

U.S. Cities Taking Sustainability Seriously: The Impacts of Sustainability Policies on Economic
Growth & Poverty

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Thesis submitted to the faculty of the Virginia Polytechnic Institute and State University in
partial fulfillment of the requirements for the degree of

Master of Arts
In
Political Science

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May 2nd, 2016
Blacksburg, Virginia

Keywords: sustainability; U.S. cities; economic development; poverty; Rust Belt

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ABSTRACT

According to Kent Portney's seminal two-part study, cities across the U.S. are taking sustainability seriously by implementing a range of sustainable policies and programs. Yet by doing so, low-income people are seemingly pushed further into poverty. Local government officials and policymakers however, are urged to take sustainability seriously, often by well meaning constituencies that may but do not necessarily include the poor. They thus have significant interest in continuing to implement such practices and policies. This thesis seeks to address the problem of the impacts that result from cities taking sustainability seriously. I ask two main questions: are cities that take sustainability seriously experiencing a boost in economic growth? And are these cities potentially experiencing a negative side effect of a rise in poverty rates? The findings from these research questions are provided through a mixed methods approach, first by quantitative data analysis. Secondly, and to supplement this, the thesis provides a qualitative case study analysis of three U.S. cities in the 'Rust Belt' region. Cleveland, OH, Indianapolis, IN, and Milwaukee, WI all 'take sustainability seriously' while addressing the problems of economic development and poverty. I conclude that these cities are hindered in their efforts to take sustainability, economic development and poverty seriously. The three cities have boosted local economic growth yet also experience an increase in poverty as a result of the economic recession of 2007-'08. The primary hindrance experienced by the cities is state level jurisdictional authority, exercised as 'neoliberalism' that undermines 'interventionist' efforts on the part of city governments to 'seriously' address sustainability, growth and poverty as interwoven problems.

Dedication

*To my parents, who have never failed to feed me
and pay my rent. I am forever grateful!*

Acknowledgments

First and foremost, I would like to thank my committee members for their continuous support for my Masters thesis. I am deeply indebted to the help and guidance of my chair, Dr. Andy Scerri for his patience, motivation, and immense knowledge. I feel very fortunate to have worked with such a brilliant professor who has taught me so much. In working on this thesis, he has not only been an excellent chair, but has been a mentor to me and helped me with many challenges I faced throughout graduate school. Although I dreaded writing book reviews each week for an entire semester, he pushed me to write more in order to sharpen and add clarity to my writing. I am forever grateful.

Thank you Dr. Luke and Dr. Pula for your expert advice and thoughtful consideration for this research. Your suggestions at the beginning (and end) of this process provided me with fresh new insights into new avenues of further exploration pertaining to my studies. I am most grateful to the lessons learned from professors before this thesis came about, particularly from Dr. Briggs and Dr. Kelly. Sadly, graduate quantitative method classes have never been (and most likely never will be) favorite classes of mine. However your effective teaching communicates complex and technical material that I have learned from and utilized in this thesis.

I deeply thank a former instructor of mine, Kent Morris. In taking his class on International Relations Theory as an undergraduate he greatly sparked my interest in this field, which led me to apply to graduate school. Without his enthusiasm for the subject matter and help in so generously writing me a recommendation letter, I would not be where I am today.

Although I promised not to acknowledge one particular person, I nonetheless find myself obliged to express my deepest thanks and gratitude to someone who has without a doubt listened and responded to every moment of concern, happiness, anxiety, and distress among a variety of other emotions and feelings that have arisen throughout the duration of writing this thesis. I will never forget the late night pep talks and discussions, which have both given me confidence and the opportunity to think out loud. Thank you, Andrew Shore.

Lastly, I thank my family and friends for always supporting me throughout my studies. This accomplishment would not have been possible without them.

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Part 1

Chapter 1 - Introduction

It has become increasingly clear that policy for sustainable development is unworkable at the global and national levels. Since the 1990s, global and national leaders have failed to implement effective policy legislation that promotes sustainable development. Thus, state and local government officials, in addition to the public, have lost confidence in national government procedure to write and pass legislation in order to effectively implement sustainable policies. Local cities and communities have recognized this trend, and in response, many have taken the matter of sustainable development into their own hands. Svava et al. comment,

In the absence of leadership at the national level, cities have emerged as both innovators pursuing broadly based environmental goals and efficient users of the reduced resources available to them as they seek to decrease their own energy consumption. Local executives are aware of the importance of the effect they can have, because more than 1,000 mayors have signed on to the U.S. Conference of Mayors Climate Protection Agreement, in which signatories commit to pursuing Kyoto Protocol standards in their communities¹.

Today, urbanists argue that cities can be effective major actors in international efforts to achieve sustainable development². Cities around the world are actively engaging with the arguably broader concept of ‘sustainability’, not only considering its policy implications, but also administering appropriate measures to address issues that account for the environmental, economic, and social equity domains of sustainable development. Such domains are also referred to as the ‘triple bottom line’, a concept that will play a central part in my analysis. These efforts

¹ James H. Svava, Tanya C. Watt, and Hee Soun Jang, “How Are U.S. Cities Doing Sustainability? Who Is Getting on the Sustainability Train, and Why?” *Cityscape: A Journal of Policy Development and Research* 15, no. 1 (2013):10.

² Such as Harriet Bulkeley, “Cities and the Governing of Climate Change,” *Annual Review of Environment and Resources*, 35 (2010): 231. Kent Portney, *Taking Sustainable Cities Seriously: Economic Development, the Environment, and Quality of Life in American Cities* (Cambridge: MIT Press 2013). And David Harvey, “From Managerialism to Entrepreneurialism: The Transformation in Urban Governance in Late Capitalism,” *Series B, Human Geography, The Roots of Geographical Change* 71, no. 1 (1989): 4. Among others.

are important because cities are well known for being the most ecologically disruptive, most polluted, and being the sites at which the most profligate use of resources takes place,³ as compared to rural localities with far less dense populations.

Interestingly, cities across the United States are seemingly leading in taking sustainability seriously. The work of Kent Portney, notably his seminal two-part study (conducted in 2003 and 2011)⁴, shows that cities in the United States are changing their old habits to adopt new ‘sustainable’ ones. Furthermore, and what is of greater interest, is that these cities seem to be experiencing higher levels of economic growth than cities that are not ‘taking sustainability seriously’. That is, cities taking a ‘business as usual’ or ‘maintain the status quo’ approach to development are achieving neither sustainability nor economic development. Furthermore, other studies suggest that these cities that take ‘sustainability seriously’ are more economically and socially progressive. Portney cites Budd et al., “[p]revious research suggests that “political culture,” including the partisan and ideological predispositions of cities, may well influence city decisions”⁵. Many of the U.S. cities that Portney studies, particularly Portland OR, Seattle WA, and San Francisco CA, all share common political ideology (liberal/Democratic)⁶, and seem to promote and administer the three-pillar conception of sustainability, equally emphasizing the environment along with the economy and social equity.

The term ‘sustainability’ holds different meanings for different actors. Businesses and corporate interests define sustainability differently than NGOs and global governance agencies such as the United Nations. For Tim Luke citing Tim Flannery, “‘Sustainability’ is a word that

³ William B. Meyer, *The Environmental Advantages of Cities: Countering Commonsense Antiurbanism* (Cambridge: MIT Press, 2013): 2.

⁴ Kent Portney, *Taking Sustainable Cities Seriously: Economic Development, the Environment, and Quality of Life in American Cities* (Cambridge: MIT Press 2013).

⁵ Portney, *Taking Sustainable Cities Seriously*, 313.

⁶ Portney, *Taking Sustainable Cities Seriously*, 313.

can mean almost anything to anyone. Whether used by cosmetics advertisers or fruit sellers, it is bandied about as if it were the essence of virtue”⁷. Given the ill-defined nature of ‘sustainability’, for the purposes of this thesis I define sustainability using the criteria that Kent Portney identifies in his 38-point index of cities taking sustainability seriously⁸.

In this thesis, I begin by setting my research within the context of a common debate held amongst policymakers, between those who advocate for an “interventionist” versus a neoliberal policy approach. I predict that cities’ efforts to implement progressive ‘interventionist’ policy to become more sustainable are boosting local economic growth, meanwhile also increasing poverty rates. The literature that informs my research is drawn from multiple disciplines. These are Political Science, in particular ‘urban regime’ analysis, and Sociology, namely ‘growth machine’ analysis. I review interventionist work of macroeconomic thinkers who seek to find alternatives to the neoliberal growth machine. The work of Portney plays a highly influential role in my research. Portney also speaks to finding alternatives to the neoliberal growth machine, yet translates such arguments into claims about U.S. cities taking sustainability seriously. I conclude the literature review chapter by reviewing research from scholars such as Harvey, Chapin, Hall, and Doucet and their work pertaining to urban (re)-development strategies and the effects on economic growth.

In chapter 3, I pose my specific research questions pertaining to a quantitative analysis that I conduct in sections 3.3 and 3.4. I explain my two hypotheses and the methodology used in order to test these hypotheses, and detail the theory that links sustainability as the independent variable to both median household income *and* poverty as dependent variables. The findings from this quantitative research are presented beginning with median household income followed

⁷ Timothy W. Luke, “Corporate Social Responsibility: An Uneasy Merger of Sustainability and Development.” *Sustainable Development Journal*, 21, no. 2 (March/April 2013): 83.

⁸ See Appendix A for full list of criteria.

by poverty. In Part 2, I present three qualitative case studies. These center on three cities drawn from the quantitative analysis, and detail the method and justification for choosing these three cities: Cleveland, Ohio, Indianapolis, Indiana, and Milwaukee, Wisconsin. I examine the sustainability efforts, economic growth, and poverty, in addition to gentrification and the triple bottom line of these cities. I seek to understand the specific dynamics at play in these cities that are seemingly taking sustainability seriously but are experiencing persistent poverty amidst growth.

Chapter 8 concludes this thesis by drawing the quantitative and qualitative analyses together in order to explain the major implications of this work. I conclude by offering various avenues of further research that may supplement this study. I now turn to the purpose and broad research questions that I explore in the overall thesis.

Section 1.1 - Purpose & Broad Research Questions

The research for this thesis is informed by a larger debate amongst policymakers, between those who advocate for an “interventionist” policy approach versus a neoliberal, “non-interventionist” or rather, “hands-off” approach for economic policy. In this section, I explain both the neoliberal and the ‘interventionist’ approach towards policymaking, and the relationship between these approaches. I suggest a paradox: taking sustainability seriously perhaps increases local economic growth, yet also increases poverty rates, which is exactly what interventionists championing social programs oppose. This intellectual puzzle drives me to pose four broad research questions in order to present what I seek to answer through this research.

Since the 1980s Reagan-Thatcher era, neoliberal policy has been the dominant policy approach in the U.S. Neoliberals promote a ‘hands-off’ form of government, in which an

‘invisible hand’ of market forces runs its course unmanaged. This approach aims at ‘non-interventionist’ economic policy and thus promotes privatization and the role of the market as the sole regulator of supply and demand, which it is presumed, will settle in an equilibrium pattern. In contrast to neoliberalism, namely (post-)Keynesian “interventionist” policymaking has remained in the shadow of the dominant neoliberal approach until the financial crisis of 2007-‘08. Interventionism is a policy approach in which the government regulates the economy to achieve certain goals over others. The economy is not left to market forces, but instead, it is steered and guided by policymakers and the state in order to produce beneficial outcomes for all. For post-Keynesians such as Joseph Stiglitz, Thomas Piketty, and Jean-Paul Fitoussi and others, it is the intention that these beneficial outcomes are to be distributed progressively, that is, should benefit all, not strictly for wealthy and elite classes⁹. Such ‘hands-on’ policy controls the market through legislation and policy to prevent an increasingly widening wealth gap between social classes and further disastrous outcomes to foster common goods. The equal distribution of goods and services is important to contemporary interventionists because the policy that they promote seeks to narrow the wealth gap between the rich and the poor and create outcomes that, they argue, solely market forces left-alone cannot. Since the mid-2000s, post-Keynesians have expanded their intervention goals to encompass ‘sustainability’ issues¹⁰.

At the heart of this debate between these two economic policy camps is a practical problem. One that is of greater political importance when it is recognized that nations, in addition to the international community, are currently paralyzed when it comes to policymaking for both social and sustainability issues. It becomes a challenge for policymakers to balance

⁹ Thomas Piketty, *Capital* (Cambridge: Belknap Press of Harvard University Press, 2014), and Stiglitz, Joseph E. Stiglitz, Amartya Sen, and Jean-Paul Fitoussi. “*Mismeasuring Our Lives: Why the GDP Doesn’t Add Up – The Report of the Commission on the Measurement of Economic Performance and Social Progress*”. New York: The New Press, 2010.

¹⁰ UN Agenda for Green Growth, Corporations including statements promoting sustainability etc.

between how to best become sustainable and foster economic growth while also accounting for equal distribution of the social common good for all. It should be noted that interventionists charge neoliberals with the argument that under neoliberal policy, which leaves the task of fostering common goods to the market, the poor are left to fend for themselves, the wealthy are only further enriched, and the environmental goods are to be distributed by the ‘invisible hand’. For Foster, et al., “Despite the devastating criticisms arising from the underworld of economics, however, the dominant neoclassical tradition moved in the years steadily away from any concept of social/public wealth, excluding the whole question of social (and natural) costs, within its main body of analysis”¹¹.

In light of these debates, I assume that the U.S. cities that Portney shows are actively taking sustainability more seriously by implementing a form of interventionist policy to achieve their goals of sustainability, or at least environmental ends. What I find compelling is that these cities are perhaps experiencing the unintended side effect of promoting robust economic growth. Thus, cities that are taking sustainability seriously, that are applying what is in effect ‘green’ interventionist economics at the municipal level, are in fact boosting local economic growth.

Even more interesting, yet possibly a difficult thing to measure and would require additional research, is that these green interventionist cities may also be experiencing an additional unintended yet potentially controversial byproduct: an increase in inequality. This is a ‘gentrification effect’ that impacts measures of equality, and possibly increases poverty rates. However, this effect is paradoxical, given the progressive nature of the politicians, administrators and populations involved. What makes this problem so intriguing is that the increase in inequality is arguably exactly what such interventionist politicians, administrators, and

¹¹ John Bellamy Foster, Brett Clark, and Richard York, *The Ecological Rift: Capitalism’s War on the Earth* (New York: The Monthly Review Press, 2010) 67.

populations would undoubtedly oppose. In other words, the contradiction lies in that by definition, interventionist policy seeks to improve common social goods, yet while promoting and adopting ‘green’ policies and ‘taking sustainability seriously’, the distribution of these effects in turn adversely affects poor and low-income residents.

Thus, this research focuses on the economic impacts of sustainability efforts by a selection of cities analyzed by Portney. I pose the following research questions:

- Does ‘taking sustainability seriously’ in Portney’s sense have the unintended consequence of promoting economic growth for the city?
- Does this ‘risk-taking’ intervention on the part of city politicians and managers lead to greater overall economic growth for the city?
- More so, does the improved quality of life (QoL) consequential upon economic growth in fact follow from taking policy measures that promote sustainability?
 - And, if so, how is that increase in QoL *distributed* across the communities [individuals and families] within the cities that ‘take sustainability seriously’?

Section 1.2 - Significance of Research

Primarily, scalability seems to be important to the success of ‘interventionist’ policy.

Portney discusses the links between environmental sustainability and economic development, claiming:

The concept of sustainable development, to a large degree, shifts the emphasis away from mere concern about the environment to include explicit concern about economic development. The argument often put forth is that the wrong kind of economic development not only depletes the earth’s resources and damages the earth’s ecological carrying capacity, but in the long run it also undermines achievement of economic growth itself¹².

¹² Portney, *Taking Sustainable Cities Seriously*, 22.

For Harriet Bulkeley, it is indeed urban responses to climate change that most effectively synthesize the economy with green goals: “A first wave of municipal responses to climate can be identified from the literature starting in the early 1990s as individual cities, predominately in North America and Europe, began to engage with the issue” as global and national leaders failed to take action¹³.

In light of such claims, it seems that scalability is important to the success of interventionist ‘hands-on’ policy over the alternative neoliberal hands-off approach. Portney notes that, “from the local perspective...local leaders have started to come to the conclusion that old models of local economic development no longer work”¹⁴.

Many attempts at the national and international level to successfully address climate change and policy creation for greater sustainability measures have failed to succeed. Locally, each region is different and requires different needs in which national legislators cannot sufficiently assess and thus fail to execute appropriate solutions under national policy. Svava et. al contend,

Pursing sustainability at the local level also makes sense in terms of scope; the actions at this level significantly affect transportation, air quality, housing, water, and energy consumption. Because of the concentrated populations in cities, the activities that occur there have significant environmental ramifications that further motivate action and the municipal level¹⁵.

Similarly, for Bulkeley, “National data can have limited validity in some local circumstances, due to its very nature as ‘average’ data”¹⁶. The alternative approach involves the gathering of local

¹³ Harriet Bulkeley, “Cities and the Governing of Climate Change,” *Annual Review of Environment and Resources*, 35 (2010): 231.

¹⁴ Portney, *Taking Sustainable Cities Seriously*, 17.

¹⁵ Svava, et. al, “How Are U.S. Cities Doing Sustainability? Who Is Getting on the Sustainability Train, and Why?”¹⁰.

¹⁶ Harriet Bulkeley et al. “Cities and Climate Change: The role of institutions, governance, and urban planning” (report prepared for the World Bank Urban Symposium on Climate Change) 12.
<http://siteresources.worldbank.org/INTURBANDEVELOPMENT/Resources/336387-1256566800920/6505269-1268260567624/Bulkeley.pdf>.

data and bottom-up development, which can possibly lead to better outcomes within cities and municipal government. Thus, better outcomes for cities 'taking sustainability seriously'.

Chapter 2 – Literature Review

This chapter draws on research from the disciplines of political science and sociology concerning conceptions of the city in relation to economic growth and development. I review interventionist work that seeks alternatives to the neoliberal conception of the city as a ‘growth machine’ drawing from the work of Speth. I also consider research from Harvey, Chapin, Hall and Doucet pertaining to the effects of urban (re)-development strategies on economic growth.

The literature that informs my research for this thesis also draws from the discipline of sociology. Sociologists offer other conceptions of economic growth and development and how they are applied to the context of the city, more specifically the impacts of post-industrialization on cities’ economic development. The most popular conception that cities used in order to foster economic growth was “attract and retain”, in which the city would attract businesses and industries to locate in cities in order to attract a work force to generate economic growth. This is significant because as Portney suggests,

The old adage that cities should “attract and retain” large, externally owned businesses as anchors of the local economy no longer seems to apply to the level of employment potential as it once did. The idea behind attract and retain prescriptions is that local governments should engage in the competition to bring new business and industry into the city¹⁷.

