

The economic fortunes of small industrial cities and towns: manufacturing, place luck and the urban transfer payment economy

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1 Size matters: economic transformation and the importance of critical mass

As the industrial revolution spread across the United States during the 19th century and the beginning of the 20th, it spawned a handful of outsized manufacturing centers such as Detroit and Pittsburgh, which became global icons of American industrial might. At the same time, it created hundreds of smaller cities and towns, equally dependent on manufacturing not only for their prosperity, but for their very existence. They range from still-important regional centers like Allentown, Pennsylvania or Dayton, Ohio to far smaller places like the factory towns strung like beads along the Monongahela and Ohio Rivers.

As larger cities like Pittsburgh or Baltimore have revived over the past roughly two decades, many commentators have noted the extent to which smaller industrial cities have lagged their larger counterparts in terms of revival and regrowth (Longworth 2008, Tumber 2012, O'Hara 2012). Although the reasons for larger cities' revival are complex and multifaceted, three central themes appear to be consistently significant: the role of global educational and medical institutions (Mallach 2018), the emergence of the 21st century city as a center of consumption (Clark 2011), and the in-migration of university-educated millennials (Moos, Pfeiffer and Vinodrai 2017).

Since the 1950s, the share of the United States economy devoted to health care, and to

a lesser degree to higher education, has grown rapidly. In 1950, the United States spent \$12 billion on health care or \$117 billion in 2014 dollars. In 2014, with a national population slightly more than double what it was in 1950, we spent just over \$3 *trillion* as a nation for health care, more than 25 times what we spent in 1950. Of that total, nearly \$1 trillion went for hospital care. Over the same period, spending on medical research, although a small part of the total, went from under \$1 billion (in 2014 dollars) in 1950 to \$46 billion in 2014, almost 50 times what it was in 1950. The growth in higher education spending, although not quite as precipitous, has outpaced population growth by a factor of more than four.

While economic changes have put large industrial cities at a competitive disadvantage with respect to manufacturing, decisions made long ago to found the institutions that have become today's global centers of health care and higher education placed them in a strong position to take advantage of the transformation of higher education and health care. Growth in institutions such as Johns Hopkins in Baltimore, the University of Pittsburgh (Pitt) and the University of Pittsburgh Medical Center (UPMC), and the Cleveland Clinic has fueled the revival of those cities. The institutions making up these cities' eds and meds sector are not just larger, but *qualitatively* different from the colleges and community hospitals of smaller cities.

Eds and meds in a city like Pittsburgh are a global industry and the city's dominant economic engine. Tens of thousands of students from all over the world gravitate to its universities, while UPMC is the largest private-sector employer in the state of Pennsylvania with a \$13 billion operating budget. These are export industries in the truest sense, attracting billions of dollars from the outside to fuel the local economy, spinning off cutting edge biotech and IT businesses and drawing others, while their students and well-paid employees fuel

commercial spending, entertainment and residential revitalization.

The small industrial city of Canton, Ohio also has an eds and meds sector, but it is local. The city has two community hospitals, and Malone University, a Quaker-oriented institution with fewer than 2,000 students. The hospitals meet the health care needs of the city and nearby communities, while most of Malone University's students come from the surrounding region, and only half live on campus. These and their counterparts in similar small cities are important community assets and provide some jobs, but add little more to the city's economy. From an economic perspective, if Pitt is New York's Central Park, Malone is a community playground.

The University of Pittsburgh has over 11,000 full-time employees compared to Malone's 250, and an annual operating budget of \$2.1 billion compared to \$32 million. Not only do research universities have larger student bodies, faculty and administrative staff, but their faculty and staff make far more; the average full professor at Yale makes nearly \$200,000 for her nine months work, compared to \$65,000 for her counterpart at Malone University. Johns Hopkins University spent \$2.3 billion on R&D in 2015, while the Pittsburgh duo of Pitt and Carnegie Mellon spent \$1.1 billion. By comparison, even large commuter universities generate little research activity; Youngstown State University's student body is half the size of Johns Hopkins', but YSU spent only \$3.3 million on R&D in 2015, or slightly more than *one-thousandth* as much.

As urban economies have been remolded by eds and meds, the onetime industrial city has been reinvented as a center of consumption; cities have increasingly become, "entertainment machines" (Clark 2011), or in Michael Sorkin's more pejorative phase, "theme

parks” (1992). Cities are increasingly places where wealth is spent rather than created, and perhaps should be seen more as “consumption machines” than as “entertainment machines,” growing back by providing the services and amenities sought by a consumption-oriented society. As bluntly put by Glaeser, Kolko and Saiz (2001), “attractive cities will thrive; unpleasant cities will decay.”

Amenities, which can be anything from a scenic waterfront to a cluster of theaters and restaurants like Cleveland’s Playhouse Square, are not merely the product of consumption demand, but are themselves generators and multipliers of demand, by drawing people with money to spend and potential wealth-creating skills to cities. A critical part of this is what Clark calls the “scene.” When enough amenities cluster in one area to form a critical mass, they create scenes. Scenes draw people together to share activities, to behave in different but specific ways, to participate in a distinctive shared atmosphere, and define themselves by sharing the scene with other like-minded people. Scenes also offer young unattached people the greatest opportunity to make friends and identify potential romantic partners.

Many factors contribute to drawing the millennial generation to these cities, but the presence of a ‘scene’ is a critical element. The millennials who set the pace for urban revival cluster closely in areas that offer the amenities that most resonate with their interests and life style. These are the areas that not only have the restaurants, cafes and music venues, but also have high density and lively mixtures of different activities on the same block, or even in the same building. It is not without reason that the reinvention of historically non-residential downtowns as heavily residential mixed-use areas is a prominent distinguishing characteristic of the urban revival (Birch 2009).

All of this is dependent on the creation of critical mass at various levels; or, put differently, the ability to create an agglomeration economy; or, as defined by Glaeser (2010), “the benefits that come when firms and people locate near one another together in cities and industrial clusters.” Ultimately, all of the complex synergies of economic transformation, consumption, “scenes” and selective in-migration, are dependent on the benefits of agglomeration, to create a critical mass of amenities as well as the level of knowledge spillovers and thick labor market needed to create and sustain a post-industrial economy (Moretti 2012).

