three times as many people in their 30s, 40s and 50s as there are in their 20s, so it would be a mistake for cities to think that they can survive solely as magnets for the young and hip."⁹¹ The point is that emphasis on the new approach for urban success should not lead to neglect or supplanting of older, more proven strategies. After all, all the theaters in Milwaukee cannot entice parents to keep their children in a failing public school system, just as a variegated array of ethnic restaurants cannot attract residents if crime is visible and rampant. Indeed, in cities, "failures seem similar while successes feel unique."⁹² Successful cities have a formula for success that hews closely to the precepts of the new formula (while not neglecting key tenets of the old formula), but always unfolds in its own idiosyncratic and cultural space. Milwaukee can and ought to do the same.

In sum, Milwaukee is not somehow worse off for its manufacturing sector. Its manufacturing base, though beleaguered by both local and macroeconomic trends, has brought much to the city and continues to bring benefits to the city. Milwaukee's manufacturing industry may remain the base of its economy, and will remain the base of its economy for a time to come. To use a metaphor, manufacturing remains the base of Milwaukee's economic tree, but the city would do well to foster an ever-increasing number of roots shooting off from the base, cementing them firmly in the city and diversifying its sources of revenue. The more roots the city builds in new sectors of the economy, the sturdier the base of the economic tree becomes. Currently, the largest of Milwaukee's roots shooting off from its economic base are in the education and health sectors, making up about 16 percent of the city's employment collectively. Milwaukee should increase the percentage of its employment within other areas known for employing college graduates like the professional, technology and science industries, which employ a paltry 5 percent of Milwaukee's population. Financial services, at less than 7 percent of Milwaukee's employment, could grow with any rise in the aforementioned, too.⁹³ The historical developments of Silicon Valley, Seattle and Austin demonstrate that, as is often the case with capital-intensive industries, growth in the professional, technology and science fields often precedes the sprouting of financial firms and start-ups trying to capitalize on lucrative opportunities for entrepreneurial

investment. Above all, remaining sedentary and complacent about the future of the manufacturing industry is an unacceptable economic development strategy. Diversification of Milwaukee's economy ought to be a key strategy moving forward.

It is clear that Milwaukee is at a critical juncture in the development of its economy. Coming out of the Great Recession, Milwaukee needs to decide the future of its city, beyond the comforting façades of public works, verdant green spaces and redevelopment initiatives in the Historic Third Ward. It faces an uphill battle in many regards, but nothing is inevitable and with the proper mix of policy and leadership, Milwaukee can revitalize its prospects. The biggest challenge facing the city's economic minds is how to define the future of Milwaukee's economy concerning the manufacturing sector.⁹⁴

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Biography

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