City engagement in competition complements the capitalistic notion and aspiration for ever-increasing economic growth. To explain this phenomenon, Portney explains the most dominant traditional view of growth with reference to the city as a “growth machine” through the work of sociologist Harvey Molotch. City politicians’ and managers’ success is determined largely (but of course not exclusively) by the rate at which it accomplishes economic growth; growth is seen

¹⁷ Kent Portney, *Taking Sustainable Cities Seriously*, 17.

as the engine that drives the health of the city. Thus a healthy city would be one in which exhibits the following characteristics, as Molotch states:

The clearest indication of success at growth is a constantly rising urban-area population – a symptom of a pattern ordinarily comprising an initial expansion of basic industries followed by an expanded labor force, a rising scale of retail and wholesale commerce, more far-flung and increasingly intensive land development, higher population density, and increased levels of financial activity¹⁸.

This traditional conception of growth as a “growth machine” practicing the notion of “attract and retain” specifically geared to the city, is part of the broader scheme of capitalistic growth.

Mainstream literature has acknowledged that constant growth in the context of the city and in general will have catastrophic consequences for the environment, but also for social wellbeing.

The growth machine’s counterpart in political science is referred to as urban regime theory. Clarence N. Stone, characterizes regimes as consisting of “the informal arrangements by which public bodies and private interests function together to make and carry out governing decisions.¹⁹” Thus, for Kilburn, “regime analyses typically involve the study of how these arrangements are worked out through the dynamics of coalition building to achieve a capacity to implement a policy agenda and govern a city”²⁰.

Interventionist work conducted by macroeconomic thinkers such as Stiglitz, Piketty, and Fitoussi seek to find alternatives to the neoliberal growth machine. In addition to these thinkers, environmentalist Speth argues that the U.S. (and possibly other wealthy industrialized liberal-democracies) need to engage in deep systematic change and enter into the realm of a post-growth society²¹. On this note, Speth argues that there is only so much that growth can provide, that the

¹⁸ Harvey Molotch, “The City as Growth Machine: Toward a Political Economy of Place,” *American Journal of Sociology* 82, no. 2 (1976): 309-332.

¹⁹ H. Whitt Kilburn, “Explaining U.S. Urban Regimes: A Qualitative Comparative Analysis,” *Urban Affairs Review* 39, no. 5 (2004): 634-635.

²⁰ Kilburn, “Explaining U.S. Urban Regimes: A Qualitative Comparative Analysis,” 634-635.

²¹ James Gustave Speth, *American the Possible: Manifesto for a New Economy* (New Haven: Yale University Press, 2012), 92.

limits of growth need to be revisited and that the United States needs to in fact grow *toward* sustainability by placing greater emphasis on social needs and the quality of life. To further his argument, Speth refers to the idea of diminishing returns. He notes, “If economists were true to their trade, they would recognize...the value of income growth declines as one gets richer. An extra \$1,000 of income is more substantial for someone making \$15,000 a year than to someone making \$150,000”²². The concept of diminishing returns to growth has received much attention in the past few decades as capitalist societies have realized that the aim to endless growth is an illusory promise.

To engage in a post-growth society, Speth argues that the United States needs to grow more sustainably with a greater emphasis on social needs and quality of life. Speth argues:

It is possible to identify a long list of public policies that would slow GDP growth, thus sparing the environment, while simultaneously improving social and individual wellbeing. ... We need to grow the number of good jobs and the incomes of poor and working Americans. ... Growth in investment in public infrastructure and in environmental protection; growth in the deployment of climate-friendly and other green technologies; growth in the restoration of both ecosystems and local communities...²³.

Although seemingly contradictory, Speth believes that pursuing a post-growth society of this type would prompt policymakers and politicians to intervene in the status quo in order to focus on what is neglected by neoliberal policymaking efforts to promote economic growth.

Speth succinctly captures his entire argument, claiming,

It is time for America to move to post-growth society, where working life, the natural environment, our communities and families, and the public sector are no longer sacrificed for the sake of mere GDP growth; where the illusory promise of ever-more growth no longer provide an excuse for neglecting our country’s compelling social needs; and where true citizen democracy is no longer held hostage to the growth imperative²⁴.

²² Speth, *American the Possible*, 91.

²³ Speth, *American the Possible*, 96-97.

²⁴ Speth, *American the Possible*, 92.

Speth's view concurs with Portney's. Economic development should align with increases in quality of life, and that the economy should grow in order to benefit society and provide for the greater good. Capturing these domains, namely the economy, social equity, and the environment, in this thesis is referred to as the 'triple bottom line'. In the context of this thesis, I combine the conceptions of the city as a 'growth machine' with that of urban regime theory to draw distinctions between neoliberal conceptions of how cities should pursue economic growth and current/resurgent interventionist (post-Keynesian) approaches.

As such, it is conceivable to understand Portney's work as translating such interventionist arguments into claims about U.S. cities that take sustainability seriously. In fact, he discusses recent approaches to economic growth and development, claiming that, "economic growth is explicitly tied to quality of life in the community. More accurately, such conceptions insist that wherever economic growth and development takes place in the city is consistent with a defined vision of what the quality of life in that city should be"²⁵. Portney and others refer to this conception of policy intervention to promote sustainability and QoL as a combination of environmental, economic, and social common goods as "smart growth". In relation to smart growth, Portney emphasizes Florida's work and the term he has coined as 'the creative class'. An increase in a city's 'creative class', which specifically entails an increase in educated and diverse populations, directly relates to the dynamics of the gentrification process. Although there is not one single agreed upon definition for smart growth, for the purposes of this thesis, I define smart growth as, "growth management policy that addresses sprawl by directing land development away from metropolitan areas that experience accelerated growth and reinvesting valuable

²⁵ Portney, *Taking Sustainable Cities Seriously*, 126.

resources to depressed urban and suburban neighborhoods”²⁶. Smart growth is important to my argument because it allows me to examine in depth, using both quantitative and qualitative analysis, the contents of what the notion of QoL entails, especially in relation to economic growth spurred by taking sustainability seriously.

The neoliberal views of economic growth that view the city as a “growth machine” and recent approaches to managed economic development through smart growth practices considerably contrast each other. For Portney,

The traditional view reflects a philosophy that economic development ought to be largely a matter of private investment. In this view, government ought not to interfere with private investment decisions. As a consequence, residents of the city experience whatever quality of life results from the aggregate activities of the individual people in the city²⁷.

In their work, Greenwood and Holt also describe the neoliberal model of economic growth, which has been,

[F]ocused on the general business climate providing tax incentives to attract new firms. The conventional wisdom sees encouraging private business as the way to increase average income and bring better quality of life. Even if the benefits of growth go first to those at the top, they eventually trickle down to the rest of the population and everyone becomes better off²⁸.

It is precisely this approach of ‘trickle-down’ economics that dominates neoliberal policies. This normative claim lies beneath the assumption that new wealth generated from new investments will “trickle down” and benefit all over time.

With reference to the neoliberal approach, Harvey, Chapin, Hall and Doucet recognize distinct shifts from a former “managerial” approach to an “entrepreneurial” approach in urban re-development strategies in order to promote economic growth. In his work, Harvey recounts this

²⁶ Regina C. Gray, “Ten Years of Smart Growth: A Nod to Policies Past and a Prospective Glimpse Into the Future,” *Cityscape: A Journal of Policy Development and Research* 9, no. 1 (2007): 110.

²⁷ Portney, *Taking Sustainable Cities Seriously*, 127.

²⁸ Daphne T. Greenwood and Richard P.F. Holt, *Local Economic Development in the 21st Century* (New York: M.E. Sharpe, Inc. 2010) 14.

shift, noting, “Put simply, the “managerial” approach so typical of the 1960s has steadily given way to initiatory and “entrepreneurial” forms of action in the 1970s and 1980s”²⁹. In the past few decades, government strategy to foster economic growth has turned to focus on a type of growth, which invests in large-scale attractions and sport complexes through public-private partnerships. The discussion lies in whether or not these investments legitimately benefit and produce the economic revitalization so promised. Usually, these projects are funded by public sector dollars³⁰ yet generate “undesirable long-term consequences for public stakeholders...[and] significant short-term gains for some corporate interests”³¹. The real benefits of such investments are questionable yet state and city governments continue to pursue these strategies.

The neoliberal view lies in sharp contrast to Portney, Speth, Fitoussi, Piketty and other post-Keynesians’ recent views pertaining to policies such as smart growth for economic development to reflect the notion of a more hands-on approach for state and local government to steer policy in order to foster opportunity for increases of the quality of life for all people across all socioeconomic classes. However, if neoliberalism also requires ‘intervention’, then the question becomes ‘intervention for whose benefit’?

²⁹ David Harvey, “From Managerialism to Entrepreneurialism: The Transformation in Urban Governance in Late Capitalism,” *Series B, Human Geography, The Roots of Geographical Change* 71, no. 1 (1989): 4.

³⁰ Timothy S. Chapin, “Sports Facilities as Urban Redevelopment Catalysts: Baltimore’s Camden Yards and Cleveland’s Gateway,” *Journal of the American Planning Association* 70, no. 2 (2004): 193-194.

³¹ C. Michael Hall, “Urban entrepreneurship, corporate interests and sports mega-events: the thin policies of competitiveness within the hard outcomes of neoliberalism,” *The Editorial Board of the Sociological Review* (Oxford: Blackwell Publishing Ltd., 2006), 59.

Chapter 3 – Methodology & Quantitative Results/Analysis

Section 3.1 - Specific Research Questions & Theory

This section of the thesis is designed as a partial response to and extension of Portney's work, and sets it in the context of the larger debates between neoliberals and interventionists. In this section, I discuss how my research builds off Portney's work in light of the debates and goes further by exploring the relationship between cities taking sustainability seriously and economic growth. I conclude by offering six specific research questions.

Portney's extensive compilation of data from the largest 55 cities within the United States is collected to rank and show which of these cities are actively intervening in markets to take steps towards becoming more sustainable. Portney measures these cities by collecting information that can be taken as evidence of a city's earnest attempt at becoming more sustainable, and provides 38 benchmark measures that illustrate how cities are engaging in sustainability³². Portney creates a sustainable index (SI) score for each city based on the number of programs that the city implements. So, if a city has a high SI score of 33 (out of 38), then it has administered 33 sustainable initiative programs³³. However, one major drawback from Portney's study is that although a city may be implementing many sustainable policies, Portney fails to determine whether or not these policies are having an effect³⁴. Only time will tell which policies positively affect a city the most and transform such cities into sustainable areas.

In addition to his list of the 55 largest U.S. cities, Portney lists a second set of thirteen cities in which from 2003 to 2011 data was collected and found that these cities have increased the number of sustainable measures implemented, therefore are striving to become more

³² The table that lists Portney's 38 criteria to determine a city's SI score is listed in Appendix A.

³³ Portney defines sustainable initiative programs as, "any set of activities, programs, policies, or other efforts whose purpose is explicitly to contribute to becoming more sustainable." Portney, *Taking Sustainable Cities Seriously*, 42.

³⁴ Portney, *Taking Sustainable Cities Seriously*, 37 & 41.

sustainable³⁵. These cities serve as a reasonable representation of U.S. cities because at least one city from the list falls in every region within the United States. It should be emphasized, however, that these thirteen cities are *not the most* sustainable cities within the United States according to Portney's work and methodology. Rather, these cities have increased the number of sustainability programs implemented from the years 2003 to 2011, thus they are intervening in 'business as usual' policymaking to promote sustainability, and so, taking sustainability seriously. According to Portney, this suggests that "cities' idea about what constitutes sustainability, and what they can and should do to try to become more sustainable, has expanded and matured³⁶. Thus, this chapter will show if cities' economic growth has *also* expanded and matured as well, in addition to the growth of their sustainable policy initiatives.

Below I will show the relationship between cities' SI score and *median household income* (as a proxy for economic growth). I pose these specific empirical questions:

- Does a higher SI score positively correlate with median household income? If not, why does it look the way it does?
- Does the change in a city's SI score positively correlate with the change of median household income over time?
 - Will these two regressions look the same? And if not, why³⁷?

As an extension to the work on median household income, *poverty* is examined as a second variable. Among the 13 cities, I predict that in each city, the percentage of poverty will rise between the years 2003 and 2011. Hence, I seek to answer these further specific empirical questions:

³⁶ Portney, *Taking Sustainable Cities Seriously*, 83.

³⁷ Of course, even if this regression is positively correlated, I am acutely aware that there are too many other factors that could be causing and/or greatly influencing this relationship.

- In which cities does the percentage of poverty increase the most and least?
- What are the differences between the cities in which poverty rose more than the others, and why?
- What relationships and conclusions can be drawn from this information in relation to a city's SI score? Why is this significant?

Taking this into consideration, these two relationships are greatly important to understand the political dimensions as to why local officials and policymakers continue to initiate and enhance interventionist sustainability programs. If a higher SI score shows a positive correlation with higher economic growth, then why, if at all, does poverty also rise? If poverty is indeed rising in all of these cities, despite their efforts to achieve sustainability, what may explain why progressive policymakers and government officials still nonetheless engage and implement sustainable measures without taking into consideration the disadvantages these policies have for low-income residents? Admittedly, these questions cannot be answered only by delving into the data, yet they may stand alone as valuable information and be of interest to policymakers and city government officials that are pursuing sustainability.

Theory: The degree to which a city takes sustainability seriously is connected to median household income in cities through a process over time. To begin, cities that implement sustainable policies and take sustainability seriously more often than not include a division of smart growth policies. In fact, Portney asserts, “in nearly *every* major city in the United States, a new model of economic development seems to be emerging...and this model is rooted in many of the [smart growth] programs and approaches described above”³⁸. Thus, the conception of smart growth is growing rapidly and being implemented all across the U.S. More often than not,

³⁸ Portney, *Taking Sustainable Cities Seriously*, 143 (italics added).

pursuing smart growth in cities increases median household income over time as vacant buildings are renovated and retrofitted and the city is seen as investing in its infrastructure in a sustainable manner.

Indeed, Portney ties sustainable cities having a division of smart growth programs directly into increasing economic growth and economic development. He states, “Sometimes cities try to achieve a balance in economic development, creating frameworks within which development can take place; the balance often includes a healthy dose of zoning and land use regulation”³⁹. Thus cities that are taking sustainability seriously are developing smart growth programs in pursuit of economic development.

If the city engages in smart growth policies and renews buildings from within, it increases the QoL for those already residing in the city, in addition to attracting others from outside. It is at this point that, I suggest, inequality rises thus spurring a rise in the rate of poverty and/or gentrification. Here is where I see inequality as being interlaced with interventionist policy to take sustainability seriously. In fact, Portney discusses this relationship as a parallel to the impact of growth management policies on local housing prices⁴⁰. So, if a city implements sustainability policies and programs (smart growth), the city over time will become more sustainable, cleaner, and hold more aesthetic value. More people will be inclined and attracted to live in a cleaner, better-regulated city. This claim can be supported by current news releases explaining this phenomenon. In a recent publication, author William Fulton states, “Today we’re celebrating the revival of cities and city neighborhoods. The population of big cities in the United States is going up for the first time in my lifetime”⁴¹. This trend is also supported by

³⁹ Portney, *Taking Sustainable Cities Seriously*, 128.

⁴⁰ See bottom of page 144 in Portney.

⁴¹ William Fulton. “To Help Poor Neighborhoods, Urban Planners Have to do More Than Urban Planning.” *Governing Daily Journal*, October, 2015.

American Community Survey (ACS) data recently released (October 2nd, 2015) that shows a pervasive pattern of affluent population gains in the nation's largest cities⁴². With the influx of these populations, gentrification may occur displacing and forcing lower income residents to relocate. As a result, median household income will rise, spur greater economic growth, and lead to a more thriving, prosperous city.

Section 3.2 – Methodology & Hypotheses

This section explains my hypotheses pertaining to median household income – used as a proxy for economic growth – and poverty rates. I further contrast this research to that of Portney's work by using median household income to show how wealth is distributed within cities. I explore these questions using data from ACS⁴³. Funded by the United States government, this branch of the U.S. Census Bureau is extremely useful in order to find data on U.S. cities. ACS collects data each year, and for this research will provide data for all years from 2003 to 2011. Examining cities over time and the changes that occurred between these years will shed light on overall occurring trends⁴⁴.

Hypothesis 1: I hypothesize that if cities implement sustainable policies, they will experience a boost in local economic growth. Portney addresses this claim by stating, “there is growing evidence that cities that successfully adopt and implement sustainability-related programs and policies experience higher rates of economic growth than other cities”⁴⁵.

In contrast to Portney, I use median household income to show how wealth is distributed within cities. Although GDP is also an indicator of wealth, it fails to account for *how* this wealth

⁴² William H. Frey, “More big cities are gaining white population, census data show,” Metropolitan Policy Program at Brookings. October 2, 2015. View this graph in Appendix A.

⁴³ www.census.gov/programs-surveys/acs/. This site is government funded and free of charge to all residents of the United States. The Census Bureau's mission statement is to be the leading source of quality data about the United State's people and economy.

⁴⁴ For a discussion on the definitional boundary of a city, see Appendix A.

⁴⁵ Portney, *Taking Sustainable Cities Seriously*, 9.

is distributed across individuals. GDP can merely point to an overall account of wealth, but for cities, that wealth could be concentrated in the top 2% of the city. In an extremely influential report, leading ‘interventionists’ Sen, Stiglitz, and Fitoussi argue that:

Average measures of per-capita income and wealth give no indication of how the available resources are distributed across persons or households...A conceptually simple way of capturing distribution aspects is to measure *median* income (the income such that half of all individuals are above that income, and half below), median consumption and median wealth. The median individual is, in some sense, the “typical” individual. If inequality increases, the differences between medians and averages may well increase, so a focus on averages does not give an accurate picture of the economic well-being of the “typical” member of society (italics in original)⁴⁶.

Portney captures the relationship between pursuing sustainability and economic growth through a simple bivariate regression using the change in income per capita as the dependent variable.

Similar to GDP, income per capita examines the wealth of cities, but fails to account for its distribution or spread. In contrast, median household income targets the wealth distribution of the city and the means of the ‘common’ individual. Focusing on the individual is crucial for addressing the QoL because economic models that solely operationalize growth and profit do not account for the individual.

Hypothesis 2: My second hypothesis pertains to poverty. I predict that poverty rates will increase in these cities between 2003 and 2011. This hypothesis can be seen as an extension to the first, expanding on the idea of smart growth as fostering the phenomenon of ‘gentrification’ within cities. As cities begin to take sustainability seriously, cities will enact smart growth policies that renovate and reconstruct old buildings and/or build new, greener buildings in the space of old ones. Smart growth policy measures will unfortunately relocate or displace poor and low-income residents, in other words, engage in the process of gentrification. Due to this, there will be an increase in residents whom are displaced and forced to spend money (which may not

⁴⁶ Stiglitz, Sen, and Fitoussi. “*Mismeasuring Our Lives: Why the GDP Doesn’t Add Up – The Report of the Commission on the Measurement of Economic Performance and Social Progress*”.

be available) in order to relocate thus pushing them further into poverty, and thus increasing the poverty rate.

For the purpose of this research, I focus on Portney's smaller set of 13 cities, as these have established sustainability plans since 2003 and have been tracked over time to examine their progress. These cities are recognized as having the greatest change over time in their sustainability programs thus changes in median household income and poverty paints a clearer picture of this relationship.