Clearly, to the extent that critical mass is a function of size, small cities are at an inherent disadvantage in attempting to compete with larger cities on the basis of the same assumptions about revival grounded in the interwoven dynamics of a strong eds and meds sector, a strong consumption economy, and equally strong millennial in-migration. While there are exceptions, as I will discuss in the next section of this paper, they are relatively few and fairly easy to identify.

Their disadvantage is not necessarily attributable, as O’Hara suggests, to their being “specifically designed to not have the kind of diversity and vibrancy that Jane Jacobs points to as essential to urban growth (2012, p26).” That is certainly true of the mill towns of the Monongahela Valley and elsewhere, but not of cities like Dayton, Ohio or Trenton, New Jersey, which in their industrial heyday contained vibrant downtowns and neighborhoods, strong cultural and educational institutions, and substantial social and economic, as well as racial and ethnic, diversity. Their disadvantage lies in their inability to aggregate the necessary activities – institutional, economic, cultural or otherwise – capable of creating sustainable critical mass. What that means, in turn, is that revival strategies grounded in what might be called the

“creative class” strategies of larger cities are likely to yield far more limited results in most smaller cities.

2 Alternative models of small city economic vitality

Ultimately, the question that must be addressed is, if small cities cannot find a path to success by emulating the large city revival model that I have summarized above, what paths to success are available to them? While I will end this paper with an attempt to frame a broad response to that question, if not exactly an answer, it serves as a useful frame for examining two types of small city that appear to show, at least for the moment, considerable economic vitality. I refer to these two city types as production cities, and, for reasons that will become apparent, well-positioned cities.

a Production cities

Despite some of the more alarmist reports, manufacturing in the United States is far from dead. although a smaller part of the US economy than in its heyday, in 2013 manufacturing employed roughly 12 million people nationally, or nearly 9% of the US workforce, and generated \$2.1 trillion in GDP in 2013, or 12.5% of total national GDP (Scott 2015). A significant part of this activity has historically taken place in small towns and cities, and continues to do so, arguably more so than in larger cities, whose early 20th century steel mills and auto plants often became the dinosaurs of the changing economy.

The significance of manufacturing can be seen clearly by looking at Ohio. The manufacturing sector employed 25% or more of the workforce in 25 of Ohio’s 88 counties in 2015. Those counties’ economies were all heavily dependent on manufacturing. That, in itself,

proves nothing about the economic vitality or well-being of these counties or their residents. A closer look, however, at these counties may offer some insights into that question.

All 25 are small city, small town or rural counties, although four fall within the penumbra of a larger city's metropolitan area. The largest central place in any of the 25 counties, Findlay, has a population of slightly more than 40,000; in 10, the largest central place had a population under 10,000. Table 1 shows salient features for the 15 counties which contained a central place with a population over 10,000. The table suggests that on the whole, these counties and their small cities are doing well. The 2016 unemployment rate was below the statewide average in 12 of the 15 counties, while median household income was above the statewide average in 10 of the 15, and only significantly (>10%) below in a single county. Even more notably, the family poverty rate was lower than either the state or national rate in 14 of the 15 counties. Although the number of manufacturing jobs declined by 23% nationally between 2002 and 2015, the rate of decline in these 15 counties was 10%, less than half of the state or national rate over the same period; the number of manufacturing jobs actually increased in four counties.

Greenville and Darke County, located in Western Ohio along the Indiana border, could be considered representative of this group in terms of its industrial mix. As shown in Table 2, the county's principal manufacturers, all but two of which are located in Greenville, are highly diversified, and represent a mix of direct consumer products (small appliances, awards, dry ice) and supply chain products (automotive parts and coatings, electric motors, oil filters). In a vote of confidence for the area, the Midmark Corporation announced that it would build its new technology center in 2018 in Versailles, adding another 97 jobs to the area (Chalmers 2017).

TABLE 1: PRODUCTION COUNTIES IN OHIO

COUNTY	Principal City/town	Principal city/town population	% of all jobs in manufacturing	Median household income	Unemployment rate	Manufacturing jobs		% change 2002-2015
						2002	2015	
Darke	Greenville	13,227	25.1%	\$47043	4.1%	4101	4486	9.4%
Logan	Bellefontaine	13,370	25.9%	\$51136	4.2%	7444	5048	-32.2%
Defiance	Defiance	16,494	26.1%	\$50822	4.8%	6037	3993	-33.9%
Union	Marysville	22,094	26.3%	\$71282	3.8%	11734	8450	-28.0%
Marion	Marion	36,837	26.5%	\$43557	5.0%	8125	6320	-22.2%
Miami	Troy	25,058	27.2%	\$53432	4.3%	12503	11356	-9.2%
Hancock	Findlay	41,202	27.9%	\$51604	3.6%	11262	12296	9.2%
Madison	London	10,058	28.1%	\$58326	3.8%	3617	4125	14.0%
Van Wert	Van Wert	10,846	28.5%	\$50547	4.0%	2678	2958	10.5%
Huron	Norwalk	17,012	28.6%	\$48838	6.5%	9394	5795	-38.3%
Wayne	Wooster	26,119	29.9%	\$51363	3.9%	13815	13669	-1.1%
Sandusky	Fremont	16,309	36.1%	\$49032	5.5%	10497	9741	-7.2%
Champaign	Urbana	11,793	36.4%	\$53673	4.5%	4074	3987	-2.1%
Shelby	Sidney	21,229	44.4%	\$56169	4.1%	14242	12024	-15.6%
Mercer	Celina	10,400	46.0%	\$55220	3.2%	3653	6297	72.4%
TOTAL						123176	110545	-10.3%
Ohio				\$50674	4.9%	884923	676315	-23.6%
US				\$55322	7.4%			-22.7%

SOURCE: On-The-Map; 2012-2016 5 year American Community Survey; Bureau of Labor Statistics

TABLE 2: PRINCIPAL MANUFACTURERS IN DARKE COUNTY, OHIO

Company name	Product	Location	Employees
Whirlpool Corp.	Household appliances	Greenville	1200
Greenville Technology	Plastic automotive parts	Greenville	865
Midmark Corp.	Medical, dental and veterinary equipment	Versailles	820
FRAM group	Oil filters	Greenville	450
PolyOne Designed Structures & Solutions	Specialized polymer materials	Greenville	170
Norcold, Inc.	Recreational refrigeration (Small refrigerators for recreational vehicles)	Gettysburg	166
BASF Corp.	Automotive coatings	Greenville	154
Neff Motivation	Awards	Greenville	116
Continental Carbonic	Dry ice	Greenville	116
Ramco	Electric motors, stators and rotors	Greenville	114

SOURCE: Darke County Economic Development

This is a very different model from the traditional single-industry company town. Cities like Greenville or Celina, in Mercer County, are not wealthy, but suggest solid economic well-being, with few vacant storefronts in their well-maintained, often carefully restored, traditional downtowns, and well-maintained older houses on tree-lined streets. While both cities boast at least one coffee place where one can buy a latte, reflecting how much espresso drinks have become a mainstream taste, most downtown stores cater to a population that is strongly working class, but not poor. Moreover, challenging the assumption that prosperity is dependent on a college degree, the percentage of adults in 14 of 15 production counties (the exception being Union County, which is becoming an exurban adjunct of Columbus) with a bachelor's or higher degree is significantly below either statewide or national levels.