Section 3.3 – Findings

In this section and section 3.4, I present my findings from the quantitative research. First, two line graphs are presented to illustrate the relationship between Portney's comprehensive list of 55 cities' SI scores and median household income and poverty. Next, I explain four regression graphs (found in Appendix B) that illustrate snapshots in time of the relationship between median household income and poverty to SI scores in 2003 and 2011. However, in these sections I present the regression graphs and tables pertaining to the change in cities' SI scores and the change in median household income and poverty.

From Portney's comprehensive list of 55 cities, I have divided the cities into three groups. The first tier consists of cities with the highest sustainability scores, the second with medium sustainability scores, and the third with low sustainability scores. The SI scores of cities for each group is averaged and plotted against the cities' averaged median household income over time between the years 2011-2014 in a simple line graph. This is useful to show the relationship over time of median household income of cities and to compare their general trends.

In order to support my theory, the lines that represent high, medium, and low cities should not intersect, and should fall according to their averaged SI score (thus cities in the

highest group would generally have higher averaged median household incomes and thus would fall above the lines for the median and low cities. The median cities' line would fall above the low, and the low would be the last).

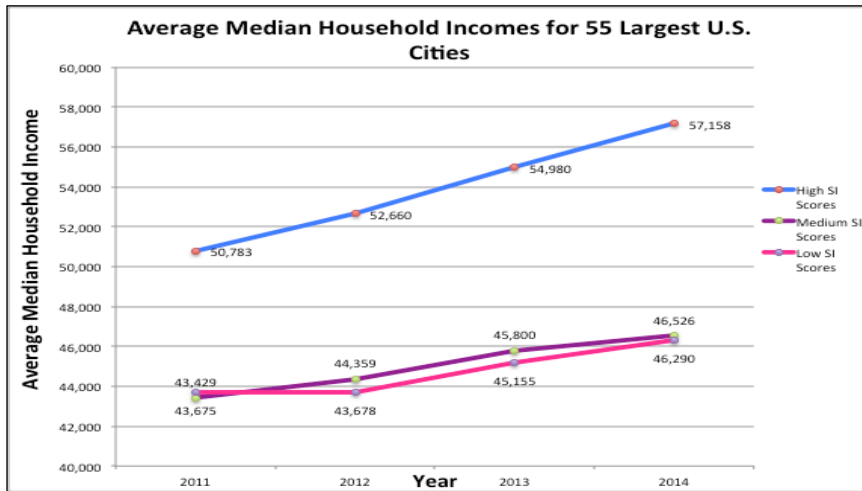


Figure 3.1

As shown in Fig. 3.1, cities in the highest group do, on average, have much higher median household incomes, and over time seem to be experiencing a steady increase in economic growth. Interestingly, the medium and low lines do not fall as expected. Instead, cities with low SI scores fall above the line of medium SI scores. This could perhaps be attributed to these cities pursuing the old conception of the city as a growth machine though a “attract and retain” strategy, and that these cities have not reached their upper limit of their potential economic growth under this model and thus still continue to do so. Moreover, it is quite possible that there are major outliers (particularly low ones) in the total list of median household income figures for cities in the medium tier that when averaged with other figures skew the average down. This may suggest that since cities in the middle tier have implemented more sustainable policies, some of these policies require more time to experience anticipated results. Cities in the lowest tier are taking sustainability seriously by first reaching for the low hanging fruit. In other words, these cities are implementing policies that are easier to implement and take less time to

see results, for example, recycling programs as opposed to zoning policy. Thus, intervention takes time and patience on the part of politicians and policymakers, and seemingly directly proportionate to the complexity and lead time of change. More so, it is notable that perhaps recycling does not impact the growth machine to the extent that zoning policy does. This point is discussed further in chapter 8.

As expected, all cities show a drop in averaged median household income after 2008, this is most notably due to the 2007-'08 economic recession. However, on average all recover by 2012 and experience steady increases. From 2011 onward, the medium tier shows an increase in averaged median household income, ranking above the lowest tier showing improvement from previous years and illustrating the original prediction. Cities that have implemented more sustainable policies show tremendous economic growth over time, thus suggesting that taking sustainability seriously has its rewards. But of course, and as previously mentioned, correlation is not causation. The graph in figure 3.2 below illustrates averaged poverty rates for each tier of cities taking sustainability seriously. Interestingly, cities with high SI scores maintain lower poverty rates than cities with medium or low SI scores. Furthermore, and not as predicted, cities with low SI scores maintain lower poverty rates than cities with medium SI scores. Evidently,

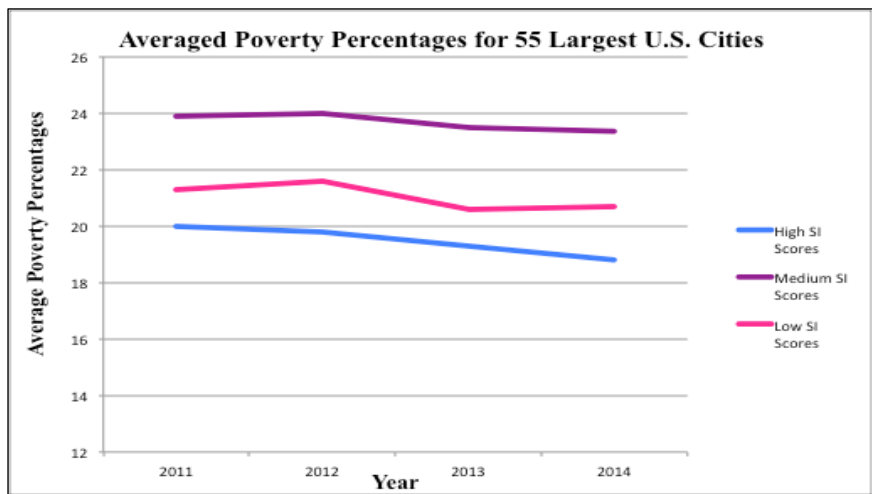


Figure 3.2

more factors unobserved here are at play and impact poverty rates than solely efforts to become more sustainable.

I now examine Portney's smaller list of 13 cities. The first regression compares the cities' SI scores with median household income for the year 2003⁴⁷. This regression shows a positive correlation that, (as predicted) the more programs implemented, the higher the cities' median household income. Seattle, Portland, San Francisco, and San Jose are not surprising, ranking at the top of the line maintaining SI scores of 30, 25, 23, and 26 respectively in 2003. A 95% confidence interval⁴⁸ of the residuals from this regression shows that only five cities fall outside this interval. These cities include Cleveland, Tucson, Tampa, San Jose and San Francisco⁴⁹. Although this finding does not fully support my theory, it is less of a concern because 2003 is merely the first year that this set of 13 cities adopted sustainable policies.

Figure 4⁵⁰ shows the relationship between median household income and cities' SI scores for 2011. Although the spread of cities appears to be greater than in 2003, this graph nonetheless shows a stronger relationship due to a steeper slope,⁵¹ thus suggesting that over time, sustainability policies slowly boost economic growth. For the 2011 regression, more cities fall into the 95% confidence interval than in 2003, and more fall on the very edge of its boundaries⁵². The two obvious outliers include San Jose and Tucson, similar to the findings from the 2003 regression.

Although the 2003 graph visually and numerically shows a stronger relationship between the independent and dependent variables, the 2011 graph does hold a smaller x-axis range (from

⁴⁷ See this regression in Appendix B, Figure 2. The 2003 median household income figures were adjusted to 2011 inflation rates for consistency.

⁴⁸ Figure 3, shown in Appendix B.

⁴⁹ The 2003 confidence interval is shown in Appendix B.

⁵⁰ Shown in Appendix B.

⁵¹ The slope of the line for 2003 is 1273.743. For 2011 it is 1431.069. The regression tables for both of these graphs are provided in the appendix.

⁵² Confidence interval graphs are located in Appendix B.

20-35). Thus, although it looks more chaotic, these cities collectively have higher SI scores and the variation between them is much smaller than in 2003. Although these regressions show positive results, the raw data for each city is important to analyze. All cities, with the exception of Cleveland, OH, did not experience an increase in median household income. Instead, all cities either experienced a decrease or maintained similar figures between these two years. This finding is illustrated in figure 3.3, which shows the relationship between the change in SI scores and the change in median household income.

It should be sufficiently stressed that correlation does not equate to causation and that many other variables could explain this relationship. For example, a change in a city’s political ideology or political leaders, influxes in businesses and residents can all affect this relationship. In other words, a characteristic(s) of a city or area that are not fixed and can change relatively frequently each year is not held constant with these regressions. Thus, to control for these frequent changes, the third regression compares the *change* in each city’s SI score (again as the independent variable) with the *change* in median household income in each city between 2003-2011.

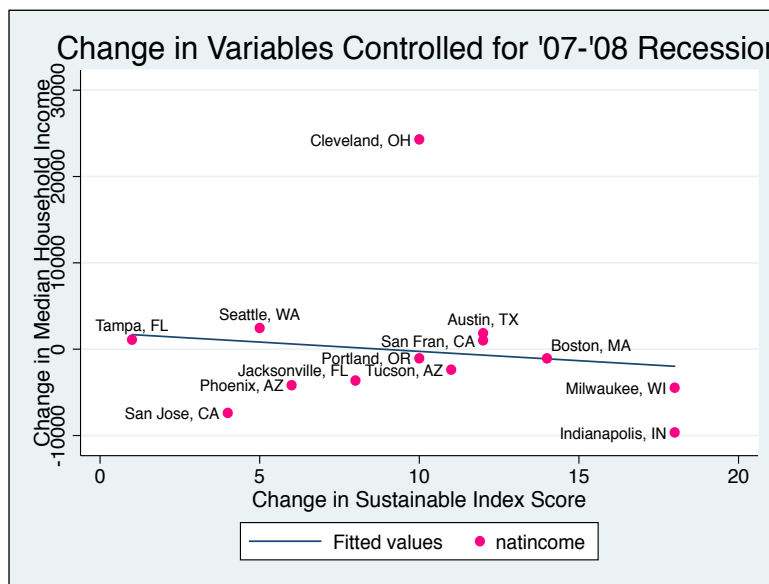


Figure 3.3

This regression in figure 3.3 controls for many of the frequent changes that occur in cities from year to year as mentioned above, while emphasizing elements that are slow to change, for example the effects of sustainable policies on a city. I hoped to find a positive relationship in this regression to suggest that sustainable policies increase median household income; unfortunately this is not the case. This regression is slightly negative, with a slope of -215.60, which suggests that positive change in a city's SI score does not equate to a positive change in median household income, suggesting that sustainable policies may have a negative effect on the local economy. Despite the expectation to fall in the upper left-hand quadrant of the regression in figure 3.3, the most sustainable cities (Portland, Seattle, and San Francisco) instead show a more spread out and varied orientation. This regression has been controlled for the 2007-'08 economic recession by subtracting away the change in median household income at the national level⁵³. Unfortunately, this process still resulted in negative figures, which have produced a negative graph only to imply that the recession took a major toll on cities and their prospects for increasing median household income.

Table 1 Regression Coefficients ^a	
Variable	Coefficient (Standard Error)
Constant	1901.21 (5299.304)
<u>natincome</u>	
SISchange	-215.6026 (478.421)
a. Dependent Variable: Change in Median Household Income = "natincome" **p < .01, *p < .05	

Figure 3.4

⁵³ See figure 6 in Appendix B.

Figure 3.4 above tabulates the regression coefficients that accompany Figure 3.3. Unfortunately, this relationship is not statistically significant; however again, much of these cities' growth was hindered by the 2007-'08 economic recession.

Section 3.4 – Poverty

Similar to the 2003 and 2011 regressions comparing median household income and SI scores, the first two regressions illustrate the relationship between each city's SI score and the poverty rates for each year. The 2003 poverty regression⁵⁴ shows a very strong negative relationship, which suggests that as a city increases the SI score, poverty rates will decrease. This is a completely opposite relationship from the predicted hypothesis.

The 2011 poverty regression⁵⁵ shows the same negative relationship, except similar to the figures for median household income; the data points on the 2011 graph are again more spread out and varied. Cities with higher SI scores again are experiencing lower rates of poverty. This may suggest that sustainability policies are accounting for poor residents by funding or supporting low income housing options and programs. Alternately, according to these two relationships, it could also be the case that as a city implements more sustainability policies, their poverty rates decrease because poor populations are not staying within the boundaries of the city and instead have moved out of the city. In other words, the poor have been suffering under gentrification, as it seems that smart growth policies support the (re)-development of higher-end and more expensive housing options directed for middle and upper class residents. This point will become salient later in section 5.6 when I discuss cities that maintain high SI scores, yet

⁵⁴ Figure 8 in Appendix B.

⁵⁵ See Figure 10 in Appendix B.

have an abundance of vacant land and room to spare. Thus, instead of poverty rates increasing due to sustainability policies, the poor are left no choice but to move out of the city boundaries in search for more affordable housing, thus poverty rates decline. Alternatively, cities that lay at the bottom right hand corner are wealthier cities than those farther left. Thus it could be that wealthier cities host fewer poorer residents because the poor cannot afford to live in wealthy cities.

Although these two regressions illustrate a negative relationship between SI scores and poverty, among all cities, overall poverty percentages in each city have *increased* between 2003 and 2011, thus supporting the original hypothesis. In examining the raw data, each city experienced an increase in the poverty rate from 2003 to 2011. Although the 2011 regression maintains a slightly stronger negative relationship to poverty, both regressions are nonetheless very similar. The final regression, in Figure 3.5 below – a change in the SI score versus the change in poverty – shows the relationship between the changes in these two variables.

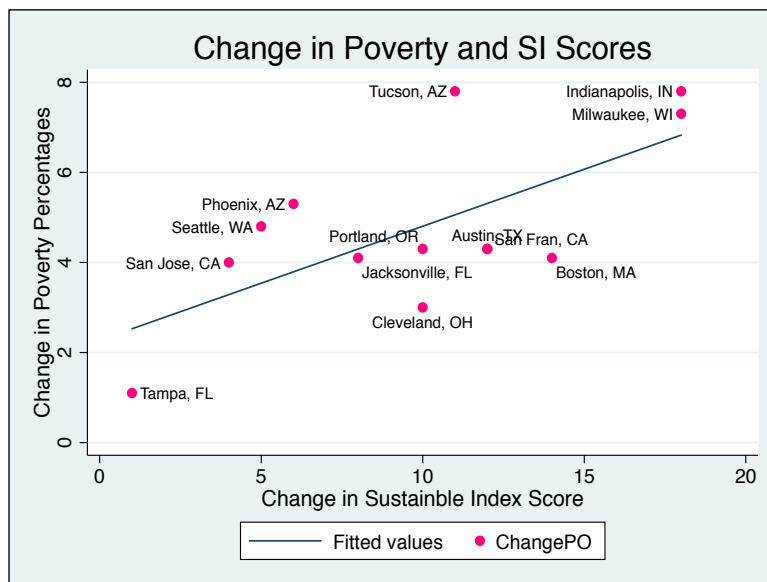


Figure 3.5

The regression Figure 3.5 produces surprising results. This positive relationship suggests that over time, taking sustainability seriously will inevitably lead to increases in poverty. Cities

with higher SI scores such as Portland, Seattle, and San Francisco, with only few changes in their sustainability programs, still experience changes in their poverty rates (increased). Interestingly, Milwaukee and Indianapolis, cities that added a total of 18 new programs and had major changes throughout the years in their sustainability programs also experienced the highest increase in poverty (both experienced above a 7.0% increase) thus placing them at the very top right-hand of the graph. Although the regressions of 2003 and 2011 show a negative relationship between poverty and SI scores and are merely a snapshot in time, this graph shows that the change in poverty and SI scores is perhaps more explanatory of the actual relationship. That is, cities' poverty rates will increase regardless, as cities increase their SI scores and take sustainability seriously, (as seen from 2003 and 2011) and will show a positive relationship between the two.

Below, Figure 3.6 shows the regression coefficients pertaining to Figure 3.5. This table shows that this relationship is not statistically significant at the .05 or .01 levels. However, and as previously mentioned, this is in large part due to the economic recession of 2007-'08.

Table 2 Regression Coefficients ^a	
Variable	Coefficient (Standard Error)
Constant	2.273791 (.9149188)
ChangePO	
SISchange	0.2530288 (0.825988)
a. Dependent Variable: Change in Poverty = "ChangePO" **p < .01, *p < .05	

Figure 3.6

Understandably this relationship involves many other factors that are not accounted for here, it still nonetheless is a very curious outcome. Possible explanations for this outcome will be discussed in further detail in Section 7.7. I find this relationship to be very interesting and more research is necessary to unveil its root causes.

Part 2 – Three City Case Studies

In part two of this thesis, I present case studies on three cities, in this order: Cleveland, Ohio, Indianapolis, Indiana, and Milwaukee, Wisconsin. Each chapter for each case study (chapters 5, 6 and 7, respectively) follows an identical structure. First, I provide a brief history of each city and highlight the settlement era, the city's boom, the bust, and lastly the period of revitalization to present-day for each city. This provides historical context that supplements my arguments for how and why each city came to take sustainability seriously in the way that it did. Then, I turn to review the political climate of each city by detailing the dynamics of local and state politics. As described in these sections, state politics can impact city policymaking, and in many cases, prevent policy from passing. Afterwards, I discuss each city's sustainability efforts by examining current programs and policies that have impacted the city. Many times, due to program design, these programs boost local economic growth. I detail how sustainability programs impact economic growth and also describe other factors that could possibly be driving growth. I then turn to examine each city's poverty situation and draw connections between cities' sustainability efforts, economic growth and poverty. Lastly, I describe the issue of gentrification for Cleveland, Indianapolis and Milwaukee. Lastly, I conclude the chapter by examining how each city attempts to tackle 'the triple bottom line'. The sections on sustainability efforts, economic growth, poverty, gentrification, and triple bottom line that pertain to each city are informed by expert interviews with city government officials in each city. Before presenting each case study, I now turn to Chapter 4 to describe the method that is used in order to study these cities in addition to detailing justifications for why these particular cities are examined.

Chapter 4 – Introduction & Justifications

Conducting a multiple case study analysis will round out what I have identified as insights into some of the consequences for the poorest cities that Portney identifies as taking sustainability seriously. When used to supplement a statistical (N) study, the case study method (n) supports an in-depth examination of a selection of cities with the aim of understanding specific dynamics at play in each city. The mixed-method approach thus supports a more robust form of generalization. However, this heightened robustness comes at a cost. The generalizations derived from the additional cases refer only to a specific type of city: one located in the upper Northeastern region of the United States with a prominent history of industrial manufacturing, currently a comparatively poorer city hosting a weaker housing market than other U.S. cities, and one that is fighting against sprawl and maintains an abundance of land. This city type lies within the second tier of cities that take sustainability seriously according to Portney with an average SI score in 2011 of 26. Therefore, with caution, characteristics of the three cities that I have chosen may offer generalization applicable to cities that fit such a typology.

Following Yin, the evidence provided from multiple cases is often considered more compelling, and the overall study is thus regarded as more robust⁵⁶. The logic of choosing these three cities is that they will predict similar results. The process of “literal replication”⁵⁷ is used because of major similarities shared amongst all three cities⁵⁸. In consideration of the 13 cities that I focused on in chapter 3, Cleveland, Ohio is a major outlier in the graphs illustrating the change in median household income and SI scores, in addition to the graph illustrating poverty

⁵⁶ Robert K. Yin, *Case Study Research: Design and Methods* (London: Sage Publications, 2014), 57.

⁵⁷ Literal replication calls for treating each case study the same in order to draw broad conclusions from all case studies. According to Yin, the replication logic is analogous to that used in experiments, thus the more you conduct, the more you understand the phenomena or what is being tested.

⁵⁸ All three cities are located within the ‘Rust Belt’ in the northeastern region of the United States and have shared similar histories of hosting manufacturing industries. Each city is located near one or more rivers that attracted early settlers and provided an agricultural sector to accommodate the growth of the region. Lastly, all the cities maintain similar 2011 sustainability index scores, thus representing the middle tier of the comprehensive list of 55 cities.

rates over time. In relation to other cities, Cleveland is curiously positioned much higher on each graph, thus showing far greater poverty rates over time and a greater difference between its SI score and median household income. As such, Cleveland deserves greater attention and more explanation. Why is this city experiencing a boom in economic growth? Is this boom wholly or partially due to internal factors, notably sustainability policy initiatives or are the most important factors external, such as proximity to the Cuyahoga River, a long history of industrial manufacturing, and federal intervention? Thus in this case study section, Cleveland will provide one case.

Of course, federal intervention may be an important issue when considering sustainability, economic development, and poverty across U.S. cities. Federal funding and competitive grant allocations are available for all three case study cities. In fact, U.S. Department of Housing and Urban Development (HUD) partners with the U.S. Department of Transportation (DOT) and the Environmental Protection Agency (EPA) through what is called the Sustainable Communities partnership. All three case study cities, Cleveland, Indianapolis and Milwaukee, have received funding for projects that either create or expand sustainable transportation or cleanup and redevelopment of former brownfield sites⁵⁹. Although there are limited municipal government resources for city projects, there are nonetheless opportunities available for U.S. cities to achieve sustainability. Therefore, I consider such federal intervention a common background factor that exerts a broadly similar influence on cities attempting to take sustainability seriously.

In addition to Cleveland, two more cities will form an embedded case study analysis of the single case – U.S. cities taking sustainability seriously. According to Yin, “The same single-

⁵⁹ “Partnership for Sustainable Communities: An Interagency Partnership, HUD, DOT, EPA”. Accessed May 3rd, 2016. <https://www.sustainablecommunities.gov/case-studies>.

case study involves units of analysis at more than one level. This occurs when, within a single case, attention is also given to...subunits”⁶⁰. In this research, the subunits will be three specific cities, Cleveland in addition to Indianapolis, IN and Milwaukee, WI. These cities are included due to their very interesting results in the previous section. In many of the findings, these cities are positioned very close to each other due to shared characteristics, namely similar poverty and median household income figures. Anecdotally, both cities share these similarities with Cleveland. Furthermore, in 2003 both these cities began with very low SI scores, but increased their scores by 18 in each city by 2011 thus showing major changes in their sustainability programs.

Method: In order to present well-rounded case studies, many sources of evidence are used to fully grasp and explain each city’s dynamic pertaining to the research questions listed in sections 1.1 and 3.1. First, I use historical data (documentation) to outline each city’s past in order to understand the broad historical influences for each city⁶¹. In addition, economic data (quantitative) retrieved from ACS provides numerical representation helpful for comparison to other case study cities. Lastly, social data is combined with three qualitative interviews that I conducted in each city with expert city government officials most knowledgeable of sustainability efforts pursued in each city⁶². Alongside each interview, direct observations from each city also inform results providing real and current contextual evidence to further inform each case study. Thus, the similarities between each case study city in addition to the variety of

⁶⁰ Yin, *Case Study Research: Design and Methods*, 53.

⁶¹ According to Yin, this type of evidence (documentation) is stable in that it can be reviewed repeatedly, unobtrusive because it is not created as a result of the case study, and broad in that it can cover many events over a long span of time and in many settings.

⁶² The interviews are anonymized and participants are given pseudo names such as Respondent A, B, and C.

sources of evidence will provide grounds to build general explanation(s) that fit each individual case, despite differences in their details⁶³.

⁶³ Yin, *Case Study Research: Design and Methods*, 148.

Chapter 5 – The Cleveland Outlier

Cleveland is an interesting case that deserves more attention. In graphs illustrating the change in median household income and SI scores, in addition to poverty rates over time, the city of Cleveland is a clear outlier and ranks higher than all other cities. In this chapter, I seek to understand why it is that Cleveland has prompted such extraordinary outcomes in its approach towards sustainability and economic growth, and offer some tentative explanations as to how this came about.

Section 5.1 – Brief History

Settlement: Cleveland has experienced a long history of industrial manufacturing, which has aided the city's economic growth. By the late 1800s, early industries that located in Cleveland included dairying, agricultural processing and coal processing⁶⁴. At the same time, steel and oil industries took root, which later became the core foundation for the city's future economic growth. These early industries heavily contributed to the city's manufacturing base, and in turn the city experienced unprecedented population growth throughout the early to mid 1900s.

Boom: Cleveland experienced great advancements post World War II, for example the completion of the St. Lawrence Seaway which, "allowed large ships to reach the Great Lakes, contributing to a steady growth in Cleveland's status as an international port...In the 1960s, the economy of metropolitan Cleveland roared in conjunction with that of the nation"⁶⁵. The St. Lawrence Seaway is a key element to how Cleveland has stood as a participant in the growing global economy. However, this has made Cleveland vulnerable to the changes within the

⁶⁴ Barney Warf and Brian Holly, "The Rise and Fall and Rise of Cleveland," *Annals of the American Academy of Political Science* 551 (1997): 210.

⁶⁵ Warf and Holly, "The Rise and Fall and Rise of Cleveland," 211.

international economy. At its height, Cleveland maintained a strong economic base by adapting and executing the “attract and retain” strategy, central to the idea of the city as a growth machine.

Bust: Unfortunately, like many other American industrial cities, by the 1970s Cleveland slowly began to experience a reversal of prosperity. The city was besieged by foreign competition, deindustrialization, numerous plant closures, and rising unemployment, which led to enormous socioeconomic inequality in addition to severe population loss⁶⁶. For two decades, until the 1990s, Cleveland experienced the devastating effects of nationwide economic restructuring, where jobs shifted from manufacturing to service industries. Corporate layoffs surged as firms downsized to meet the standards and prerequisites to become globally competitive. As a result, Warf and Holly explain, “Clevelanders’ real median family income, which had risen 22 percent throughout the 1960s, slid by 11 percent in the 1970s”⁶⁷. Across the nation, many American cities experienced severe national symptoms during this “bust” phase within the United States economy. White flight began to occur and the weak economy resulted in a very unfortunate drop in the real value of the dollar, plunging the purchasing power of the minimum wage to very low levels of economic value, pushing people and the poor further into poverty.

Revitalization: Since the 1990s, the revitalization of Cleveland was due in part by a reversal in status and the emergence of reindustrialization in the city. Resurgent industry took root again and began to offer skilled, high technology jobs. According to King at the U.S. Department of Commerce, “While its unemployment rate in 1996 (5.1 percent) was about the same as the national average (5.4 percent), Cleveland experienced a 6.3 percent growth in

⁶⁶ Warf and Holly, “The Rise and Fall and Rise of Cleveland,” 211.

⁶⁷ Warf and Holly, “The Rise and Fall and Rise of Cleveland,” 211.

business establishments in the 1990s and a 4 percent increase in job growth between 1994 and 1996”⁶⁸. The population influx prompted a growth in the service industry offering low-wage jobs. The globalization of the U.S. economy presented industry in Cleveland with the opportunity to export goods such as merchandise, chemicals, industrial machinery and transportation equipment. Furthermore, the region has become a leading center for research into polymers and liquid crystals⁶⁹. Overall, it seems as if the city’s capacity to offer a diversity of businesses, firms, and industry generates a strong economic environment. In his work, Mallach discusses Cleveland’s growth with reference to his own research,

As the city’s resident workforce has shrunk, the city’s employers are becoming progressively less dependent on that workforce as a source of people to fill their jobs. The job base in all 10 cities substantially exceeds the size of the resident workforce; taken as a whole, they show a ratio of 1.48 jobs for each resident worker, with 3 cities –Cincinnati, Cleveland, and Pittsburgh – with job/worker ratios close to or above 2.0⁷⁰.

Mallach offers what may be a strong reason as to why Cleveland shows such intense economic revitalization with a skyrocketing median household income. However, this unprecedented economic boom does not explain Cleveland’s poverty rate, which as illustrated in Chapter 3, is also skyrocketing. This will be discussed in further detail in section 5.5.

Section 5.2 – Local & State Politics

In recent decades, the state of Ohio has been characterized as a swing state. Ohio determined the 2004 election and ushered in Republican presidential candidate George W. Bush. However, four years later in 2008, the state reversed its course and voted Democrat thus electing

⁶⁸ Glenn King, “Census Brief: ‘Rust Belt’ Rebounds”, *U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census*, December 1998, accessed April 2, 2016, <https://www.census.gov/prod/99pubs/cenbr987.pdf>.

⁶⁹ Warf and Holly, “The Rise and Fall and Rise of Cleveland,” 215.

⁷⁰ Alan Mallach, “The Uncoupling of the Economic City: Increasing Spatial and Economic Polarization in American Older Industrial Cities,” *Urban Affairs Review* 51, no. 4 (2015): 456.

President Obama to the White House⁷¹. To this day, Ohio is characterized as the ‘battleground state’, and few presidents have reached the White House without prevailing in the state⁷².

Political control of the state oscillates between Republicans and Democrats. Currently, Republicans outnumber Democrats in both the Ohio State Senate (23-10)⁷³ and in the Ohio House of Representatives (65-34)⁷⁴. Similar to most urban areas, the major cities in Ohio, including Akron, Columbus, Cincinnati, and of course Cleveland host Democratic mayors, vote Democrat, and have consistently promoted liberal policies. Thus, with predominantly Republican representation in state politics, political decisions made at the state level significantly influence the functions of liberal, Democratic cities, especially in Cleveland. For example, according to Cleveland’s local news outpost, recently seventy Ohio cities and four villages have lost at least \$1 million a year due to state budget and tax decisions made by current Governor and former presidential candidate John Kasich and the Republican-controlled legislator since 2011. Larger cities suffered the most, many of which are from the Cleveland-Akron area⁷⁵. Like many Republican-led states, tax cuts and policies to save money at the ballot box are seemingly quite popular, thus leaving little hope for funding to pursue sustainability and sustainability projects. As with other conservative states, the majority of funding for the Office of Sustainability in Cleveland and the projects and initiatives implemented are from grants, various foundations, and local municipal government. Very rarely, if ever, is funding provided through the state.

⁷¹ Daniel J. Coffey, John C. Green, David B. Cohen, and Stephen C. Brooks, *Buckeye Battleground: Ohio, Campaigns, and Elections in the Twenty-First Century* (Akron: University of Akron Press, 2011), 1-2.

⁷² Coffey et al., *Buckeye Battleground*, 2.

⁷³ “The Ohio State Senate, 131st General Assembly, Senate Directory,” The Ohio Senate, accessed March 25th, 2016. <http://ohiosenate.gov/members/senate-directory>.

⁷⁴ “The Ohio House of Representatives, 131st General Assembly Directory,” The Ohio House of Representatives, accessed March 25th, 2016. <http://www.ohiohouse.gov/members/member-directory>.

⁷⁵ Rich Exner, “12 smaller cities losing millions from Ohio cuts”, Cleveland.com: Covering Northeast Ohio. URL: http://www.cleveland.com/datacentral/index.ssf/2016/03/12_smaller_cities_losing_milli.html#0.

Section 5.3 – Sustainability

Like many poorer U.S. cities, Cleveland’s municipal government has limited resources. Thus, it is crucial for the city to strategically and carefully devise efficient and effective programs that will generate the best possible outcomes. A strong relationship exists between local government, local business, non-profits and other key actors in Cleveland, which allows for strong partnerships to be made in order to successfully create programs and promote sustainability. Without such strong partnerships, Cleveland could not excel at becoming more sustainable, and would perhaps remain beholden to an outdated economic development model of “attract and retain” and the city as a growth machine.

Cleveland’s city residents are the primary actors pushing for sustainability. According to respondent A, “Hundreds and hundreds of engaged residents...care about the city and are passionate about sustainability. That is our [the government’s] main motivating force”⁷⁶. Thus, an excited and engaged local community pushing for sustainability is perhaps a major indicator for why the city has experienced an increase in policies and initiatives, and thus an increase in the SI score. Local residents are leading by example by taking advantage of the incentives and programs offered by the city government. This phenomenon has made the most impact in scaling up Cleveland’s sustainability progress, from 14 programs in 2003 to 24 programs in 2011⁷⁷. The enthusiasm seen by residents is particularly interesting because local community members are more likely to engage in sustainable lifestyles if their friends and family are engaged. This butterfly effect can have significant and positive prospects for Cleveland’s future sustainability outlook. In terms of class, generally white affluent populations are involved with retrofitting programs for houses and installing technology for renewable energy, mainly because they have

⁷⁶ Respondent A, Cleveland, Ohio, March 7th, 2016.

⁷⁷ Portney, *Taking Sustainable Cities Seriously*, 83.

secured stable housing and own rather than rent property. Involvement in these programs is not as common for poorer populations.

Not only are city residents taking sustainability seriously, but also various local businesses are engaged with the city's efforts to become more sustainable as well, as they have engrained sustainability into their business models. According to Respondent A, roughly 10-20 local businesses take sustainability seriously and look to local government for guidance⁷⁸. Similar to other city governments promoting sustainability, Cleveland rarely mandates policy requirements on local businesses, but instead provides incentives, programs, and initiatives in order to engage and prompt business to take more leadership roles. This approach has resulted in significant, hopefully sustainable, economic growth and has had a positive effect on some businesses that were possibly apathetic towards environmental protection.

In terms of demographics, Cleveland's more educated, affluent white population undertakes sustainability efforts more so than any other group. Generally speaking, becoming more sustainable requires time, effort, and resources that poor populations generally do not have. Poorer residents, in many cases, do not own or have access to sufficient resources such as personal computers, internet access, or smart phones that allow them to access sustainability programs offered by city governments. Furthermore, many work long hours at low wages in order to sustain themselves, thus limiting their time to engage in community projects. However, the poor do take part in sustainable agriculture and have built many urban community gardens in poorer neighborhoods.

There are numerous non-profit organizations that primarily seek to promote sustainability within Cleveland. Partnerships among non-profits and municipal government are key towards any sustainability program or initiative. Various examples include GreenCityBlueLake, Clean

⁷⁸ Respondent A, Cleveland, Ohio, March 7th, 2016.

Fuels Ohio, Green Energy Ohio, and the Generation Foundation. Many strive to reach and influence all local groups, even low income. Specifically, Green Energy Ohio offers renewable energy training programs at local community colleges, in addition to providing information about courses and degrees in the renewable energy sector. This is particularly salient for Cleveland in order to fill the gap between high tech renewable energy jobs, which require college-educated workers and low paying jobs for uneducated poorer populations.

However, not all businesses pursue sustainable practices, especially those within the manufacturing industry. Known for its dirty and environmentally polluting practices, manufacturing is still very much a key characteristic of Cleveland's past, present and future. The city continues to promote manufacturing despite its efforts to become more sustainable, thus balancing sustainability and manufacturing is tricky and comes with costs. Cleveland upholds the argument that manufacturing must happen somewhere in the world for specialized and consumer products to be produced. Thus, it is more advantageous to have manufacturing take place in Cleveland than in other areas within the United States due to the city's long history of industrial manufacturing and previously established controls on air and water pollution that mitigate the local impacts of such pollution. Thus to city government officials, the decision to continue to promote manufacturing in Cleveland is unquestionable, despite its harmful effects on the environment.

Overall, sustainability efforts in Cleveland have grown due to municipal government, business engagement, partnerships and predominantly eager and passionate residents seeking to improve a formerly polluted industrialized city in hopes to create a more sustainable one. However, there are always obstacles toward achieving greater sustainability in a city such as Cleveland, for example incentivizing smaller manufacturing companies to participate.

Nonetheless, Cleveland strives for sustainability and is becoming a leader among other cities because of its efforts.

Section 5.4 – Economic Growth

Although Cleveland is still very much a poor city, it has still nonetheless experienced a great boom in economic growth with a \$27,524 increase in median household income between 2003 and 2011, signaling dramatic economic growth. Like most former industrialized cities, Cleveland was hit hard by the 2007-‘08 nationwide recession, and is thus recovering from its disastrous effects. Suffering under a weak market and limited resources, Cleveland must work hard to promote sustainable economic development; it is occurring, yet slowly. Cleveland’s Office of Sustainability works diligently to alter opportunities for economic growth to include sustainable elements, most notably in energy programs because of its immediate cost savings. For example, saving money on utility bills allows residents to spend more within the local economy. Similar to Milwaukee, the city promotes an initiative called Reimagine Cleveland, which is aimed at beautifying and reconstructing vacant lots for reuse. This can attract newcomers to the area, thus spurring economic development and median household income.

In Portney’s discussion of smart growth in cities, he argues that pursuing planned economic development, in an effort to avoid abandoned and deteriorating inner-city infrastructure...promotes economic growth and a quality of life for city residents⁷⁹. Thus, Cleveland and Milwaukee serve as real examples that smart growth is successful. Furthermore, sustainable transportation programs such as bike sharing is directly linked to increased economic growth around the areas where bike stations are located. According to Respondent C, studies from Minneapolis have shown that the installation of bike-sharing stations have resulted in

⁷⁹ Portney, *Taking Sustainable Cities Seriously*, 126.

billions of dollars of development within the corridors that they are located, thus significantly boosting local economic growth⁸⁰. Overall, with programs and initiatives such as these, taking sustainability seriously at the municipal level has led to economic growth, but explains only one part of Cleveland's era of revitalization.

Cleveland hosts a variety of new industries that are booming and are having significant impact on the local economy, one of which is the growing research industry. Newly established companies such as Quasar focuses on research and innovation of renewable energy practices such as bioconversion. Bioconversion is a process that converts local food waste (from restaurants, homes, etc.) into energy. This energy is then fed back into the city's energy grid where businesses and residents buy it to heat and light their homes and buildings. This growing industry can promote economic growth by employing local residents, and is completely sustainable. Cleveland is unique in its attempt towards taking sustainability seriously because it has managed to utilize its foundational base of heavy industrial manufacturing in order to creatively innovate new, sustainable industries. Cleveland has capitalized on constructing the resources, such as tanks and metal infrastructure, and facilities needed in order to pursue alternative energy, such as bioconversion as explained above, in addition to solar and wind. Using the city's resources sustains industrial manufacturing for what is needed in order to pursue new and growing sustainable industries such as urban agriculture, renewable energy, and transportation among others.