Although limited in scope, this brief description strongly suggests that, for these small cities and counties, manufacturing not only remains viable as a business model for the local economy, but sustains a healthy level of prosperity for the people of the community. This model is radically different from the far more widely publicized urban revival model of larger

cities. To what extent it is a model that could be replicated elsewhere, and under what conditions, is a more complex question beyond the scope of this paper, but one well worth exploring both as a research question and as an important concern of public policy.

b Well-positioned cities

Well-positioned cities represent another model for smaller industrial cities. While the economic vitality of production cities is based on indigenous export-oriented manufacturing production, that of well-positioned cities is based on their good fortune in being situated in a strong region or close enough to a major outside source of economic activity to build a viable local economy around their regional location, a variation on what Reese and Ye (2011) refer to as “place luck”; or, more rarely, to have inherited from previous generations an institution or facility of such magnitude or recent growth that it provides the city with a strong economic base by itself. While these cities are fortunate in that sense, they remain challenged in other respects.

The latter category need only be addressed briefly, in that only one unequivocal example comes to mind, that of New Haven, Connecticut. New Haven was historically a classic industrial city, in which Yale University played only a modest, peripheral economic role; well into the 1960s “beyond frequent scrapes between the students and the towns-people, Yale had little to do with the city around it (Powledge 1970, p25)”. Today, as a quintessentially global institution, Yale dominates New Haven’s economy. The university and its affiliated hospital employ nearly 25,000 people or roughly one out of every three people who work in New Haven, while the university’s 12,000-strong student body accounts for one out of every eleven city residents. When one factors in the effects of the university’s spending, the dollars spent by

its workers and its student body, and the thousands of jobs and hundreds of businesses that spending supports, it is probably not an overstatement that Yale is responsible for three-quarters of the city's economy.

No other small industrial city houses such an outsize institution capable of single-handedly driving the local economy to such an extent, although many, including Muncie, Bethlehem and Albany, have substantial educational institutions that contribute significantly to their economic vitality. Indeed, the small industrial cities that appear to be most successful economically are those that combine proximity to a strong regional economy with strong local institutions, albeit of a more modest scale than Yale.

Hollingsworth and Goebel (2017) ranked a sample of small and medium sized industrial cities on a variety of indicators. The five cities that scored highest were Grand Rapids, Michigan, Worcester and Lowell, Massachusetts, Bethlehem, Pennsylvania and Albany, New York. All five can readily be characterized as well-positioned cities. Grand Rapids, which at nearly 200,000 population may or may not be considered a small city, not only has a strong manufacturing base but anchors an economically strong region; GDP growth in the Grand Rapids-Wyoming Metropolitan Area from 2011 to 2016 was nearly 36%, compared to the national level of 21% (Bureau of Economic Analysis 2017).

Both Worcester and Lowell are within the Boston metropolitan area, which had the 9th highest rate of GDP growth from 2011 to 2016 of 382 metropolitan areas. Both cities have regular commuter rail service to Boston, as well as being the home of major higher educational institutions, particularly Worcester, with a strong array of institutions led by nationally-known Clark University. Bethlehem, in a moderately strong metropolitan area, benefits from its

proximity to New York City – which provides the principal market for its casino – as well as the presence of Lehigh University. Finally, Albany is not only also arguably close enough to New York to benefit from its economic strength, but is the capital city of New York State, hosting a large state government workforce, as well as containing one of the largest public universities in any small industrial city, the University at Albany, with an enrollment of nearly 18,000 students.

This brief recitation should not be taken to suggest that success was inevitable for these cities. In each case, albeit to varying degrees, they have pursued economic development strategies which have enabled them to capitalize on their locational and other assets, notably Lowell's successful reuse of historic industrial buildings or Bethlehem's highly productive repurposing of the closed Bethlehem Steel plant, once the mainstay of the city's economy. In contrast to the production cities discussed earlier, however, the elements of revival for the well-positioned cities are those of the large industrial cities albeit writ smaller – eds and meds as the principal economic base; attraction of a well-educated younger population, including in Lowell's case, significant numbers of Boston commuters; and growth of the consumption economy, featuring arts, culture and entertainment, as well as residential redevelopment of downtowns. It is their position within their regional setting, however, which enables them to succeed while others cannot.

Despite their relative success, all of these cities continue to confront the challenges of America's older industrial cities, including entrenched poverty and inequality, substandard housing and distressed neighborhoods. That said, their growth at least gives them the potential to address those issues, a potential which may be largely absent elsewhere. It is notable that Bethlehem today, despite the loss of its long-standing role as a steelmaking city, has a poverty

rate only modestly higher, and an unemployment rate lower, than the national average.

Finally, while the replicability of the production model is uncertain, the positioning model, being more a matter of fate than design, would appear to offer even less replicability potential. That raises the central question of this paper; what happens to those cities that have lost their historic industrial role, but cannot follow either model, or any other idiosyncratic route to economic revival?

3 Small cities and the urban transfer payment economy

A few miles south of the central Italian city of Ravenna, a magnificent Byzantine basilica stands in the midst of fields and pastures. It was built in the heart of the now long-vanished city of Classe, which was a major naval base under the Roman emperors, and became one of the most important commercial ports in the Mediterranean basin from the 5th to the 7th centuries, when the basilica was constructed (Augenti and Boschi 2012). Although Classe suffered the usual depredations during the years following the end of the Roman Empire, it was ultimately destroyed by Mother Nature. Located at the southern edge of the Po River delta, “between the 7th and 9th centuries the port was gradually buried, as a result of the combined action of the sea and the hinterland’s rivers [...] The ancient Classe disappeared from the surface, becoming part of the countryside around Ravenna.” (Augenti and Boschi 2012, p3). The only remnant of the city today is the church, now four miles from the seacoast.