Although not distinctly 'sustainable' in the environmental sense, health care is also another major industry that is feeding into the city's overall economic growth and is not immediately "dirty". This industry is diversifying the city's economic base and it is booming as

⁸⁰ Respondent C, City of Milwaukee, March 11th, 2016.

research and new developments are undertaken to provide medical facilities. It has also attracted many young professionals to the city in search for jobs in the health care industry.

Due to these booming industries, Cleveland is experiencing a growth in millennials and entrepreneurs in the city, which has increased the city's human creativity base and sparked economic growth. In his work, Richard Florida coins the term "the creative class" and argues that a city's wealth should not solely be measured by human capital, but also by the character of the labor force to include social culture and cultural diversity⁸¹. With growing industries that attract and recruit educated workers into the area, Cleveland is experiencing an increase the city's 'brain game'. Such increases expand the population, which lead to higher tax revenue gains that are directly fed back into public programs that benefit residents. Growth in industries and educated populations in the city foster economic growth over time, and can thus explain Cleveland's increase in median household income from 2003 to 2011. However, is this growth spread evenly throughout the city? Is it only wealthier populations that are benefiting from this growth, thus leaving the poor out? Despite these growing industries, Cleveland is very much experiencing an 'uncoupling of the economy' as described by Mallach. First hand observation suggests that some neighborhoods are booming meanwhile others are severely depressed, thus leading to areas that are not growing the local economy and others that are. This could in part contribute to why Cleveland's growth is steady, but somewhat staggered. There is an obvious gap between a lack of low-income jobs and the creation of new middle class jobs in various industries. This is perhaps another indicator for the increase in poverty rates. Although Cleveland is taking sustainability seriously, the city nonetheless struggles to create meaningful and sustainable jobs for a majority of its residents.

⁸¹ Portney, *Taking Sustainable Cities Seriously*, 147.

Section 5.5 – Poverty

According to a local news report for the Northeast Ohio region, a decade after being declared the nation’s poorest big city, one in three Clevelanders remain in poverty and the rate exceeds 50% for children⁸². As seen in Chapter 3 of this study, Cleveland’s poverty increased significantly between 2003 and 2011. In 2011, Cleveland’s poverty rate was at 34.3% and has increased to 35.9% today⁸³. Over the past 5 decades, like many former heavily industrialized cities, Cleveland has lost many manufacturing jobs. This has been the biggest driver of poverty specific to Cleveland despite the 2007-‘08 economic recession.

Despite growth in a variety of other industries, namely health care, sustainable industries, such as solar, wind, and bioconversion, many of the jobs offered in these industries target middle class residents that often hold college degrees. This limits the opportunities for non-college educated residents; especially as low-income manufacturing jobs become sparser. In terms of sustainability, few programs create local jobs for low-income, non-college educated residents. The city government has funded many community garden projects in poorer areas, which have employed roughly 15-40 people per neighborhood. But despite these efforts, sustainable agriculture has produced nothing to scale.

Low-income jobs available now to lower class residents are service industry jobs. Warf and Holly note a significant point – more jobs do not necessarily equate to ‘good’ jobs, jobs that pay well and provide many benefits. In his work, Mallach notes:

Unfortunately, services tend to pay lower salaries than manufacturing jobs: the average service worker in Northeastern Ohio receives only 56 percent of the income of the average manufacturing employee. Cleveland, like much of the nation, has seen the substitution of relatively well-paying blue-collar jobs by lower-paying pink-collar and

⁸² Rick Exner, “Decade after being declared nation’s poorest big city, 1-in-3 Clevelanders remain in poverty”. Cleveland.com. http://www.cleveland.com/datacentral/index.ssf/2014/09/decade_after_being_declared_na.html, Accessed March 3rd, 2016.

⁸³ American Fact Finder, American Community Survey.

white-collar jobs. The distribution of income today in the region has grown more unequal over time⁸⁴.

Despite revitalization and impressive economic growth, there still seems to be an increasing trend of greater income inequality. This recurring theme is getting worse, especially in cities that host thousands of poor and homeless residents⁸⁵. With regards to Cleveland, Warf and Holly discuss this phenomenon:

Despite the growth of high-end retail malls downtown and on the urban periphery, central city housing abandonment has accelerated, and thousands remain homeless. Many inner-city blacks are denied access to the labor market by a lack of skills, a crime- and drug-ridden environment, racism, and a poor educational system... Trapped by poverty, lack of education, inadequate transportation, and little access to burgeoning suburban housing and labor markets, Cleveland's black population suffered much of the brunt of deindustrialization and few benefits of the recent renaissance in growth⁸⁶.

Since the 2000s, the city has experienced significant economic growth, however this growth perhaps signifies a leveling of the playing field for Cleveland in comparison to other cities.

Section 5.6 – Gentrification

As explicated in section 3.2, it was presumed that interventionist smart growth policies would in fact increase poverty rates by prompting gentrification and the displacement of poorer residents within cities. Interestingly, such a phenomenon is not the case in Cleveland. Since the 'white flight' of the 1950s, the city has been under capacity in terms of population. Cleveland's revitalization era has attracted some new residents into the area with the help of growing industries, which has encouraged and prompted economic growth. On this point, the issue of gentrification is not so much of a worry as it occurs in cities that maintain stronger housing markets. Cleveland has land and space available to host a greater number of residents in the city,

⁸⁴ Warf and Holly, "The Rise and Fall and Rise of Cleveland," 217.

⁸⁵ According to 2014 ACS data, 35.9% of the population live below the poverty level, and 63% of whom are African American.

⁸⁶ Warf and Holly, "The Rise and Fall and Rise of Cleveland," 219.

and even seeks to attract more. The abundance of land in Cleveland has in fact prohibited, in some instances, sustainability efforts. Tipping fees in landfills are very inexpensive due to cheap and available land. Therefore composting and recycling are less cost effective for businesses and companies. As a result, Cleveland is in some regards negatively impacted by the abundance of land and struggles to incentivize businesses to compost and recycle despite higher costs. With regards to available housing, city government officials are not yet challenged with gentrification. It is not the case that lower income residents are displaced due to an influx of population because there is enough space (at least currently) to host more residents without displacing current ones. This may in part explain Cleveland's "outlier" status in chapter 3. This dynamic may change if the city continues to grow and attract more residents, however as of now, Cleveland can stand to grow its local creative class in order to promote greater economic growth.

Section 5.7 – The Triple Bottom Line

Cities that take sustainability seriously try to account for the triple bottom line, an updated approach towards policymaking that accounts for three areas: sustainability, economic development and social equity. For Cleveland, the major tensions between these three factors tend to surface when it comes to development projects. Like other cities across the United States, Cleveland must cope with a weaker economic market, meaning property and real estate values are not high as in comparison to cities with stronger markets, such as San Francisco. Therefore, the city struggles to incentivize new development to the city. For example, in order to become more sustainable municipal government mandates sustainable building requirements for development projects, however this policy can often deter developers from constructing in areas without such requirements. If severe building requirements are in place to promote sustainable building, it is perhaps cheaper for developers to locate in other areas such as Akron, Ohio where

there are very few, if any, sustainable building requirements. Cleveland works to provide incentives to developers in order to attract new construction within the cities limits, however the challenge for the city is to balance the number of tax abatement programs and incentives to attract newcomers with maintaining policy and certain requirements in order to continue to promote sustainability.

Chapter 6 – Indianapolis, IN Case Study

Section 6.1 - Brief History

Settlement: Up until 1818, the city of Indianapolis was home to Native American nations including the Lenape (Delaware), Wea, Kickapoo, Miami, and the Potawatomi⁸⁷. Indianapolis flourished from the flat, fertile soil from the White River, in which a strong agricultural base was established. Similar to other cities in this region including Cleveland & Milwaukee, by the mid to late 1800s, the city was largely comprised of immigrants of European, eastern European, Irish and German decent, many of which built Indiana’s canals, roads, and railroads⁸⁸. Few African Americans resided in the city before 1840⁸⁹. The state legislature appointed Alexander Ralston, to plan the city of Indianapolis around what was then called ‘The Governors Circle’ which later became known as ‘Monument Circle’⁹⁰. On October 8th, 1821, after the finalization of the town plan, the land was divided into land plots and put on the market for purchase⁹¹.

Boom: By the late 1800s U.S. cities, including Indianapolis, experienced great technological advances. The White River was thought to benefit the city as it could be used to transport goods and passengers, however unfortunately, the river proved to be too narrow and shallow for large cargo ships and steamboats to pass through. Thus, the city’s first manufactured goods were brought in by flatboats and keelboats or overland by wagon along the White River. The construction of railroads helped the city establish a strong manufacturing base and improve freight and passenger transportation throughout the region. Indianapolis began its own

⁸⁷ Indiana Historical Society. “Immigration Time Line 1817 to 1890.” Indiana Historical Society. <http://www.indianahistory.org/teachers-students/teacher-resources/classroom-tools/immigration-and-ethnic-> (Accessed February 28th, 2016).

⁸⁸ Indiana Historical Society. “Immigration Time Line 1817 to 1890.” (Accessed February 28th, 2016).

⁸⁹ M. Teresa Baer, *Indianapolis: A City of Immigrants* (Indianapolis: Eugene and Marilyn Glick Indiana History Center, 2012), 4.

⁹⁰ Berry R. Sulgrove (1884). *History of Indianapolis and Marion County Indiana*.

⁹¹ Jacob Piat Dunn, *Greater Indianapolis: The History, the Industries, the Institutions, and the People of a City of Homes* (Chicago: The Lewis Publishing Company, 1910), 31-32.

manufacturing industry as early as 1898 when Waverly Electric began to mass produce the first battery operated car⁹². The automobile industry boomed in Indianapolis and became the city's gateway to hosting a variety of manufacturing industries. The city enjoyed great prosperity in the early 20th century and witnessed great social, political and economic progress.

Bust: When World War II broke out, Indianapolis aided the war effort by contributing soldiers, and war materials including tanks, bombsights, and airplane parts⁹³. During this time, African Americans flocked into the city, and took jobs in the manufacturing industries in place of those who had left for the war. Black migration increased and remained steady throughout the rest of the century. By 1990, more than 20% of Indianapolis residents were African American⁹⁴.

Revitalization: In the late 1950s, Indianapolis witnessed major renovations and city revitalization. Various public amenities and attractions opened including the Indiana Convention Center costing \$26.1 million in 1972, and the Market Square Arena home of the Pacers in 1974⁹⁵. These new additions promoted an entertaining and more convenient lifestyle for residents of Indianapolis. Unique to Indianapolis, in 1969 the Indiana General Assembly adopted legislation named "Unigov" and one year later it went into effect merging Marion County and the City of Indianapolis into one government. Thus, from the early 1970s to today, all towns and places included within Marion County fall under the same jurisdictional unit. Throughout the rest of the 1900s and early 2000s, further government consolidation has taken place.

⁹² Marion County Historical Society. "History of Indianapolis and Marion County: Timeline." Marion County Historical Society, accessed February 29th, 2016, <http://www.mchsindy.org/history.php>.

⁹³ Marion County Historical Society. "History of Indianapolis and Marion County: Timeline".

⁹⁴ M. Teresa Baer, *Indianapolis: A City of Immigrants* (Indianapolis: Eugene and Marilyn Glick Indiana History Center, 2012), 24.

⁹⁵ Marion County Historical Society. "History of Indianapolis and Marion County: Timeline".

Section 6.2 – Local & State Politics

In the city alone, Indianapolis holds a mayor-council structure, in which city residents elect a mayor and the council is representative of a legislative branch. Up until the late 1990s, the metropolitan area of Indianapolis was considered to be very conservative. At the city level, Democrats generally held the majority vote. However, in 1968, Republicans gained control of Indianapolis city government,⁹⁶ and prompted the creation of Unigov, the merging of city and county governments. For a period of time this political move increased Republican power within the area.

Historically, the state of Indiana has been considered a conservative state, however the presence of Democratic leaders in office cannot be overlooked. Republicans and Democrats have generally held office for long periods of time before losing power to the opposite party. As of January 2013, Republican Governor Mike Pence has held office, and has promoted a strong conservative agenda. Examples of his actions include attacks on Planned Parenthood, supporting the Religious Freedom Restoration Act, promoting anti-LGBT efforts, rejecting refugees, and most importantly resisting stricter environmental regulations. Many city residents strongly oppose the Governor's approach to political issues and in particular, a non-profit organization has been formed to prevent his re-election into office.

Similar to the experiences of Cleveland and Milwaukee, state politics are vastly different from the politics of cities like Indianapolis. Sustainability is next to nothing at the state level. Governing Daily's Alan Greenblatt discusses this situation in depth, at it appears to be occurring in many states across the nation. He explains,

⁹⁶Eric Brader, "Indianapolis Democrats, African-Americans saw diminishing returns in 'Unigov,'" Journal Media Group, August 29th, 2010. Accessed April 3rd, 2016.
<http://www.indianaeconomicdigest.net/main.asp?SectionID=31&subsectionID=303&articleID=55914>.

There's a fundamental mismatch right now between the desires of many cities and the policy preferences of states... As cities attempt to fulfill liberal wishes, they are increasingly stymied by the Republicans who dominate state offices. The GOP currently controls all branches of government in more than three times as many states as Democrats. There's rarely much doubt about who will win an argument between a Democratic city and a Republican state – the state nearly always has the upper hand⁹⁷.

The current political climate between leaders at the state level and city level in Indianapolis has hindered the city's efforts to become more sustainable, mainly due to a conflict of interests.

Many larger projects, such as renewable energy policies and programs must receive approval by the state, thus officials at the city level lack control over the successful implementation of these programs. Recently, Governor Pence vetoed on legislation that would have “prohibited the state environmental agency from adopting more stringent rules than the federal EPA”⁹⁸. However, given the current climate, the Office of Sustainability in Indianapolis holds an opportunistic and positive outlook and tends to focus on sustainability programs that they can successfully implement.

Section 6.3 – Sustainability

Between 2003 and 2011, according to Portney Indianapolis has increased their SI score by 18 programs. The initial and sustained push to become more sustainable has mostly come from municipal government. Surprisingly, former Republican mayor Greg Ballard created the Office of Sustainability in 2008, which has provided the opportunity for non-profits and residents to engage in sustainability. Since then, the Office of Sustainability has made a concerted effort to increase the number of programs and incentivize private and public participation within the city.

⁹⁷ Alan Greenblatt, “We Interrupt this Program... Some states will nullify local government actions any chance they get-while at the same time complaining about federal intrusion on their own policies,” *Governing Daily*, April 2016.

⁹⁸ Abdul Hakim-Shabazz, “Pence Vetoes Bill Limiting State Environmental Agency”, <http://indypolitics.org/2016/03/24/pence-vetoes-bill-limiting-state-environmental-agency/>. March 24, 2016. Accessed March 27th, 2016 (acronym used).

City resident participation for sustainability is largely dependent upon the issue. For example recently, the city municipal government implemented what city residents thought was an inefficient, ineffective, and unsustainable recycling program. The city government has retracted this program and prompted public discussion in order to reinstate a new program that better suits city residents' desires. On other sustainability issues however, city residents are less engaged, mainly because few sustainability programs directly tie into their lives. Only a small percentage of residents regularly and actively engage with the city's sustainability efforts, thus produces nothing to scale. The more programs implemented, the more likely city residents will become more active and engaged.

In terms of local businesses, some tend to take sustainability more seriously than others depending upon the foundation of their business. In the Broad Ripple area for example, some local restaurants grow many of their own fruits and vegetables for use in their own restaurant and in support of other restaurants nearby. The proceeds from this sustainable agriculture are sent to a local non-profit that feeds hungry children in the city. However, other businesses in the area are opposed to sustainability programs if it impacts the profits procured by the business. Overall, businesses can either favor or oppose sustainability depending upon their underlying foundation.

Similar to Cleveland and Milwaukee, the Office of Sustainability shies away from urging strict sustainability policies upon local businesses and city residents, given the policy climate at the state level. Thus, it is not surprising that the city takes a different approach to promote and encourage participation and leadership through programs and initiatives. This mindset has been successful for two reasons: first, the city lacks the political power and authority needed to enforce such policies and secondly, this positive encouragement has been more effective towards

reaching sustainability goals more so than forceful mandates. Indianapolis is becoming more sustainable. Time and more programs are key to its success as a sustainable city.

Section 6.4 – Economic Growth

Between 2003 and 2011, Indianapolis experienced a decrease in median household income⁹⁹. Like Cleveland and Milwaukee, much of this decline can be attributed to the economic recession of 2007-'08 and decline in industrial manufacturing. Similar to Cleveland, Indianapolis hosts a growing health care industry, which employs roughly 200,000 people¹⁰⁰. Health care, as in Cleveland, is an important industry because not only is it sustainable (all peoples benefit from prestigious health care facilities and good health) but it also attracts educated populations into the city which expands the city's creative class. More specific to Indianapolis, the city has supported a heavy tourist industry through strong promotion of local sport teams, attractions and affiliations. Indianapolis is home to the Indianapolis Colts, the Indianapolis 500 Speedway, and the NCAA headquarters. The trend to invest in such attractions is becoming more common, similarly seen in Cleveland and Milwaukee. Harvey concludes that this new urban entrepreneurialism typically rests "on public-private partnership[s] focusing on investment and economic development with the speculative construction of place rather than amelioration of conditions within a particular territory as its immediate (though by no means exclusive) political and economic goal". As discussed further in section 8.2, this raises the suspicion that perhaps politicians championing neoliberalism are not so true to their approach, as it is defined.

Specific to sustainability policies, the designing and mapping of the Cultural Trail has fostered dramatic economic growth in the city. Similar to Cleveland, the City of Indianapolis is

⁹⁹ From \$50,549 in 2003 to \$39,015 in 2011.

¹⁰⁰ Respondent B, Indianapolis, Indiana. March 28th, 2016.

largely spread out and scattered. Recent growth and revitalization in the city is seen in patches of the city, and all areas of the city remain detached and fragmented. The Cultural Trail was designed to foster economic development and growth through connecting the downtown area with surrounding neighborhoods, either booming or depressed, through a safe, walk-able and bike-able trail that runs through and around the city and is available to all residents. The implementation of the trail has increased access to roads, opened up adjacent properties and encouraged openness in order to spur economic development and growth.

Section 6.5 – Poverty

Poverty rates in Indianapolis increased from 13.6% in 2003 to 21.4% in 2011. The city government struggles to this day to create new jobs since manufacturing left. Despite a transition to service and retail jobs, it is clear that these industries do not provide enough jobs to alleviate poverty. To make matters worse, very recently two manufacturing companies named Carrier and UTEC, based in Indianapolis and Huntington respectively, have announced their upcoming plant closures in the area, costing 2,100 low-income jobs¹⁰¹. Unsurprisingly, these companies are moving these jobs to Mexico, thus devastating more local Indiana workers. The closure of these plants is disappointing for soon-to-be affected workers, city government officials, and residents. However, local government officials from all offices and departments, and on both sides of the aisle, are diligently working to create replacement jobs for those workers who will soon be out of work.

No sustainability policy, program, or initiative inevitably creates more poverty within the city. Unique to Indianapolis, city government conducts an impact analysis where all policies are

¹⁰¹ Kris Turner, “Carrier in Indy, UTEC in Huntington to move units to Mexico, costing 2,100 jobs,” IndyStar, February 12th, 2016, accessed March 24th, 2016. <http://www.indystar.com/story/money/2016/02/10/carrier-move-indy-unit-mexico-eliminate-1400-jobs/80181804/>.

carefully reviewed before implementation or public participation so that poverty rates do not increase. Government officials working in the Office of Sustainability are pleased to note that if a program does somehow create poverty, the program will not be approved. Indianapolis applies for many grant programs in order to fund projects such as green infrastructure, housing retrofits and revitalization, and energy programs that are specifically directed towards poverty alleviation and creating better living spaces for low-income residents.

Section 6.6 – Gentrification

Like Cleveland and Milwaukee, gentrification is not an issue that concerns city government officials because so far, it is not seen in the city. Despite the revitalization of certain neighborhoods, particularly downtown, Broad Ripple, Virginia Square, and Irvington, the growth in these areas among others does not equate to displaced residents. Like Cleveland, Indianapolis also has an abundance of land within the city, and when developers commit to a new construction site, it is often to rebuild or retrofit vacant buildings or starting from scratch. As a result, poorer residents are rarely displaced, if ever. For many decades, and especially after the loss of many manufacturing jobs, the city has functioned under capacity in terms of population. Thus a primary goal of Indianapolis's city government is to attract more newcomers to settle in the city in order to increase the tax base in the downtown area. Although city government officials do not consider gentrification to be a pressing issue in Indianapolis, the Office of Sustainability is nonetheless aware of its harmful affects and will manage the issue once and if it comes to the forefront.

Section 6.7 – The Triple Bottom Line

According to Respondent B, the Office of Sustainability in Indianapolis certainly integrates all three areas of the triple bottom line for every decision made¹⁰². However, sustainability is not a top priority for all municipal departments and thus perhaps is not integrated into other projects coming from the city. Thus, a struggle for Indianapolis is to continue to promote sustainability not only to local residents, but internally within city government as well.

Like Cleveland and Milwaukee, there are limited resources and limited budgets when it comes to the triple bottom line. Most municipal departments for each of the three ‘lines’ squabble for more money in order to promote their objectives. A primary struggle for Indianapolis is balancing and delineating resources appropriately in order to hit all three areas of the triple bottom line.

¹⁰² Respondent B, Indianapolis, IN. March 28th, 2016.

Chapter 7 – Milwaukee, WI Case Study

Section 7.1 – Brief History

Settlement: Milwaukee has a very long history of trade and commerce due to its geography and strategic location. The city was settled and built on the confluence of three rivers that feed into Lake Michigan: the Milwaukee River, the Menomonee and the Kinnickinnic. By the 1860s, steel and iron manufacturing became the two dominant industries in the city. At this point in time, manufacturing was not the only thriving business; meatpacking, brewing, tanning and flour milling were all flourishing as a result of a steadily booming economy. By 1910, the census takers classified more than three-fourths of the total population as “foreign white stock”¹⁰³, a majority of which were of German descent. Many German immigrants settled in Milwaukee, which marked the land in German heritage and culture, and was at the time named the “German Athens” on the edges of the Great Lakes. A strong beer business and culture took root with the initialization of German breweries and *bier gartens* accompanied by German food. The German flavor was an essential stamp to the city, however immigrants of other nationalities also left their mark. The second biggest group was the Poles, in addition to Irish, Czechs and Slovaks, and Jewish Russian immigrants.

1920s: Politically, the city was a center for socialism. In 1916, Daniel Hoan was elected Mayor of Milwaukee and pursued a legacy of progressive reform. Under his leadership, he implemented the county’s first public housing project and bus system, and accomplished many other public reforms such as streetlights, water purification, a sewer system, and municipal ownership of the stone quarry¹⁰⁴. Hoan focused on basic quality of life issues for his

¹⁰³ Still, *Milwaukee: The History of a City*, 259.

¹⁰⁴ Chudnow Museum of Yesteryear. “Milwaukee in the 1920s.” YouTube Video, 4:01.

constituencies, and due to his good work establishing a high standard of living, Hoan was the second-longest serving mayor in Milwaukee.

Boom: After the Great Depression and leading into World War II and beyond, like many rust-belt cities, Milwaukee evolved from a frontier town to the “Machine Shop of the World”¹⁰⁵. Due to a strong manufacturing base established in the late 1800s, the city was well suited and equipped to aid the war effort. Through the mid 1900s, the city was characterized by union-heavy, blue-collar industrialization, which manufactured tractors, automobile frames, mining equipment, and machine-tooled specialties¹⁰⁶.

Bust: The second half of the 20th century took a toll on the rust-belt cities, including Milwaukee. Like Cleveland and others, the city was confronted with a steady drift of people away from the inner core. Population decreased significantly meanwhile the availability of jobs was also diminishing. However interestingly, Jablonsky notes, “Unlike Cleveland, Detroit, and Chicago, this migration was not fueled in the immediate postwar period as much by white flight because Milwaukee’s African American community did not become sizeable until the 1960s, decreased after the development of similar enclaves in other Midwestern cities”¹⁰⁷. The census illustrates that in 1910, only about 980 African-Americans lived in Milwaukee, by 1945 the black population increased to 13,000, and by 1960, the population reached 62,458¹⁰⁸. Like many American cities, racial tensions surged in the 1960s between whites and blacks, and in the city, conditions worsened. Poverty in these areas increased significantly, and by the 1960s, the city as a whole suffered from decaying infrastructure, a stagnant economy, and poor inner city residents. Jablonsky concludes by explaining,

¹⁰⁵ Thomas J. Jablonsky, “Urban History as Public History: A Case Study from Milwaukee,” *Journal of Urban History* 32, no. 2 (2006): 344.

¹⁰⁶ Jablonsky, “Urban History as Public History: A Case Study from Milwaukee,” 344.

¹⁰⁷ Jablonsky, “Urban History as Public History: A Case Study from Milwaukee,” 344.

¹⁰⁸ Milwaukee County Historical Society. “Milwaukee Timeline.” (Accessed February 25th, 2016).

Milwaukee's history echoes that of urban developments elsewhere in the country, especially the Midwest: the importance of location on the continent...the rise of manufacturing, an immigrant-thick population, and a postindustrial flattening in the economy. Interestingly, many of these developments were timed, in Milwaukee, about a decade later than in other cities. For example, the great migration of African Americans to Milwaukee did not occur until the 1960s and 1970s, and the city only reached its population peak in 1960 rather than in 1950 (as in so many other cases). Even the post-Fordist phase in Milwaukee was harder to discern in the 1970s than it was in other midwestern cities¹⁰⁹.

Thus, Milwaukee's delayed experience of historical trends shared by other cities presents a unique element for this analysis. However in terms of sustainability, Milwaukee nonetheless remains aligned with Cleveland and Indianapolis. Today, Milwaukee has become a leader in sustainability efforts. By 2011, the city expanded its sustainability action plan by 18 new programs and policies. Despite Milwaukee's history as a 'rust-belt' city, the term is forbidden among city government officials as it shines a negative light on their sustainability efforts and promotion of Milwaukee as an 'eco-city'.

Section 7.2 – Local & State Politics

Since 1945, Wisconsin, like Ohio and Indiana, has been characterized as a competitive two-party state. Control often oscillates between the Democrats and Republicans. Recent elections at the state level hold slim margins between the two parties, resulting in uncertain predictions of the state vote. At the state level, in 2010 Republicans took control of the state Senate and House, in addition to the Governor's office. Since then, elected official Governor Walker has maintained Republican control despite passing a Collective Bargaining Bill, which prompted protests and intense resident outrage.

In sharp contrast, the City of Milwaukee, both in the past and present, has favored progressive policies and supports a very liberal political scope. Generally, city residents in

¹⁰⁹ Jablonsky, "Urban History as Public History: A Case Study from Milwaukee," 346.

Milwaukee overwhelmingly vote Democrat come election season. Despite current Republican control, “12-15 percent of the total Wisconsin vote, which is roughly what Milwaukee casts today, is still significant. That vote is overwhelmingly Democratic, [and] increasingly so”¹¹⁰.

Similar to Indiana and Ohio, state level policies influence, and in some cases severely impact the city. Current policies in which state leaders have passed include Right to Work legislation¹¹¹. It is therefore no surprise that the state government has also completely rejected as illegitimate, worker labor unions. Additionally, the state turned away \$800 million federal dollars of funding in order to build a high-speed rail train from Milwaukee to Madison, Wisconsin. Respondent C notes that, “This project would have created numerous jobs for many local residents as the trains were to be built in Milwaukee by manufacturing industries”¹¹². These current political issues have had severe impacts on the city, primarily hindering job growth. Republican decision making at the state level deliberately chooses policies that save the state money by reducing wages without considering the long-term impacts on the city and the state as a whole. Greenblatt notes, “States are stepping on urban toes at practically every turn, from limiting hotel taxes to banning requirements that builders install sprinkler systems”¹¹³. In recent years, policy decisions made at the state level has neither aligned nor supported Milwaukee politics, primarily due to a very distinct a conflict of interest.

Similar to both Indianapolis and Cleveland, the City of Milwaukee is trapped within a state that does not recognize its sustainability efforts. Meaning little to policymakers and politicians, no action is taken at the state level to become more sustainable. Primarily, state leaders hold an outdated view of sustainability – one that equates sustainability policies as ‘anti-

¹¹⁰ Robert Booth Fowler, *Wisconsin Votes: An Electoral History* (Madison: The University of Wisconsin Press, 2008), 223.

¹¹¹ This prohibits union security agreements between employees and unions.

¹¹² Respondent C, City of Milwaukee, March 11th, 2016.

¹¹³ Alan Greenblatt, We Interrupt this Program...” *Governing Daily*, April 2016.

business’ and ‘anti-economic growth’. This conception holds that all economic growth, no matter how it is generated, is good. This approach for growth is undoubtedly unsustainable, and continues to eradicate opportunities for ‘good’ growth.

Section 7.3 – Sustainability

Milwaukee experienced a major increase in sustainability programs from 2003 to 2011. Interestingly, Portney includes Milwaukee in the list of 13 cities claiming that each city had implemented sustainability programs in 2003, despite the fact that Milwaukee had not established an Office of Sustainability until 2006¹¹⁴. Undoubtedly, this leads to questionable data gathering and perhaps fallacious evidence on behalf of Portney of Milwaukee’s early attempts at sustainability. This increase in programs is in part due by creating and incorporating an economic development model around the concept of sustainability. This approach seeks to include and intertwine sustainability concepts, policies and initiatives into the normal day-to-day activities and functions of municipal government in order to create a more sustainable city. Thus, Milwaukee is thriving and transforming from a depressed, tired manufacturing city, into a vibrant area promoting sustainable economic development.

Sustainability began to take root in 2004 with the election of Milwaukee’s current Mayor Tom Barrett (-D), who created the Office of Sustainability, officially known as the Environmental Collaboration Office (ECO). According to Respondent C, since its inception the office has expanded and grown to “promote the visibility of Milwaukee, environmental protection, and the quality of life for Milwaukee residents”¹¹⁵. The local government is a major actor pushing and promoting sustainability in the city. Similar to Cleveland and Indianapolis,

¹¹⁴ Respondent C, City of Milwaukee, Wisconsin. March 11th, 2016.

¹¹⁵ Respondent C, City of Milwaukee, Wisconsin. March 11th, 2016.

Milwaukee has limited resources and funding, thus partnerships and collaboration with other departments and local businesses are key to its success in achieving sustainability goals. Through combined efforts with the Water Council and the School of Freshwater Sciences, Milwaukee created a sustainable water supply. A sustainable water supply is very much a neglected piece in most cities, despite its utter importance. This project was core to the beginnings of Milwaukee's sustainability efforts, and is very much the foundational base intertwining sustainability and economic development in the city. Becoming more sustainable influences many spheres of life, and thus can only be possible through inclusion, coordination, and collective teamwork.

Many Milwaukee city residents are also very much involved and engaged with the city's sustainability efforts. Homeowners see the cost benefits from taking advantage of energy efficiency programs offered to residents. Furthermore, low-income residents find job opportunities through such programs, which fosters community development. For example, ECO offers a Vacant Lot Beautification Program, which is designed to target and identify vacant lots that can be beautified into parks within the city available for public use. In addition, Milwaukee strives to incorporate sustainability into even the most unsustainable industries, primarily manufacturing. The Me3 Program was created and designed to assist existing manufacturing companies become more sustainable by, for example, reducing energy consumption and other natural resources. The city's government strives to revitalize the city to create a more livable, healthy, and aesthetically pleasing environment in order to create a sense of place that is unique to Milwaukee. The addition of sustainable features only further enriches and attracts more residents into the city.

Section 7.4 – Economic Growth

Milwaukee experienced a decrease in median household income from 2003 to 2011¹¹⁶. Although Milwaukee significantly increased its SI score during this period of time, economic growth was severely impacted by the economic recession of 2007-'08. Like most U.S. cities, Milwaukee suffered from a severe economic collapse, a level closely resembling that of the early 1930s depression.

However, the city promotes economic growth and development through many, if not all, sustainability programs. Unlike Indiana but similar to Cleveland, Milwaukee does not conduct an impact analysis before implementing a sustainability policy because no policy inevitably creates more poverty for local residents. Instead, policies uplift the poor by providing job opportunities. For example, the city offers what is called the Me2 Program. This program is designed for homeowners to retrofit their houses through city funding. Retrofitting projects can include the installation of energy efficient windows, new insulation, boilers, air conditioners, and other new technology that helps reduce energy consumption in local homes. The installation of such technology creates local jobs in Milwaukee through an agreement called the Community Workforce Agreement in addition to the Resident Preference Program, which is aimed at directly hiring local workers and paying a minimum wage of \$17/hour. Encouraging homeowners to invest in their houses, as opposed to utility companies, increases the value of homes within neighborhoods. These projects spur economic development in surrounding areas as properties become more energy efficient and home values increase, while also creating local jobs.

In terms of economic development, Milwaukee has chosen to build a new Bucks Stadium west side of the city. This controversial decision stimulated serious discussion between local government and Milwaukee residents. Instead of investing in education and other health services,

¹¹⁶ From \$39,476 in 2003 to \$33,122 in 2011.

the city has chosen to invest in a basketball sports arena in the hopes of attracting large crowds to the city and to spur economic growth. Thus as seen in the Indianapolis case study, a form of interventionism is oriented to neoliberalism that promotes investment in big business and buildings, as opposed to social programs for residents. The choice to invest in places rather than people is not unique to Milwaukee as Cleveland and Indianapolis have also chosen similar investments, for example the Bankers Life Fieldhouse in Indianapolis¹¹⁷ and the Progressive Field (Baseball) in Cleveland. Governing Daily columnist Aaron M. Renn comments,

Most local government leaders, however, seem uninterested in people-based strategies, at least insofar as they are seen as ingredients in economic development. These leaders tend to prefer place-based approaches such as stadiums, casinos and convention center projects that so often are planned as boondoggles...If aid were directed to helping pay for these [liability] costs instead of going to more speculative projects, this would hold down utility rates that hit low-income people the hardest, and it would contribute to improving the cost profiles of these places that have driven people to the suburbs or out of the region entirely¹¹⁸.

Some government officials and local residents claim that this project will further revitalize Milwaukee's downtown area. Others, on the other hand, complain that the money could have been poured into public services and programs to support the city's residents. Respondent C notes that the result of this investment, like any city aiming for greater economic growth, "will hinge on the extent to which the owners of the project follow through on their commitment to do ancillary developments around the stadium"¹¹⁹. If not, the stadium will become isolated within the city, which could perhaps further depress surrounding areas.

¹¹⁷ This indoor arena is home to the Indiana Pacers (NBA) and the Indiana Fever (WMBA).

¹¹⁸ Aaron M. Renn, "Should Economic Development Focus on People or Places?" *Governing Daily Journal*, March, 2016.

¹¹⁹ Respondent C, City of Milwaukee, March 11th, 2016.

Section 7.5 – Poverty

From 2003 to 2011, Milwaukee’s poverty rate increased by 7.3%¹²⁰. This increase is mostly a result of the 2007-‘08 economic recession. Like Cleveland and many Rust Belt cities, Milwaukee suffered.

Given the nature Milwaukee’s sustainability programs mentioned in section 7.4, none tend to create more poverty for Milwaukee residents. This finding is important to note because it discredits the original theory that sustainability policies, such as smart growth, inevitable creates more poverty by way of gentrification and displacement of poorer residents. In addition, it further contrasts the city from the largely unprogressive state government. Instead, Milwaukee’s sustainability programs, when designed, incorporate strategies that positively impact poverty alleviation by creating local jobs. For example, in one year, the city’s Homegrown Program created 28 pocket parks in the city from vacant lots through this program. Milwaukee still struggles to fight against sprawl due to an abundance of land. Thus through this program, municipal government strives to contain growth within the city’s boundaries first before enlarging the city and growing outwards. This program not only promotes sustainability through land reuse policies, but also generates jobs and indirectly, economic growth. Similarly, the city has also designed a Pace Financing Program in which 10 million dollars worth of projects hire local workers through local minority-owned firms.

Section 7.6 – Gentrification

Similar to Cleveland and Indianapolis, Milwaukee does not face the issue of resident displacement that larger cities do because of sustainable policies. The flight of white populations out of the inner city impacted the downtown area as less people contributed to the local

¹²⁰ Poverty was 22.1% in 2003 and 29.4% in 2011.

economy. Recently, however, population rates are steadily rising and Milwaukee is experiencing a steady influx of mixed populations into the city. This population growth is fostering economic growth on a whole, but not necessarily displacing poorer residents. There is not a limited pool of housing for residents due to its current status as under capacity. Thus, through the many economic development projects underway in the downtown area and due to sustainability incentives, grants, and financial support, new units are being built in the space of formerly vacant buildings, which further incentivize population growth, yet not at the expense of resident displacement.

Section 7.7 – Triple Bottom Line

Similar to Cleveland, Milwaukee adopts sustainability programs that account for the triple bottom line through many of their sustainability programs, specifically the Me2 Program as described in section 7.4. Many advocates of sustainability perceive energy efficiency to be the ‘low hanging fruit’ of sustainability because with sufficient funding, programs and initiatives can be created to account for all three areas of the triple bottom line. The city government struggles to bridge the gap between high technology jobs that are easily created around sustainability, for example renewable energy, and entry-level positions for lower-income residents. Low-income jobs offered through development projects generally do not last once projects are completed. This lies in sharp contrast to jobs in high technology sectors, which require college-educated workers where jobs are more stable with less turnover rates. Thus, although Milwaukee generates jobs hiring local workers through local projects, such jobs themselves are not sustainable once the city advances as an “eco-city”. In this sense, stable well-paying jobs are provided for middle and upper class residents, and thus favoring the wealthy. This trend could also explain why the change between poverty rates and the change between Milwaukee’s SI

score from 2003 to 2011 illustrates a positive correlation. Bridging the gap between high and low-income jobs is not specific to Milwaukee, as similar trends are occurring in Cleveland and Indianapolis. For city government officials working to ‘take sustainability seriously’, this particular struggle is perhaps the most difficult to overcome.