In ancient times, cities like Classe that lost their economic purpose as ports, trading centers, or mining towns simply disappeared. Today, in the United States as in other developed nations, that does not happen; instead, their historic economic base has been replaced by a

FIGURE 1: THE BASILICA OF SANT'APOLLINARIS IN CLASSE



SOURCE: Google Earth

system of financial transfers which sustains a local population without regard to its economic activity in the conventional sense, which I call the urban transfer payment economy. I will explore its features and effects in four small cities that might be considered exemplars of this economy to provide a sense of its ramifications, as distinct from trying to present a detailed economic model of its workings, which would be a massive undertaking for which I am not, in any event, well-equipped.

a Describing the urban transfer payment economy

Transfer payments, mostly but not entirely from the public sector, are redistributive payments made by sources outside a local jurisdiction to provide social and economic support within that jurisdiction, either through direct income supports to residents such as Social Security or SNAP (Food Stamps), through payment for services those residents need but cannot afford to pay from their own resources, such as Medicare, or by subsidizing institutions that bring outside funds into the jurisdiction, such as public universities or military bases. In this

broad definition, I also include funds coming from outside the jurisdiction to support local government services, including county tax revenues collected from outside the city and spent in the city, as well as state and federal aid to local governments. A simplified model of the urban transfer payment economy is shown in Figure 2.

FIGURE 2: A SIMPLIFIED MODEL OF THE URBAN TRANSFER PAYMENT ECONOMY

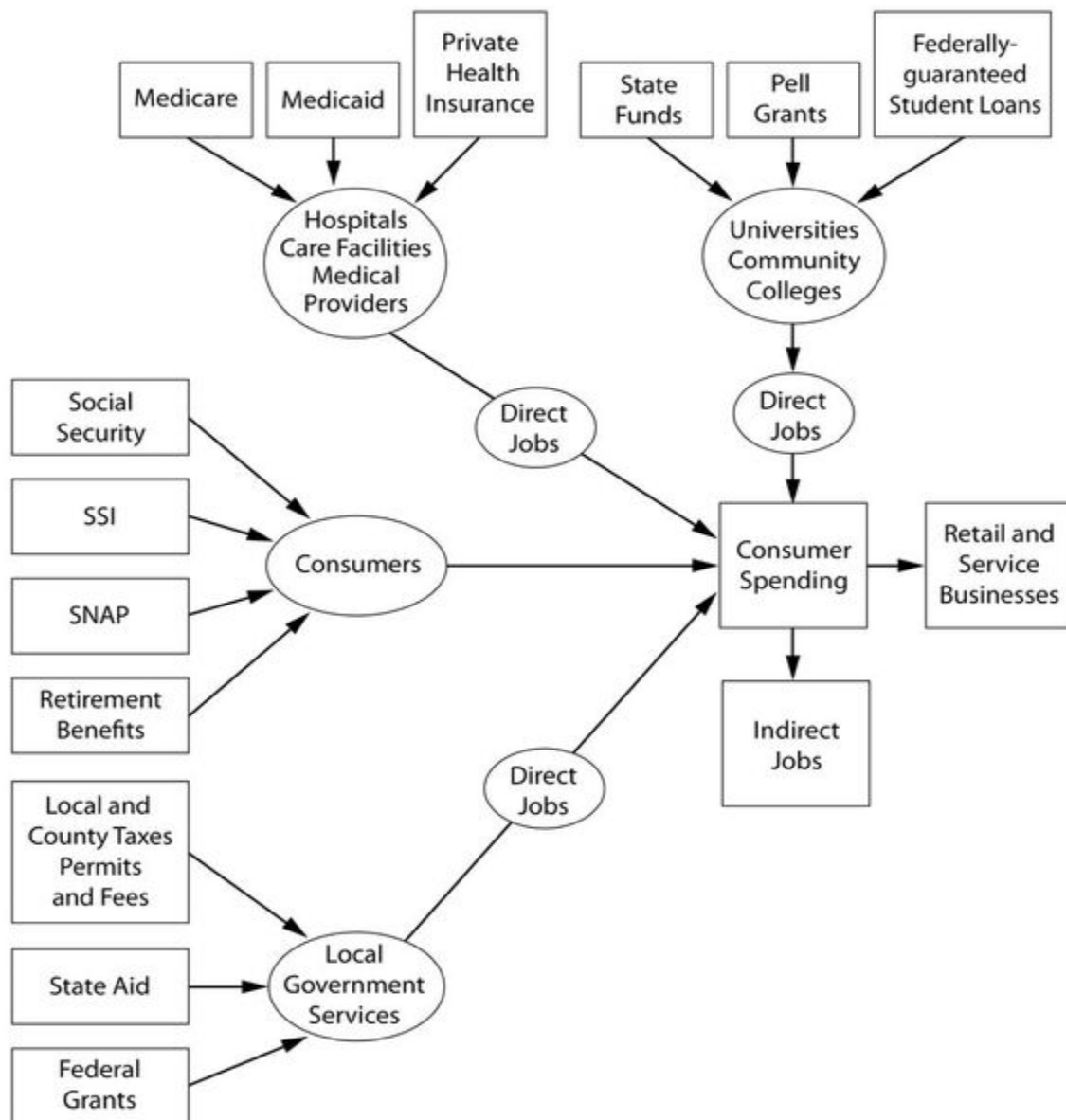


TABLE 3: PRINCIPAL COMPONENTS OF THE URBAN TRANSFER PAYMENT ECONOMY

CATEGORY	ELEMENT	DIRECT IMPACT	INDIRECT IMPACT
INCOME SUPPORT	Social security	Consumer spending	Earnings of local businesses Salaries and wages of workers in retail and services
	Other retirement benefits	Consumer spending	
	SSI, TANF and other public assistance benefits	Consumer spending	
	Housing Choice Vouchers	Rental spending	Earnings of local landlords Investment in local real estate Landlord payments to contractors and vendors
	SNAP	Food spending	Earnings of local businesses Salaries and wages of workers in retail and services
SUPPORT FOR GOVERNMENT AND SOCIAL SERVICE SECTOR	Countywide taxes, fees and other revenues	Salaries and benefits for government employees Payment for delivery of public services and capital investment	Consumer spending Payment to contractors and vendors
	State and federal grants	Salaries and benefits for government and non-profit sector employees and contract service providers Payment for delivery of public services and capital investment	Consumer spending Payment to contractors and vendors
SUPPORT FOR HEALTH CARE SECTOR	Medicare	Salaries and benefits for employees and contract service providers in health care Capital investment in and maintenance of health care infrastructure	Consumer spending Payment to contractors and vendors
	Medicaid and CHIP		
	Blue Cross/Blue Shield and other private insurance		
SUPPORT FOR HIGHER EDUCATION SECTOR	Pell grants	Salaries and benefits for higher education employees and contract service providers Capital investment in and maintenance of higher education infrastructure Student spending	Consumer spending Payment to contractors and vendors
	Federal student loans		
	State operating and capital support		
	Federal grants		

Direct payments to individuals provide them with purchasing power which they use to consume goods and services, while payments that flow to hospitals, universities and local government bodies translate into jobs for doctors, teachers and public officials, as well as large numbers of support personnel and vendors, which in turn drive consumer spending and indirect employment, although – since high-level employees as well as the proprietors of urban businesses often live in suburban areas – much of this leaks out of the urban jurisdiction into which the resources flow. Figure 3 shows the principal components of the urban transfer payment economy, and how they affect the local economy.

Of these sectors, income supports are most widely characterized as transfer payments. The level of income supports in the four small cities is shown in Table 4 below, along with national data for purposes of comparison. A far larger percentage of households in these four cities rely on Income supports, which make up a far larger share of aggregate household income, than nationally. Most dramatic, perhaps, is the extent to which specific-purpose supports, in the form of SNAP benefits and housing subsidies, pervade these cities' economies; roughly 2 of 5 households receives SNAP benefits, and roughly half of all renter households receive housing subsidy, either through a Housing Choice (Section 8) Voucher or by occupying a housing unit built under a public sector subsidy program such as public housing or the Low income Housing Tax Credit. Even more significantly, nearly 2 out of 3 households with children in these cities receive SNAP benefits. This highlights the extent to which poverty, low wages and unemployment, as I will discuss later, are a hallmark of the urban transfer payment economy.

It is relatively easy to map income supports, because detailed small area data, albeit with a hefty margin of error, is provided by the American Community Survey. No similar source

provides equivalent small area data across jurisdictions and institutions for other types of transfer payment, so that one must rely on illustrative examples for much salient information.

Fortunately, a variety of illustrations are available.

TABLE 4: INCOME SUPPORTS IN UNITED STATES AND FOUR SMALL CITIES

	United States	Saginaw MI	Youngstown OH	Chester PA	Johnstown PA
% of households with social security income	30.2%	36.1%	38.8%	34.8%	42.5%
% of households with SSI	5.4%	15.8%	13.9%	13.6%	17.1%
% of households with public assistance or SNAP	13.7%	43.6%	39.6%	41.2%	40.0%
% of households with other retirement income	18.3%	20.9%	20.7%	18.2%	21.3%
% of households receiving SNAP benefits	13.0%	42.6%	38.9%	40.5%	38.8%
% of households with children <18 receiving SNAP benefits	21.6%	60.2%	67.9%	61.4%	62.2%
Number of households with Housing Choice Vouchers	2265478	1075	1433	1224	468
Number of households in subsidized housing	5220819	3737	4504	2278	1829
% of all households receiving rental subsidy (see note)	6.4%	24.8%	22.0%	30.2%	24.0%
% of all renter household receiving rental subsidy (see note)	17.5%	63.0%	50.6%	48.1%	47.3%
Share of aggregate household income derived from each source					
Social Security	7.1%	15.3%	15.3%	12.6%	18.8%
SSI	0.7%	4.2%	3.4%	3.4%	4.3%
Public Assistance	0.1%	0.4%	0.8%	0.6%	0.6%
Other retirement income	5.8%	10.3%	10.9%	7.1%	9.0%
All sources above	13.7%	30.2%	30.4%	23.7%	32.7%

SOURCE: Income and SNAP data from 2012-2016 5 year ACS; housing choice vouchers from US Department of Housing & Urban Development (through PolicyMap); subsidized housing from National Housing Preservation Database

NOTE: Many residents of subsidized housing projects also hold vouchers, resulting in a large but impossible to determine duplication of the total number of units in the two categories. As many as 1/3 to 1/2 of all vouchers may be duplicated. As a result, the percentages shown in the table inflate the share of subsidized housing in the population and in the rental housing stock, probably by 5 to 10%.

As Table 5 shows, the three transfer payment driven sectors - health care, education and government - make up a disproportionate share of the jobs (compared to statewide levels)

in each city. Local government is something of a special case, since, other than inter-governmental transfers and grants-in-aid, local government revenues derive from the productivity of the local economy; in other words, income taxes are a function of people having income, property taxes a function of property having value, etc. Thus, local government both supports the transfer payment economy by drawing federal and state funds, and is a beneficiary of it, by virtue of the taxes it collects from those supported directly by that economy.

TABLE 5: SHARE OF PRIMARY JOBS BY SECTOR 2015

CATEGORY	Saginaw	Youngstown	Chester	Johnstown
Health care and social assistance	37.8%	26.1%	20.5%	26.1%
Educational services	3.1%	11.7%	20.0%	3.6%
Public administration	4.8%	7.8%	6.5%	3.8%
Total	45.7%	45.6%	47.0%	42.7%
Michigan	27.5%			
Ohio		26.6%		
Pennsylvania			29.5%	29.5%

SOURCE: On-The-Map

The scale of intergovernmental transfers is largely a function of state policy vis a vis local government. New Jersey is particularly generous in that respect; state, and to a much lesser extent, federal funds cover \$117.2 million or 53% of the municipal budget of Camden, the state's most distressed city, and \$388 million or 97% of the budget of the local school district. Put differently, in what is admittedly something of an apples and oranges comparison, the \$500+ million that the state and federal government spend to support local government services and public schools in Camden amounts to more than 50% of Camden residents' aggregate household income. Chester, Pennsylvania, gets far less direct state aid, but \$12

million or 27% of its general fund revenues come from its share of state gambling taxes levied on Harrah's Philadelphia Casino and Racetrack, which, notwithstanding its name, is in Chester, not Philadelphia.

Public non-research colleges and universities in smaller industrial cities, which tend to be the majority of higher education institutions in such cities, depend heavily on state and federal resources. With nearly 13,000 students and a 145 acre campus close to Youngstown's downtown, Youngstown State University (YSU) is the largest single contributor to the city's economy. YSU is a product of the transfer payment economy. While state appropriations cover a significant part of its expenses, its largest single source of operating revenue is the federal government, largely through the federal direct student loan program, which covers the majority of its students' tuition costs (Table 6). It is hardly an exaggeration to suggest that but for federal

TABLE 6: YOUNGSTOWN STATE UNIVERSITY REVENUE BREAKDOWN FOR 2015-2016 FISCAL YEAR

SOURCE	CATEGORY	AMOUNT (000)	% OF TOTAL REVENUES
State of Ohio	Operating support	\$ 41,814	24.0%
	Capital support (note 1)	\$ 8,539	4.9%
Federal Government	Direct Student Loan Program	\$ 63,048	36.2%
	Pell Grants	\$ 20,159	11.6%
	Other student aid	\$ 3,566	2.0%
	Research & Development	\$ 1,083	0.6%
	Other	\$ 2,052	1.2%
Total Federal and State		\$140,261	80.5%
All other		\$ 34,051	19.5%
TOTAL (note 2)		\$174,312	100.0%

SOURCE: Youngstown State University Single Audit Report, June 30, 2016. Analysis of figures in report by author.

Note 1: State funds characterized as capital support are actually used for major maintenance and upgrading of existing facilities, and are shown as annual revenues, as distinct from bond proceeds used for new buildings and expansion of existing buildings, which are not included.

Note 2: This figure excludes \$23.9M shown in the audit as auxiliary revenues, which include such areas as housing room and board, bookstore, etc., and which are in some part derivative of revenues shown in the table.

student loans and grants, institutions like YSU could not continue to exist.

This is not a criticism of either the university or the federal programs that sustain it. Indeed, they are both critically important; without the availability of federal loans and grants, millions of young people other than the handful going to elite institutions would be unable to obtain a higher education today. The fact remains that that aid has become an equally critical mainstay of the economy of cities like Youngstown.

The same is true for medical care. While it is not possible to obtain comprehensive local data that would show the distribution of funds by source going through the entire health care system, a few data sources shed some light on the extent to which outside resources, primarily federal ones, drive health care spending. Table 7 shows the national distribution of health care costs by source of funds.

TABLE 7: NATIONAL HEALTH CARE EXPENDITURES BY SOURCE 2015 (in billions)

SOURCE	AMOUNT	% OF TOTAL
Medicare	\$ 646.2	20.2%
Medicaid	\$ 545.1	17.0%
Other federal programs	\$ 121.1	3.8%
TOTAL FEDERAL	\$1312.4	40.9%
Other (note)	\$ 482.8	15.1%
Private health insurance	\$1072.1	33.4%
Out of pocket	\$ 338.1	10.5%
TOTAL	\$3205.6	100%

SOURCE: Center for Medicaid and Medicare Services

Note: Other category includes other third party payers, public health services, and investment. The majority of these funds come from the public sector, including federal, state, local government and school district resources.

It is well-known, of course, that the great majority of health care costs in the United States are covered by governmental or private insurance, rather than direct payment by consumers, although some readers may not be aware that Federal insurance spending now substantially exceeds private insurance. In an affluent community, however, health care costs

are offset by the insurance and tax payments of individuals and employers, generated in large part from private sector economic activity. In cities that are part of the urban transfer payment economy, these costs are almost entirely covered by outside, largely public sector, transfers. Even to the extent that those costs are covered by private health insurance, that insurance in turn is largely paid by public sector, education or health care employers in the form of either employee or retiree health benefits.

Residents of cities in the urban transfer payment economy disproportionately receive health care benefits through the public sector, as shown in Table 8. While the extent of Medicare coverage is essentially a function of the age distribution of the community – since Medicare coverage is all but universal for people over 65 almost without regard to income – the extent of Medicaid and other means-tested coverage, particularly for children, is a function of the poverty of these cities and their residents. Without the benefits made available through Medicaid, CHIP (Children’s Health Insurance Program), and SNAP (as shown in Table 4), the overwhelming majority of children living in these cities would have little or no means of sustenance or health coverage.

Health care spending represents a massive infusion of transfer payments into cities dependent on the transfer payment economy. While many such cities lack universities, most above some modest minimum size have hospitals and ambulatory care providers. In 2012, total revenues of health care providers in Youngstown totaled \$845 million, of which \$500 million was generated by the city’s two hospitals. While most of these revenues do not remain in the city, they nonetheless represent the largest single element in the city’s economy.

The above discussion leads to a clear conclusion; while all parts of the United States

TABLE 8: RELIANCE ON PUBLIC SECTOR HEALTH INSURANCE BY INSURANCE TYPE AND AGE CATEGORY

CATEGORY	United States	Saginaw	Youngstown	Chester	Johnstown
PUBLIC HEALTH INSURANCE BY TYPE FOR TOTAL NONINSTITUTIONALIZED POPULATION:					
Medicaid or other means-tested insurance alone	14.2%	39.1%	36.0%	29.3%	32.8%
Medicare alone or with supplements	16.3%	17.8%	21.0%	16.3%	25.0%
Other (note)	2.5%	3.4%	3.7%	4.8%	2.8%
Total public insurance	33.0%	60.3%	60.7%	50.4%	60.6%
PERCENTAGE WITH PUBLIC SECTOR HEALTH INSURANCE BY AGE CATEGORY					
Under 6	44.2%	84.0%	86.7%	71.9%	72.5%
6 to 17	36.3%	72.5%	76.3%	65.9%	80.4%

SOURCE: 2012-2016 5 year American Community Survey

NOTE: Other category includes Medicaid in combination with other insurance

benefit from the system of transfer payments that has emerged over the past many decades, the cities described above *depend* on it. To summarize the dynamics of the urban transfer payment economy:

- A large percentage of the population, particularly children and the elderly, are directly dependent on income supports, whether direct in the form of Social Security, or indirect in the form of SNAP or Housing Choice Vouchers;
- A second large percentage holds jobs that are in turn dependent on transfer payments to health care, social service and education providers.
- A third large percentage, including retailers, consumer service providers and their employees and vendors, are dependent on the consumer spending of the first two categories.
- Finally, local government, including its employees and vendors, are dependent on the tax and other revenues generated as a result of the first three categories.

While each of these cities has some residual manufacturing activity, as well as other export

industries such as Chester's casino, they are modest by comparison; an educated guess would suggest that collectively they are unlikely to represent more than a quarter of the economic activity taking place in each city. The urban transfer payment economy enables these cities to survive, and not disappear like Classe did over a thousand years ago. Survival, however, is a low bar. In the next section, I will explore what it means to a city and its residents to be dependent on the urban transfer payment economy.

b Life in the urban transfer payment economy

The urban transfer payment economy, as it operates in cities like Saginaw or Johnstown, is a subsistence economy. As these cities have transitioned from manufacturing to their current economy, they have undergone dramatic declines in their standard of living and quality of life. Table 9 shows current conditions and trends for the four cities and the United States as a whole.

This is hardly surprising. Income supports are not designed to foster a high standard of living, but to provide minimum subsistence. While many of the beneficiaries of the transfer payment economy, in particular professional and managerial personnel in local government, health care and higher education, earn good salaries, few live in the cities where they work; 88% of all jobs paying \$40,000 or more in 2015 in Youngstown were held by commuters, while the same was true for 94% of all such jobs in Chester. Most of the indirect economic effects of those jobs, with the exception of the occasional latte, will therefore also be felt in the city's suburbs, where most of each region's commercial activity takes place, or even farther afield. People who live in the city are less likely to be in the workforce and, if in the workforce, far more likely to be unemployed. Even those who work full-time and year-round typically earn

only about 2/3 of national average earnings.

TABLE 9: SOCIAL AND ECONOMIC CHARACTERISTICS FOR UNITED STATES AND FOUR SMALL CITIES

	United States	Saginaw MI	Youngstown OH	Chester PA	Johnstown PA
Peak population (peak year)		98265 (1960)	170002 (1930)	66039 (1950)	66993 (1930)
2016 estimated population		48948	64312	33988	19712
% change		-50.1%	-63.2%	-48.5%	-70.6%
Poverty rate 2000	12.4%	28.5%	24.8%	27.2%	24.6%
Poverty rate 2016	15.1%	34.7%	38.0%	36.9%	37.0%
Poverty rate for population under 18 in 2000	16.1%	40.2%	37.3%	36.9%	37.5%
Poverty rate for population under 18 in 2016	21.2%	46.0%	60.3%	51.2%	60.4%
Median family income in 1969 (in 2016 dollars)	\$63,183	\$65,846	\$59,828	\$56,078	\$52,927
Median family income in 2016	\$67,871	\$34,356	\$32,507	\$32,971	\$32,946
Change 1969-2016	+7.4%	-47.8%	-47.3%	-41.8%	-47.8%
Adults with BA or higher degree 1970	10.7%	6.3%	5.4%	3.1%	3.4%
Adults with BA or higher degree 2016	30.3%	11.4%	12.0%	10.3%	11.7%
Unemployment rate 2000	3.7%	7.7%	5.8%	9.9%	5.8%
Unemployment rate 2016	7.4%	17.7%	16.8%	19.0%	15.7%
Homeownership rate 1970	62.9%	67.7%	67.6%	51.2%	46.0%
Homeownership rate 2016	63.6%	60.7%	56.7%	37.3%	49.4%

SOURCE: US Census 1970 and 2000; 2012-2016 5 year ACS; sales price data for US from National Association of Realtors, for cities from Boxwood Means and PolicyMap

The pervasive poverty of these cities is compounded by their continued long-term population loss. As Table 9 shows, all four cities have lost substantial parts of their peak population, in some cases in a trend line that has persisted since 1930, or nearly 90 years. The combination of poverty and population loss has created extremely weak housing market conditions, shown in the extraordinarily high levels of housing vacancy, the extremely low

prices for which houses sell, if they sell at all, and other factors shown in Table 10. 'Other vacant' is the residual category used by the Census Bureau to identify vacant properties that are not on the market either for sales or rental, nor are being held for seasonal or occasional use; in other words, a rough surrogate for properties that have been abandoned by their owners. In all four cities, but particularly in Youngstown, their numbers have been steadily reduced through demolition activity. Such properties make up more than 1 out of 10 of all units in these four cities, although the most powerful impression an observer gets in Johnstown is less the number of vacant houses as the pervasive dilapidation of so many of the occupied ones.

TABLE 10: HOUSING MARKET CONDITIONS IN UNITED STATES AND FOUR SMALL CITIES

	United States	Saginaw MI	Youngstown OH	Chester PA	Johnstown PA
Other vacant housing % 2000	2.0%	4.3%	2.8%	8.2%	4.2%
Other vacant housing % 2016	4.1%	12.1%	11.6%	15.4%	14.6%
Median sales price 2006	\$221,900	\$43,000 (2007)	\$24,000	\$25,000	\$25,000
Median sales price 2015	\$222,400	\$21,652	\$22,925	\$17,950	\$19,990 (2014)
1-4 family properties	92,614,000	20,428	28,304	11,373	8,880
Number of sales (2015)	5,745,000	739	781	478	212 (2014)
Sales as % of inventory	6.2%	3.6%	2.8%	4.2%	2.4%
Purchase mortgages originated (2015)	3,650,000	133	147	32	57
Mortgages as % of sales	63.5%	18.0%	18.8%	6.7%	26.9%

SOURCE: Inventory data from 2000 Census and 2012-2016 5 year ACS. National median sales price for existing houses from National Association of Realtors, city sales price and volume data from Boxwood Means and PolicyMap. Purchase mortgages from Home Mortgage Disclosure Act (HMDA) reports.

The weakness of the housing market in these cities is further exemplified by the low volume of sales, suggesting that many properties, when their current owner moves, are not

sold at all, and end up being added to the ranks of abandoned properties; and the low ratio of mortgages to sales, indicating not only that the great majority of transactions are cash transactions, but that in all likelihood, the great majority of purchasers are investors rather than homebuyers. Given the low sales prices, and the high ratio of rental income to house price – particularly when the tenant has a Housing Choice Voucher – it is likely that the majority of these investor buyers are not people planning to invest significant money in these properties and hold them for a long time, but investors which I have characterized elsewhere as “milkers,” who plan to put little money into the properties, make a healthy profit through cash flow in a few years, and then walk away (Mallach 2014).

On any measure shown – and many not shown – cities that are dependent on the urban transfer payment economy show severe deficits in terms of living conditions, quality of life, housing markets and opportunities compared to the rest of the United States. Not only are cities like Johnstown or Saginaw desperately poor communities, but they offer only one way by which most of their residents can escape poverty; that is, to leave and go elsewhere. They will never disappear like Classe, as long as the transfer payment economy continues to exist, but the question remains – is there an alternative to sustained, long-term extreme deprivation and lack of opportunity for these cities? Although I do not presume to suggest I have the answer, I will close with a few observations on that question.

4 Conclusion: the prospects for transfer payment dependent cities

In contrast to production cities, which have maintained or regrown a manufacturing base, and well-positioned cities, which have with some success replaced their manufacturing

base with a post-industrial economic base linked in most cases to a nearby major city, transfer payment dependent cities have done neither. This is not for lack of trying. All four cities have made major efforts, often with substantial state or federal support, to recruit new sources of economic activity.

Thanks in part to the Keystone Opportunity Zone, a Pennsylvania program that provides firms with generous relief from both state and local taxes along with a major investment by the state's Department of Transportation, Chester's Delaware River waterfront has seen the construction of not only the casino and racetrack mentioned earlier, but also a 400,000 square foot Class A office building and an 18,500 seat stadium hosting a professional soccer team.

Johnstown's story is striking. From his election in 1974 until his death in 2010, Johnstown's Congressman John Murtha devoted himself to funneling over \$2 billion in federal money into his home town (Zengerle 2009), earning him a reputation as Washington's "king of pork" (CBS, 2008). Murtha's largesse gave Johnstown a cluster of federally-subsidized facilities, including the John P Murtha Airport, characterized by one writer as "the airport for nobody" (Karl 2009), the John P Murtha Regional Cancer Center, the Joyce Murtha Breast Cancer Center, the Murtha Center for Public Service and National Competitiveness at the University of Pittsburgh-Johnstown (a major beneficiary of Murtha's earmarks), and the National Drug Intelligence Center, described at the time of its opening as a "wasteful display of political patronage that primarily benefits the constituents of one Democratic Congressman (Hinds 1993)." It was closed, and its functions reassigned to facilities elsewhere, in 2012.

The extent to which Murtha's largesse sustained a viable economy for Johnstown during his lifetime is debatable, although the evidence is not compelling; since then, however, while

perhaps providing some marginal quality of life benefits, they have not led to a sustainable local economy. Similarly, while Youngstown has had some success luring firms to its industrial parks, which clearly provide some benefits in terms of employment and municipal revenues, it has not changed the basic picture; as a city staffer ruefully acknowledged to me, nearly all the workers in those firms live in the city's suburbs.

I do not fault Youngstown's planners, who are doing the best they can with the tools and assets at their disposal, and at least are pursuing a coherent strategy. The number of manufacturing jobs has remained largely the same over the last fifteen years in that city, albeit representing only 10% of the city's jobs, and might well have dropped significantly without their efforts. The fact remains, however, that Youngstown remains a desperately poor city. The question then arises, is there anything Youngstown, or a similar city, can do that would significantly shift its economic trajectory?

In some cases, the answer may well be no. Cities, especially small ones which cannot benefit from agglomeration, cannot invent economies, but must operate within the range of options provided by the larger regional, national and global economies. As suggested earlier, the revival of industrial cities like Baltimore or Pittsburgh from a macroeconomic perspective can be seen as little more than a chain reaction flowing from the expanding role of the higher education and health care sectors in the United States economy and the fortuitous location of critical components of both sectors in those cities, coupled with inter-generational changes in consumer preferences reflected in the millennial migration. Those cities, to be sure, did not sit passively by, but their actions responded to those changes, they did not initiate them.

Over the past decades, those particular forces have worked against many small cities such as the four described above. That does not mean that other opportunities may not arise. Some accounts suggest that Youngstown may have the ability to benefit significantly from the growth in the fracking industry, as well as the parallel decline in natural gas prices (Schwartz 2014, Mundahl 2017), to rebuild a strong manufacturing sector. Similarly, Chester's location only 12.5 miles from the heart of Center City Philadelphia, with frequent commuter rail service to both Philadelphia and Wilmington, would suggest that economic opportunities should exist for that city over and above a casino and soccer stadium. What those opportunities might be, however, particularly since Philadelphia, although reviving, is far from an economic powerhouse fueling regional growth like Boston or New York, remains unclear.

That suggests that there may be few intentional strategies in terms of what is conventionally termed economic development that these cities can pursue and which are likely to lead to meaningful change beyond responding to idiosyncratic opportunities such as fracking if and when they arise. And even then, to the extent that significant numbers of jobs or investment may ensue, the question remains to what extent they will actually benefit the cities directly, as distinct from the counties or larger regions of which they are a part. While regional growth is also important, it begs the question of the future of the cities themselves.

That, in turn, suggests that one should look at the future of these places through other than conventional economic development lenses, and explore other ways of increasing their prosperity and that of their residents. One might be to focus on building human capital, particularly with respect to local education systems, in the hope that raising the level of human capital will increase a city's competitive position (Glaeser 1994, Glaeser et al 1995); failing that,

it will increase the degree to which the city's young people can find attractive opportunities elsewhere. That, of course, would be to their benefit if not to the benefit of the city as a place.

Another approach, more specific to place, would be to explore whether one could increase the localized impact of the transfer payment system by reducing the leakages that currently mean that most of the resources the system provides leave the city, and in many cases, the immediate region. That might involve measures to increase the number of jobs for city residents – particularly those currently unemployed or without stable employment – in local hospitals, universities and the like; measures to increase local procurement of goods and services by those institutions; and measures to encourage more of the middle- and upper-income workers in those institutions to live inside the city. Any such approach would require that service providers address simultaneously education and workforce development on the one hand, and the appeal and quality of life of the city on the other, so that people who benefit from greater job opportunities do not immediately leave the city for its suburbs, which are typically affordable to almost anyone with a stable income.

Any strategy to both increase skills and job opportunities as well as rebuild the quality of life – physical and social – of a city like Chester or Saginaw would require a major infusion of public resources, well beyond what would be possible from local sources. In today's political climate, one must concede that such a commitment appears unlikely. The only plausible alternative, though, is an indefinite perpetuation of the status quo, and the progressive immiseration of a significant number of American towns and cities.

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