Chapter 8 – Conclusion

Throughout this thesis, I have explained a major debate amongst policymakers, between those who advocate for an interventionist policy approach versus a neoliberal approach. I have drawn upon the work of political scientists and sociologists in order to study different conceptions of the city in relation to economic growth and development. Portney's work, along with other scholars, has provided alternatives to the neoliberal growth machine. Lastly, I have found that the work of Harvey, Chapin, Hall and Doucet help explain why cities invest in public attractions over social programs.

In chapter 3, I found that some cities' efforts to implement progressive 'interventionist' policy in order to become more sustainable delivered a boost in local economic growth meanwhile others did not, most notably because of the 2007-'08 economic recession. However, this boost in local economic growth for these cities is also the result of other factors. For poverty, the change in poverty and SI scores illustrates a positive relationship, yet this increase is not necessarily due to sustainability policies. In order to explain these outcomes, I embarked upon case studies and examined three cities in depth: Cleveland, Indianapolis, and Milwaukee.

Across the board, all three case study cities tend to take sustainability seriously, and approach it in a manner that, for the most part, positively benefits local residents, local businesses, and city governments. Sustainability is not a zero-sum game. In a sense, Cleveland, Indianapolis, and Milwaukee have abandoned the neoliberal conception of the city as an economic growth machine, and instead have turned towards incentivizing companies and businesses to engage in sustainability efforts that directly and indirectly protect the environment and in some cases powerful and wealthy people. The degree to which such policy assists the poor remains questionable.

Cleveland, Indianapolis, and Milwaukee seem to take economic development very seriously and work hard to encourage and promote it. Many sustainability programs are in place in order to incentivize ‘green’ economic development such as tax abatement programs, rebates, and grants for local business and residents. The selected cities function with weak housing and building markets. Thus, new development projects currently underway are most often only possible through these sustainable development programs. After taking advantage of such programs, developers have experienced significant monetary and energy savings in the long run, despite higher initial upfront costs. Regardless, due to the revitalization that I am, with Portney, suggesting takes place as SI scores increase and cities take sustainability seriously, more investments are being made and these do seem to foster economic growth.

With reference to poverty, each city was severely impacted by the 2007-‘08 economic recession, and notably poverty rates increased. The recession hit Cleveland, Indianapolis, and Milwaukee very hard. Many low-income manufacturing jobs were lost as companies downsized in order to stay afloat and compete in an increasingly globalized economy. Manufacturing companies have found it cheaper to outsource the production of their products to countries where they can pay workers smaller wages for the same job than in the United States.

Interestingly, poverty did not increase in these cities due to gentrification prompted by the smart growth policies that I, following Portney, associate with high SI scores. Since experiencing a significant decrease population in the 1950s and 1960s, from what is known as “white flight,” each case study city has remained under capacity in terms of population. Vacant and half-vacant buildings have characterized these inner cities for decades, thus municipal government strives to expand and increase the population and attract more residents into these cities. Thus as of now, gentrification is seemingly not a threat in these cities, albeit other U.S.

cities, such as San Francisco and Seattle. Primarily, resident non-displacement is due to an abundance of land that remains in and outside each city's boundary. Thus, as these cities attract more residents, gentrification driven displacement of the poor does not necessarily occur given the amount of vacant space available.

As a result, each city struggles to fight against sprawl and competes with developers to incentivize new construction in the city, as opposed to the surrounding suburbs, which in each of the three cases are incorporated as counties. Adopting sustainable policies may help here. Smart growth policies can attract new residents into the city and expand the population. In turn, this can increase the tax base and incentivize new development as opposed to spurring resident displacement as I predicted in my original theory.

In terms of the triple bottom line, all municipal government departments and offices in each city fight for money and limited resources to pursue projects and design programs for the city. Thus, it is crucial for these cities to establish partnerships and engage in collaboration with other departments in order to accomplish sustainability goals through programs that hit each 'line' of the triple bottom line. In each city, different industries are booming and creating growth. However, this is seemingly creating a gap between low-income and highly specialized jobs. For example in the health care industry, highly specialized jobs such as doctors and surgeons are needed, in addition to low-income jobs such as janitors and maids for the smooth functioning of hospital centers.

The struggle that remains for all cities is for municipal government to bridge this gap in order to create meaningful working class jobs. In this case, it may be that sustainability policies play a big part in creating working class jobs focused around sustainability. However, this responsibility cannot solely be left to municipal government. The local governments in the

selected cities can only leverage interventionist policy to an extent, but are inevitably hindered by jurisdictional authority and a lack of resources, particularly money and time.

Section 8.1 – Implications & Discussion

This research has revealed notable issues that pertain to taking sustainability seriously in U.S. cities. As discussed in the case study sections, there are great political discrepancies between city and state leaders in terms of policy preferences. This clash means that state leaders dominate the political arena of the state and city, thus blocking any and all progressive and interventionist policy that the three cities I examined wish to implement. Tensions arise between state and city officials when state leaders pursue a neoliberal approach to policy, and cities aim for intervention in order to become more sustainable. Left beholden to state political jurisdiction, city politicians lack the political authority to intervene with progressive policy in their cities.

With regards to the neoliberal approach, there seems to be a great distinction between the ‘type’ of intervention pursued, or for whom intervention is designed to benefit. This nuance is important to note. Even though advocates of neoliberalism claim to support a total ‘hands-off’ approach to policy and to avoid intervention at all costs, there seems to be room for intervention *if* it supports particular groups in the city. State leaders in Ohio, Indiana, and Wisconsin tend to intervene in markets to pour public dollars into new buildings and large-scale sport arenas in the city under the name of ‘economic development’. However, this intervention rarely produces the robust economic growth so promised by politicians agreeing to such development. Chapin debunks the common conception that such neoliberal interventions are beneficial to local economies. He states,

Almost every systematic study of the economic impacts of sports facilities has concluded that at face value these facilities promise a great deal for a city but deliver very little in

economic returns. Economists argue that these projects simply redirect spending from one activity to another, producing only a very small increase in economic activity...¹²¹

Nonetheless, state politicians continue to promote and administer such projects under the belief (or not) that this type of urban (re)-development will boost economic growth *and* that the benefits will ‘trickle down’ to the average citizen. What is of interest, however, is that these same state politicians refuse to intervene, or let their cities intervene, in economic markets to directly support middle and low class residents through sustainability policies and programs. Instead, neoliberals leave social and environmental domains to the fate of the market.

By definition, any intervention by neoliberal politicians goes against the core attributes of neoliberal policy, which, as described earlier, is characterized as a ‘hands-off’ approach for economic policy, and strictly non-interventionist. This is a conundrum, given that the type of intervention for large-scale development projects is seemingly acceptable to neoliberal politicians, and exposes the true beneficiaries of this allegedly neutral ideology: big business, corporate interests and wealthy elites¹²². These actors mainly profit from the public-private partnerships for big development projects in these cities, and thus turn a blind eye to other groups, such as low-income residents, who perhaps would benefit more from interventionist social programs and the opportunities that I, again following Portney, associate with high levels of ‘taking sustainability seriously’. Although these projects create short-term construction jobs and few low-wage service jobs once in operation, overall, these projects generally do not generate the economic growth that is desired upon implementation. Meanwhile, and especially in

¹²¹ Chapin, “Sports Facilities as Urban Redevelopment Catalysts: Baltimore’s Camden Yards and Cleveland’s Gateway,” 193-194.

¹²² C. Michael Hall, “Urban entrepreneurship, corporate interests and sports mega-events: the thin policies of competitiveness within the hard outcomes of neoliberalism,” *The Editorial Board of the Sociological Review* (Oxford: Blackwell Publishing Ltd., 2006), 59.

Cleveland, Indianapolis, and Milwaukee, poorer residents are left neglected as city investments favor wealthier establishments.

It very well could be the case that smaller programs such as recycling or pesticide reduction programs are not robust enough to scale up and affect the neoliberal growth machine and the urban regime that it spawns. However, larger scale projects such as zoning, land use policy and energy efficiency programs can very well impact economic development and the quality of life, regardless of their intended goals to achieve sustainability. As mentioned in section 3.1, more time and research is needed to determine which specific sustainability programs do the most to promote economic growth and poverty alleviation. However, as seen in each of the case study cities, all have designed programs that specifically target the triple bottom line, and are seemingly having a positive effect on local economic growth. Thus these programs and policies are scaling up enough in order to affect the growth machine. Politicians at the state level are perhaps unaware or unconvinced of the economic benefits that can result from investing in domains that normally neoliberals would leave up to the fate of the market. Or, they simply do not have the patience to anticipate economic growth resulting from more complex policy decisions. Or, they do not experience sufficient political pressure from advocates of the poor or environmental groups. Regardless, as seen in Cleveland, Indianapolis and Milwaukee and their investments in sport stadiums, Hall notes that such projects “are going to continue to be funded as it provides opportunities not only for the furtherance of corporate interests but also for politicians to be seen to be ‘doing something’ in the face of global competition”¹²³. Therefore, the neoliberal approach that I identify is nuanced – seemingly it offers ‘hands-off’ policy for the poor, yet intervention for and in benefit for big business and wealthy elites. Politicians and

¹²³ Hall, “Urban entrepreneurship, corporate interests and sports mega-events: the thin policies of competitiveness within the hard outcomes of neoliberalism,” 67-68.

advocates for sustainability in these cities seem to oppose the latter or at least question this strategy for economic development. For cities that take sustainability seriously, and particularly the case study cities, sustainability oriented interventionist policy has produced beneficial outcomes and economic growth so desired, meanwhile also accounting for the quality of life. Thus, urban redevelopment projects imposed on cities by state politicians in Cleveland, Indianapolis, and Milwaukee are not the type of investments city leaders from these cities generally wish to invest in. Unfortunately, and as previously discussed, cities often do not have a choice or the political authority to prevent or block these types of investments. As a result, cities are forced to live with the circumstances.

Thus, high-level debates between interventionist and neoliberals require nuance for policy applied to the urban scale. The problem seems to be one characterized not by a distinction between intervention and ‘hands-off’, but intervention for whom – the ‘growth machine’/‘urban regime’ or the average citizen. This insight suggests new elements to characterize the two policy approaches. Neoliberals tend to look to highly influential wealthy elites and corporate interests in order to form public-private partnerships for urban (re)-development that is designed to benefit the growth machine. In contrast, interventionists seemingly look to the common individual. Through departmental government collaboration and creative policies, interventionists at the city level might devise strategies to utilize available labor and resources to boost local economic growth through inclusive programs and incentives that target all three areas of the triple bottom line, and to thus affect the growth machine.

Lastly, this research has opened up another notable distinction. Although gentrification and resident displacement does not currently challenge the selected case study cities, there can nonetheless be two types of gentrification occurring: internal and external. These types of

gentrification are distinguished by where displaced residents move. My original theory predicted internal gentrification, that when gentrification occurs residents would be displaced to other areas of the city, thus poverty rates within the city would increase. However, this lies in contrast to external gentrification in which residents are forced to move outside of city boundaries because of increasing property values and a lack of affordable housing. Thus in this situation, poverty rates are either held constant or even decrease. These types of gentrification can significantly alter outcomes and should be specified at the onset of further research for this topic.

Of course, this thesis perhaps presents a naïve narrative of sustainability, in which city policymakers genuinely wish to, and have the capability to, increase the quality of life for all residents and better the natural environment in their cities. However, it is worth considering some of the more critical or ‘realist’ literature, which presents the idea that sustainability is merely a tragic game played by many players, particularly by politicians and policymakers. ‘Sustainability’, in the view of thinkers such as Tim Luke or Ingolfur Blühdorn, is a game in which the rules are defined by and benefit the rich and powerful more so than any other group. In other words, in order to maintain comparatively ‘powerful’ positions in city governments, government officials must measure their progress in some fashion in order to appease the demands of local businesses and residents who are concerned with ‘sustainability’. Thus indexes are created without the input of poorer residents or marginalized groups, and bureaucratizing what should be an inclusive political debate. In short, those who measure progress towards a sustainable city are in fact those who benefit most from seeming sustainable. The powerful also decide what is to be measured. In light of this research, then, SI scores are translated into ‘indicators’ in order to monitor and measure progress. City governments then ‘advertise’ to their constituencies and regional competitors that they are ‘sustainable’. However, in ‘reality’, such

indexes do nothing more than monitor incremental progress towards what Luke pithily refers to as “sustainable ecological degradation”¹²⁴.

For municipal government, seemingly the only level of government which has taken substantial action towards becoming more sustainable, sustainable development has not halted ecological degradation, but instead has “measured, monitored, and manipulated [it] with certain tolerances. Thus, ecological degradation perversely acquires its own sustainability within capitalist built environments.”¹²⁵ Scholars of environmental politics such as Luke and Blühdorn discuss a rather bleak reality, that politicians and city government officials use ‘sustainability’ as a crutch to remain in powerful positions in order to appear to be ‘solving environmental crises’ by merely creating indicators in order to monitor and sustain ecological degradation to maintain the status-quo.

To the naïve observer, politicians take positive steps toward achieving a sound balance between nature and economic growth. Yet, as Blühdorn suggests,

Whatever has been undertaken and achieved so far has at best tackled symptoms but never addressed the root causes of environmental decline. Even in the richest and technologically most advanced countries, the strategies of ecological modernisation and environmental management [and so, ‘sustainability’] have been unable to halt, let alone reverse, the trajectory of environmental consumption and destruction¹²⁶.

Somewhere between the naïve view and that of the realists, Scerri suggests that political pressure on city governments may lead to a more effective questioning of the use of ‘sustainability indicators’. He notes, “Often primarily quantitative in approach, indicators-based projects are extremely valuable tools for measuring where an urban area “is” in relation to some or other given concept of “sustainability” or “sustainable development”. However, much urban

¹²⁴ Luke, Timothy, W, “The System of Sustainable Degradation,” *Capitalism, Nature Socialism* 17, no. 1 (2006): 100.

¹²⁵ Luke, Timothy, W, “The System of Sustainable Degradation,” 99-100.

¹²⁶ Ingolfur Blühdorn, “Sustaining the Unsustainable: Symbolic Politics and the Politics of Simulation,” *Environmental Politics* 16, no. 2 (2007): 251-252.

sustainability work seems to draw a line around indicators and metrics, as if this were enough”¹²⁷. Taking Scerri’s approach seriously, the selected case study cities for this thesis reveal how pressure from local residents and businesses seem to be coercing city governments to measure and achieve more legitimate and possibly more effective forms of sustainability. In Cleveland, Indianapolis and Milwaukee, it is arguably the case that at least some of each city’s sustainability programs are not just for show. These cities are taking sustainability seriously and so, challenging ‘neoliberal’ state (Ohio, Indiana, and Wisconsin) imperatives to intervene in markets to benefit powerful market interests.

Section 8.2 – Limitations

This research harbors the limitations of any small N mixed methods study. The examination of only 13 cities is no doubt not a substantial population size. However, if more cities established sustainability plans by 2003, then more would be available for analysis. The methodology and selected variables used in this thesis can never definitively explain the relationship between sustainability and median household income and poverty for two reasons. First, 13 observations is not a robust sample size to make broad generalizations applicable to all U.S. cities, and secondly, multiple variables can contribute to economic growth, and growth may not necessarily be related to sustainability as a simple bivariate regression. This research may be seen as suggestive at best of such a relationship. As sustainability is a relatively new and growing concept, more data collection and analysis is needed to further this research, a point that Portney himself recognizes¹²⁸. What would be ideal and a best-case scenario would be to randomly assign sustainability scores for all American cities, watch for a decade and observe the

¹²⁷ Andy Scerri, “Accounting for Sustainability: Implementing a residential emissions reduction strategy using an approach that combines qualitative and quantitative “indicators” of sustainability,” *Management of Environmental Quality: An International Journal* 21, no. 1 (2010): 123.

¹²⁸ Portney, *Taking Sustainable Cities Seriously*, 74 & 145.

effects. As more time passes, and more data collected, the easier it will be to make connections and prove claims about this relationship. Of course, this kind of natural experiment would exceed the scope of all but the most lavishly funded social science research ever conducted.

Section 8.3 – Further Research

This work opens up many avenues for further research. In terms of Portney's 38 criteria to measure sustainability, more research is needed to determine which, and to what extent, programs are impacting median household income and so poverty, more so than others. It could be that only a few particular programs and policies, such as energy efficiency or sustainable transportation are the ultimate cause as to why cities experience economic growth. However, no doubt this research would require more time for cities to establish such programs and keep them in place in order to measure their impact in subsequent years.

Another avenue insightful to explore involves gathering variables to measure the quality of life across different socio-economic strata in these cities. Although these measures may be somewhat difficult to find and perhaps even justify, this research can be pursued as an extension to the quantitative section in Chapter 3 to further understand if and how the quality of life is being evenly and equally distributed among all residing populations in a city. Nonetheless, this research explores whether or not some cities maintain a higher quality of life than others, and if this is a direct or indirect result of sustainability efforts by municipal government.

As an extension to Part II of this work, conducting additional case studies on three of the wealthiest cities that maintain the highest SI scores, namely Seattle, Portland, and San Francisco, can be useful for comparison with my three case study cities. Examining these cities in further detail can possibly shed light on the issue of gentrification. Unlike Cleveland, Indianapolis, and Milwaukee, gentrification is more likely a greater issue impacting the city due to stronger

housing markets and shortages of available land. Furthermore, these cities are much wealthier and host much larger populations than the selected case study cities. The political climate of these West coast cities strongly contrasts to those in the ‘Rust Belt’ as both city and state officials hold very strong liberal/progressive political views. According to Portney, this characteristic perhaps makes implementing sustainability programs and policies less demanding and thus an easier process¹²⁹.

Furthermore, the type of neoliberal intervention, namely large-scale urban redevelopment projects seen in Cleveland, Indianapolis and Milwaukee, perhaps does not have the same type of draining effects as it would in wealthier cities such as Seattle, Portland, and San Francisco. Further study is needed to address this suspicion. However, it could be the case that this type of intervention in already rich cities leads to bigger increases in economic growth because such cities already maintain a healthy and strong tax base and can afford to spend on such attractions. As mentioned above, adopting this type of policy for poorer cities, such as the ones studied, runs the risk of draining public dollars on expensive attractions that both fail to generate significant economic growth, boost the quality of life for residing residents, and attract permanent residents. However, more research is needed to support this hypothesis. Nonetheless, conducting case studies on Seattle, Portland, and San Francisco with this suspicion in mind may also open up new insights into the dynamics at play among this type of city, and different tensions may arise in efforts to account for the triple bottom line. The comparison can largely be generalized between three rich and three poor U.S. cities taking sustainability and the broad challenges that face each group. In addition to West coast cities, case studies might be conducted on cities within the ‘Sunbelt’ region of the United States, such as Tampa, Jacksonville, Austin or Phoenix. Since the 1970s, these cities have come to be regarded as exemplifying the growth machine. Thus, three

¹²⁹ Portney, *Taking Sustainable Cities Seriously*, 303.

sets of cities in different regions of the United States might provide an interesting comparison of how cities tackle and achieve sustainability.

Despite my findings regarding resident non-displacement within these case study cities, this research has suggested an interesting yet, as far as I am aware, unexplored dimension of gentrification. Surprisingly, there is little to no standardized procedure adopted by urban scholars, planners, or policymakers for measuring gentrification, despite how serious of an issue it is. Thus, it appears that there exists a gap in the literature. However, I am aware of one effort by urban studies scholar Atkinson. In his work, *Measuring Gentrification and Displacement in Greater London*, Atkinson combines cross-sectional census data with spatially re-aggregated longitudinal census data to overcome the problem of ‘tracking’ those displaced. However according to Atkinson, displacement and replacement are still very difficult to distinguish, as I expect it would be in the United States¹³⁰. The scope of this work is perhaps no small undertaking and would require many years of study and research to come to a fruitful conclusion in the U.S. context. However with some certainty, this would be a major contribution to the field, and in time could legitimately uncover whether or not adopting sustainability measures in cities inadvertently, and in contrast with the efforts of cities such as Cleveland, Indianapolis, and Milwaukee, leads to such an unfortunate outcome: gentrification.

¹³⁰ Rowland Atkinson, “*Measuring Gentrification and Displacement in Greater London*,” *Urban Studies* 37, no. 1 (2000): 149.

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Appendix A

Table 1.1 A Comparison of Cities Over Time, 2003-2011

City	2003 Index Score	2011 Index Score	2003 to 2011 Improvement
Seattle	30	35	5
San Jose	26	30	4
Portland	25	35	10
San Francisco	23	35	12
Tampa	19	20	1
Tucson	18	29	11
Austin	17	29	12
Phoenix	15	31	6
Jacksonville	15	23	8
Cleveland	14	24	10
Boston	14	28	14
Indianapolis	9	27	18
Milwaukee	6	24	18

Taken from Portney, page 83.

Table 1.2
The Elements of the “Index of Taking Sustainable Cities Seriously”

Sustainable indicators project

1. Indicators project active in last five years
2. Indicators progress report in last five years
3. Does indicators project include “action plan” of policies/programs?

Smart growth activities

4. Eco-industrial park development
5. Targeted or cluster green economic development
6. Eco-village/urban infill or transit-oriented housing project or program
7. Brownfield redevelopment (project or pilot project)

Land use planning programs, policies, and zoning

8. Comprehensive land use plan that includes environmental issues
9. Zoning used to delineate environmentally sensitive growth areas
10. Tax or fee incentives for environmentally friendly development

Transportation planning programs and policies

11. Operation or sponsorship of public transit (buses and/or trains)
12. Limits on downtown parking spaces
13. Car pool lanes or high occupancy vehicle (HOV or diamond) lanes on city streets
14. Alternatively fueled city vehicle (green fleet) program
15. Bicycle ridership or bicycle sharing program

Pollution prevention, reduction, and remediation

16. Household solid waste recycling
17. Industrial recycling
18. Hazardous waste recycling
19. Air pollution reduction program (i.e., VOC reduction) climate action plan
20. Recycled product purchasing or preferred procurement by city government
21. Superfund or other hazardous waste site (other than brownfields) remediation initiative

Energy and resource conservation/efficiency

26. Green building program
27. Green affordable/low-income housing program
28. Renewable energy use by city government
29. Energy conservation effort (other than green building program)
30. Alternative energy offered to consumers (solar, wind, biogas, etc.)
31. Water conservation or protection program

Organization/administration/management/coordination/government

32. Single government office or official, or nonprofit agency, responsible for implementing sustainability programs
33. Sustainability an explicit part of a citywide comprehensive/general plan
34. Involvement of city council
35. Involvement of mayor or chief executive officer
36. Involvement of metropolitan or county-wide planning council
37. Involvement of the business community (e.g., Chamber of Commerce, sustainable business organization)
38. General public involvement (public hearings, visioning process, neighborhood groups or associations, etc.)

Figure 1.3

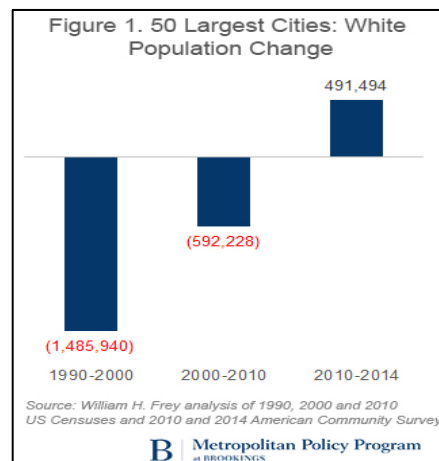


Figure 1.3 illustrates this white population change from 1990 to 2014. In previous decades there has been a shortage of whites living within inner cities. Interestingly, this data shows that there is a shift beginning to emerge in which more are relocating in inner cities.

Section 3

The definitional boundary of a city should be considered before examination to avoid discrepancies and to facilitate sound comparisons. Portney addresses this matter, stating,

The term *city* is used in a formal sense, referring to the legally defined and incorporated jurisdiction. As a general rule, cities are relatively small divisions of government that nonetheless possess the authority to affect environmental and ecological results. Cities are not coterminous with metropolitan areas except in those few areas around the country in which there has been city-county or metropolitan-wide consolidation of local government. ...Although there may be considerable differences between and among cities in the United States, they share the basic characteristic that they are legally defined entities that have the legitimacy and authority to address issues and problems within their borders¹³¹.

The ACS also defines their boundaries under their 'Glossary' section. To refer to a city as a designated and confined jurisdictional area under the ASC, it is named as 'Consolidated city,' which is defined as,

An incorporated place that has combined its governmental functions with a county or minor civil division. The primary incorporated place and the county or MCD (Minor Civil Division) continuing to exist as legal entities, even though the county or MCD performs few or no governmental functions and has few or no elected officials. Where this occurs—and where one or more other incorporated places in the county or MCD continue to function as separate governments, even though they have been included in the consolidated government—the primary incorporated place is referred to as a consolidated city¹³².

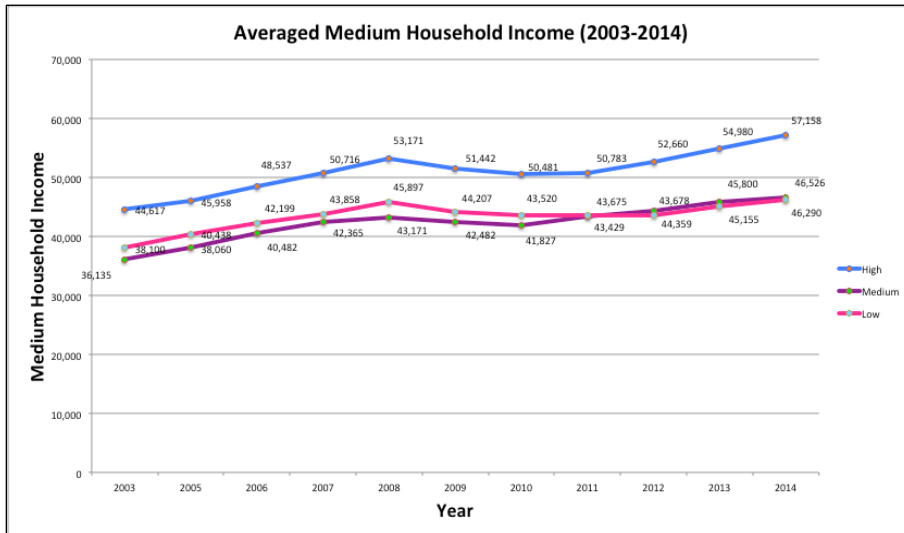
Thus, according to these definitions I will be comparing like with like as to avoid unsound comparisons and results.

¹³¹ Portney, *Taking Sustainable Cities Seriously*, 14-15.

¹³² American Community Survey, "Glossary," https://www.census.gov/glossary/#term_Consolidatedcity.

Appendix B

Figure 1:



The year 2004 was not included in this line graph due to a lack of sufficient data for all the cities. ACS did not include median household income figures for over twenty cities in 2004, thus the graph begins at 2003, skips 2004 and continues to 2005 through 2014.

Figure 2:

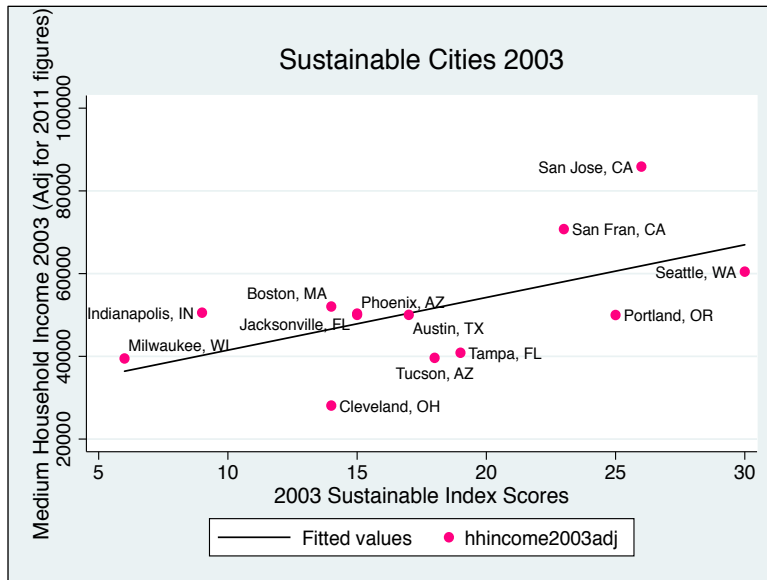
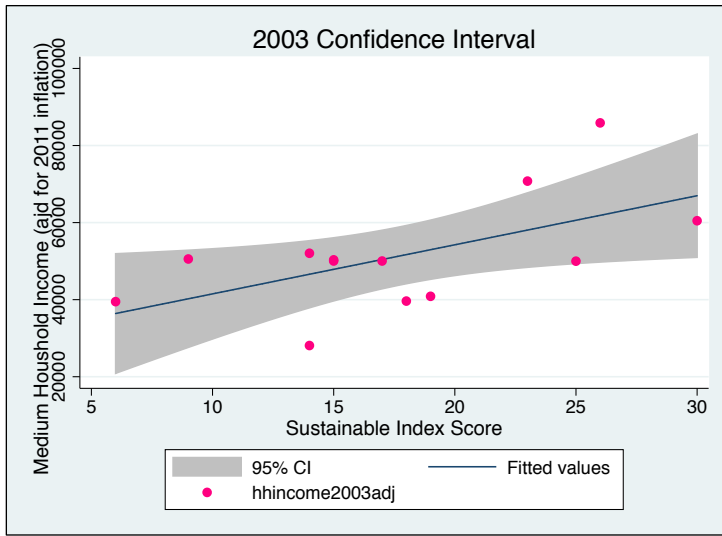


Figure 3:



Only 5 cities fall outside the confidence interval - Cleveland, Tucson, Tampa, San Jose, and San Francisco. I am less concerned with this because it is the initial representation when their sustainable programs and policies were new and beginning to grow, thus I expect a weaker relationship.

Figure 4:

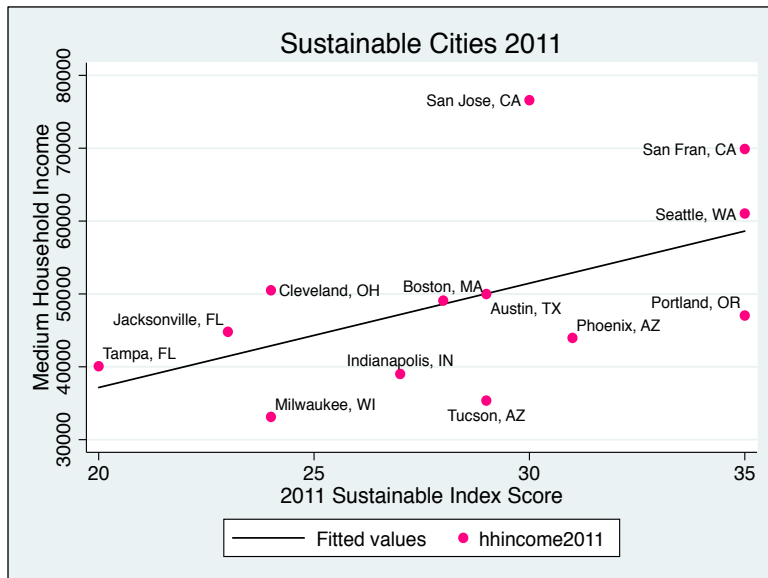
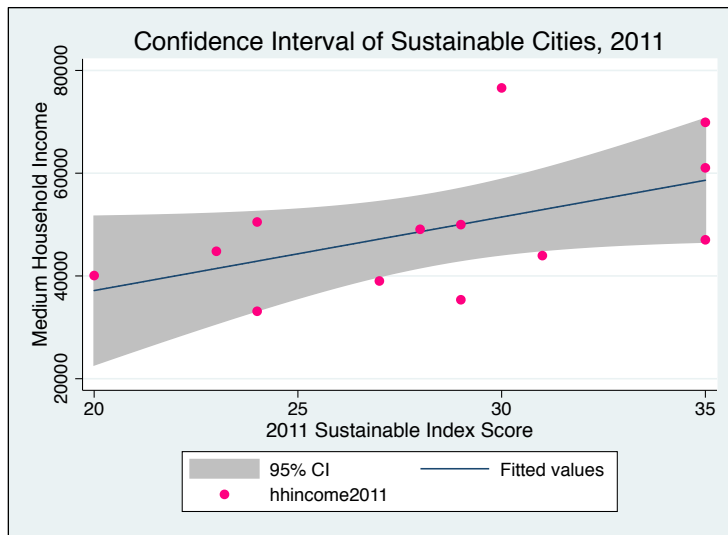


Figure 5:



I have more cities falling into the confidence interval than in 2003, in addition to more cities getting very close to being in it. The two major outliers are still San Jose, CA and Tucson, AZ (from 2003). Those that are closer to being inside this interval are Milwaukee, WI, Indianapolis, IN, and Phoenix, AZ. Interestingly, these cities showed a stronger relationship to their 2003 index scores. Over time, Indianapolis and Milwaukee have increased their scores the most out of all other cities (by 18 new programs). However, Phoenix has only added 6 new programs.

Figure 6:

Below, I have controlled for the recession:

(National) Median household income 2011 - \$51,324
 2003 - \$53,212 (adj. for 2011 inflation)
 Change in median household income at the national level = **-\$1,888**

With this figure, I can control for national change in median household income. Here, I will take the city's data (listed above) and subtract away the national data. This will show how much better the city is than the national average and control for the recession.

Seattle, WA	2,449
Portland, OR	-1,061
San Fran, CA	1,020
San Jose, CA	-7,387
Tampa, FL	1,100
Tucson, AZ	-2,375
Austin, TX	1,849
Phoenix, AZ	-4,175
Jacksonville, FL	-3,636

Cleveland, OH	24,300
Boston, MA	-1,069
Indianapolis, IN	-9,646
Milwaukee, WI	-4,466

Figure 7:

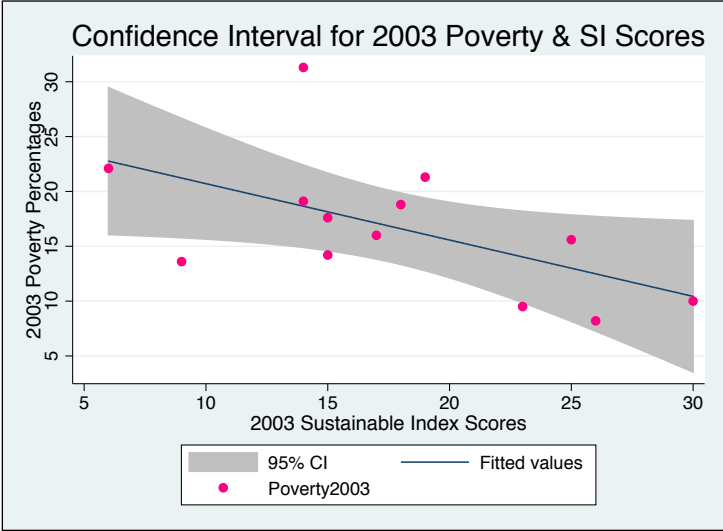


Figure 8:

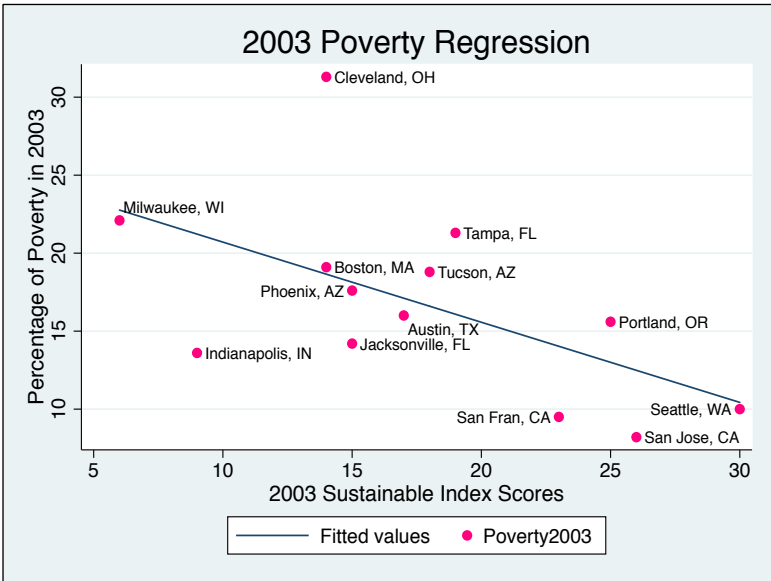


Figure 9:

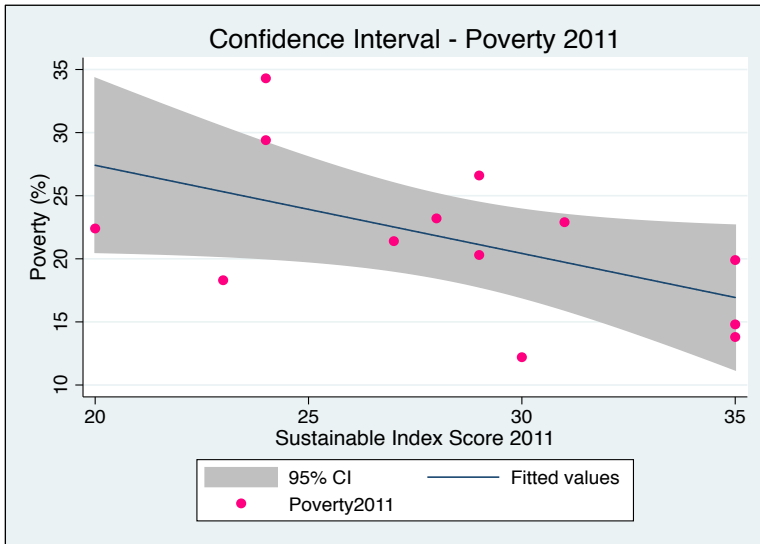


Figure 10:

