

Shedding the Rust:
Developing Green Jobs Policy in the Industrial Midwest

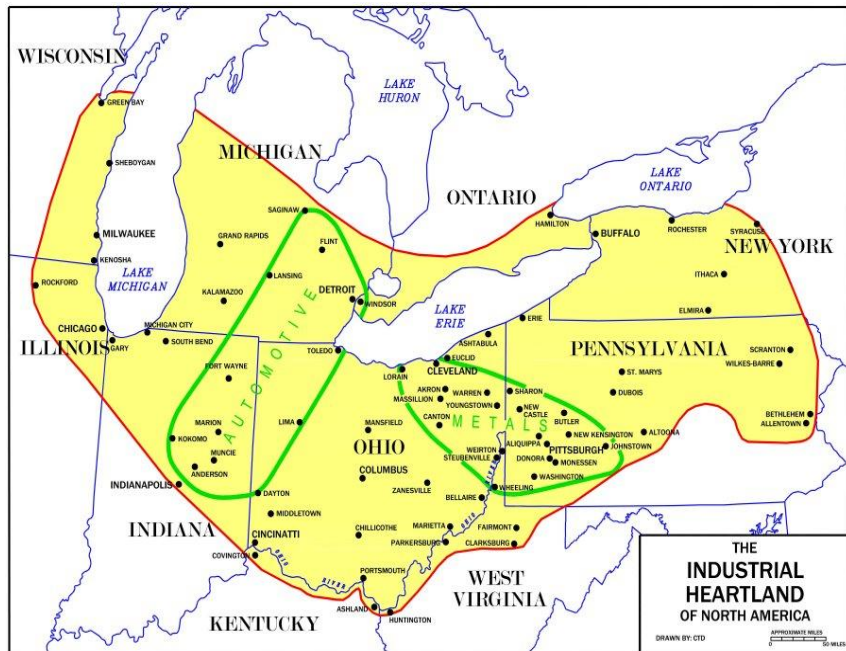
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Environmental Studies 395
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December 16, 2009

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Introduction

The United States Industrial Midwest, otherwise known as the Rust Belt occupies a unique place in American history. The region's distinct character stems from its close ties to manufacturing. Central to the area's economy, manufacturing jobs influenced the social structure of the Rust Belt. There are different geographical interpretations about where the region lies, but it roughly includes Michigan, Indiana, Ohio, and Pennsylvania as well as the cities of

Milwaukee, Chicago, and Buffalo. Jobs in manufacturing were in the hundreds of thousands during the mid- twentieth century and continue to provide a significant amount of employment today. Jobs are at the forefront of any Rust Belt politician's agenda due to



The Rust Belt was built significantly around automotive and heavy metals manufacturing. Image from:
<http://studentweb.cre8vty.com/art335w08students/project2/wood/pages/articles.html>

the area's high unemployment and large business and labor constituencies. Significant social issues like education and race are also affected by the region's heavy reliance on manufacturing. From the region's birth as the hub for industrial giants like Ford Motor Company and US Steel in the early twentieth century, to its rapid growth in the post-World War II, era and its stark decline in the 1970's, manufacturing work has always been central to the region.

However, the region's reliance on manufacturing for most of its employment caused significant problems during the later half of the twentieth century. By the mid 1970's, the region's manufacturing jobs declined significantly due to a number of different and complex reasons. Economic and social problems like poverty and racism intensified in the wake of economic downturn, and efforts to counteract the problems with political policy were applied with marginal success. Different stakeholders in the region still debate solutions to fix the Rust Belt's economic woes. Businesses believe that taxes and regulation need to be lightened, while labor unions call for stronger measures to protect American jobs. These suggestions have been applied with uneven success throughout the region. Rust Belt communities fight to survive in the wake of massive layoffs while manufacturing companies continue to leave the area. In order to successfully bring jobs back to the region, policy will need to address a multitude of issues.

One of the most popular solutions to the current crisis is to create "green jobs". A coalition of environmentalists, businesses, unions, and social justice groups popularized the idea of putting laid-off manufacturing workers back to work creating wind turbines, energy efficient cars, and solar panels. While recent policies aimed to save the Rust Belt focus on helping manufacturers create green jobs through tax incentives and worker training, the policies do not address the problems with the social and business climate of the area. Developing green jobs policy in the old industrial model of tax breaks and monetary incentives to manufacturing companies will not be sufficient to revitalize the Rust Belt economy. Instead, green jobs policies need to focus on industrial restructuring, community development, and utilizing educational assets in order to successfully revive the Rust Belt. The region's knowledge of manufacturing and industrial infrastructure must be a part, but not the entirety of a green economy.

History of the Region

The manufacturing industry formed in the Rust Belt region due to favorable geographic conditions and revolutionary business practices. According to economist Paul Krugman, the region had the necessary qualifications to grow a manufacturing hub, which included low transport costs, large production capability, and the ability to move products easily.¹ One of main benefits of the region was its accessibility to water and rail to ship finished goods. Businessmen like Henry Ford pioneered revolutionary management techniques like the assembly line that allowed for optimal production levels to be reached.² Manufacturing companies became so profitable by the 1950's that most of them were labeled as "key industries" in the American economy.³

The rise of these key industries created a new industrial and social organization. The "Fordist" model of development came to prominence in the Rust Belt. This mode of development was distinguished by a low-skill workforce that mass produced durable products for consumers.⁴ According to Wilson Chandler, author of The Invisible Hand, Fordist companies shared a number of production techniques, embedded high amounts of capital, consumed large amounts of energy, and mass produced durable products.⁵ Or to put it simply, these factories made lots of items for consumers to buy across the nation. Due to the economic factors described by Krugman, these industries began to conglomerate and integrate themselves into the social and

¹ Krugman, Paul. "Increasing Returns and Economic Geography." *The Journal of Political Economy* 99, no. 3 (Jun., 1991): 483-499.

² Womack, James P., Daniel T. Jones, Daniel Roos, and Massachusetts Institute of Technology. *The Machine that Changed the World : Based on the Massachusetts Institute of Technology 5-Million Dollar 5-Year Study on the Future of the Automobile*. Vol. viii. (New York: Rawson Associates; Collier Macmillan Canada; Maxwell Macmillan International, 1990), 32.

³ Alfred Dupont Chandler. *The Visible Hand : The Managerial Revolution in American Business*. (Cambridge, Mass.: Belknap Press, 1977), 371.

⁴ Sean Safford. *Why the Garden Club Couldn't Save Youngstown: The Transformation of the Rust Belt*. (Cambridge, Mass.: Harvard University Press, 2009), 18

⁵ Chandler, 347.

economic fabric of the region.⁶ Even though many different products that were created in the region, the industry that best exemplified the Fordist model of development was the automobile industry.

The Ford Motor Company exemplified a company that used Fordist development in the Rust Belt. The revolutionary design of the company, the ruthless leadership of Henry Ford, and the company's economic success shaped the social and economic pattern in Detroit and ultimately the greater Rust Belt for the rest of the century. In the early nineteen hundreds, the Ford Motor Company developed and prospered through a number of different management innovations and favorable market conditions. Henry Ford pioneered many of the innovations that are characteristic of large manufacturing companies today.⁷ Ford centralized the production of his automobiles into single plants (instead of making parts in many different places) and created the assembly line in which each worker was assigned to perform only one task. Both of these innovations increased efficiency and productivity. By 1908 Ford had produced over 10,000 cars, a production amount which was unheard of at the time.⁸ By the 1930's, the company needed more workers to keep up with demand, which led thousands of people to migrate to the region for the seemingly endless number of jobs.⁹

The management practices at Ford were an integral part of the Fordist development. Working in the factory was cramped and tedious, and there were thousands of other workers doing the same repetitive tasks, unlike the past when workers would all be doing specialized

⁶ Safford, 28.

⁷ Womack, 30.

⁸ Womack, 37. Ford also revolutionized how dealerships distributed his vehicles by selling the all out at one time. These actions led to nearly 25 million dollars in profits in 1923.

⁹ Joyce Shaw Peterson. "Auto Workers and their Work, 1900-1933." *Labor History* 22, no. 2 (Spring81 1981): 213-224.

labor. Interviews with auto workers highlighted being a “cog in the machine.”¹⁰ However, Ford was adamant on keeping workers in check and free from organizing. As a worker said in the early days of the company, “a man checks his brains and his freedom at the door when he goes to work at Ford’s.”¹¹ Although workers were generally well paid at Ford and by 1925 the auto industry was first in average hourly wages received by employees.¹² These cramped conditions planted the seeds for unionism in the region.

Unions played a pivotal role creating prosperity for workers in the Rust Belt. In the wake of the Great Depression, unions influenced politicians to pass legislation that placed greater responsibility on business to protect workers as well as giving unions significantly more rights to strike. Even though there was a significant upswing in the American economy after WWII, unions tried to keep their legislative momentum going. However, businesses worked to undercut the militancy of unions so they would not disrupt the sustained economic growth.¹³ In the period after the war, corporations entered into a “social contract” with labor. These agreements gave workers higher wages and increased jobs security in exchange for giving significant rights to strike.¹⁴ This had the immediate effect of increasing real wages and sustained purchasing power for the average American manufacturer. These agreements also helped workers obtain middle class wages without post-secondary education (only 36% of manufacturing employees at the time earned high school diplomas).¹⁵ These policies would eventually affect the way business would be done in the future.

¹⁰ Studs Terkel *Working: People Talk about What they do all day and How they Feel About What they are Doing* (New York : Pantheon Books, 1974),164.

¹¹ Peterson, 223.

¹² Peterson, 221.

¹³ Bluestone and Harrison, 135.

¹⁴ Don Sherman Grant II, and Michael Wallace. "The Political Economy of Manufacturing Growth and Decline Across the American States, 1970-1985," *Social Forces* 73, no. 1 (1994), 40.

¹⁵ Safford, 112.

The region's business and social development model began to reap vast economic rewards after World War II. The high economic growth, strong union presence, and availability of low skilled labor turned the region into a middle class bastion. United States companies took advantage of the destroyed economies of Europe and Asia by beginning to locate plants abroad. This gave way to explosive economic growth, tripling the economic output of the country during the 1960's.¹⁶ As companies expanded, so did the centralization and mergers of capital. A few large companies took control of a greater share of the manufacturing industry, which would have consequences for towns centered around industry in the future.¹⁷

By the late 1960's, the Rust Belt's manufacturing base began to crumble. Companies now had to compete with cheaper competition abroad. The term 'deindustrialization' was coined to describe the flight of industries from the region. Prominent economists blamed plant closings on the 'widespread systematic disinvestment' in the production facilities of manufacturing cities.¹⁸ Production facilities relocated abroad or to areas with lower production costs, like the American South. It was estimated that over 38 million jobs overall were lost due to private disinvestment in the industry, most of them concentrated in the Rust Belt region of the country.¹⁹ This economic phenomenon ripped the once stable economic base of the region.

The economic and social landscape of the Rust Belt was significantly altered by deindustrialization. There are estimates that the region's economy began to change as early as 1969 or as late as 1977 and companies continue to leave the region to this day.²⁰ While

¹⁶ Barry Bluestone and Bennett Harrison, *The Deindustrialization of America: Plant Closings, Community Abandonment and the Dismantling of Basic Industry*. (New York: Basic Books, 1982), 114.

¹⁷ Safford, 27.

¹⁸ Steven High. *Industrial Sunset: The Making of North America's Rust Belt, 1969-1984*. (Toronto: University of Toronto Press, 2003), 8.

¹⁹ Bluestone and Harrison, 35

²⁰ Bluestone and Harrison, 26. and Feyrer, James, Bruce Scaerdote, and Ariel Dora Stern. "Did the Rust Belt Become Shiny? A Study of Cities and Counties that Lost Steel and Auto Jobs in the 1980s." *Brookings-Wharton Papers on Urban Affairs*, no. 8 (07 2007): 41-89.

deindustrialization occurred all over the country, the Midwest was hit proportionately harder than the rest of the United States.²¹ It is estimated that between 1977 and 1987 there were approximately 500,000 jobs lost in the auto industry and 350,000 lost in the steel industry, most of which were concentrated in 140 counties within the Rust Belt.²² Businesses used various strategies to trim costs including, removing capital, refusal to invest in plant upgrades, laying off workers, or just leaving the town completely.²³ The removal of resources from the region affected the economy in numerous, devastating ways.

The reasoning behind deindustrialization was often complex and confusing to the average citizen. Many different things were blamed for the economic woes of the region including expensive union legacy costs, foreign competition, and outdated bureaucratic decision making models.²⁴ Companies argued that increasing legacy costs made them uncompetitive. Car manufacturers calculated that health care pensions added over \$1300 to every car and truck made.²⁵ There was also competition from foreign economies, like Japan. The Japanese manufacturing economy began to overtake the United States manufacturing economy due to a number of different innovative practices: proactive government investment in high tech firms, low degree of employee turnover, and high investment in worker training.²⁶ Many different theories came to light on what caused deindustrialization, but no one theory explained everything.

As manufacturing jobs were no longer a stable source of employment communities experienced a negative ripple effect. Communities and families were economically, as well as

²¹ Grant II, Don Sherman, and Michael Wallace. "The Political Economy of Manufacturing Growth and Decline Across the American States, 1970-1985." *Social Forces* 73, no. 1 (09 1994): 34

²² Feyrer, Saerdote, Stern, 41.

²³ Bluestone and Harrison, 35-36.

²⁴ Safford, 19.

²⁵ Longworth, Richard C. *Caught in the Middle: America's Heartland in the Age of Globalism*. (New York: Bloomsbury, 2008), 33.

²⁶ Bluestone and Harrison, 215-217.

emotionally affected by the shutdowns. When auto manufacturers decided to close over 100 plants in the early 1980's, nearly 80,000 additional jobs were lost from related industries that depended on the auto industry and their workers.²⁷ Families were also affected by the mass layoffs. Amongst laid off workers, levels of stress, trauma and anxiety were shown to be higher than average. Some plant shutdowns caused extreme trauma for workers. After the Federal Mogul Corporation closed a plant in Detroit, eight of the plants laid off workers committed suicide.²⁸ Many small towns relied solely on single factories for jobs, and when those companies left, many towns were caught in turmoil. Manufacturing jobs were so intertwined with their surrounding communities, both economically and socially, that their loss irrecoverably damaged their social and economic fabric.

The vacuum that large scale manufacturing companies left in their disappearance altered society's perspective of the region. Once viewed as the heartland of America, the region was now seen as an industrial wasteland plagued by social, economic, and environmental problems left in the wake of abandoned plants.²⁹ The severity of economic turmoil reminded many Americans of the Great Depression.³⁰ According to Bluestone and Harrison, many workers were devastated by the loss of these jobs because they seemed so certain in the postwar economic boom, "The system that seemed so capable of providing a steady growing standard of living during the turbulent 1960s had become totally incapable of providing people with a simple home mortgage, a stable job or a secure pension."³¹ The region no longer was the ideal place for the worker to raise a family and join the middle class, and old line manufacturing jobs could not be counted on to shape the economies of the future.

²⁷ Bluestone and Harrison, 36.

²⁸ Bluestone and Harrison, 63-64.

²⁹ High, 24.

³⁰ High, 24.

³¹ Bluestone and Harrison, 4.

Cities of the Rust Belt took the severest brunt of the economic destruction. Once prosperous manufacturing powerhouses like Detroit, Cleveland, and Buffalo were now ravaged by unemployment, rotting infrastructure, and an increasing racial tension. Rust Belt citizens saw the writing was on the wall: the once bountiful manufacturing jobs were not coming back. In the early 1980's nearly every major metropolitan areas in the region suffered extensive job losses.³² People soon followed the flight of jobs from the city which caused urban cores to become deserted wastelands. The number of abandoned buildings in Detroit increased at a rate of 2400 per year by the end of the 1980's.³³ White citizens could escape the destruction of the cities, but much of the poorer population was left behind, a majority of whom were African-American. A community leader in the predominantly African American city of Gary, Indiana described the bleak outlook for the city, "If things keep going as they are, Gary could be an all-black dead city."³⁴ Middle-class workers followed the flight of jobs from the once prosperous cities. These workers left behind a decaying landscape that was now inhabited by a poor, and mostly black population.

Companies were blamed for worsening the economic problems of the region. They became demonized for refusing to make job-saving investments, undermining labor unions, and repudiating any civic responsibility. Corporations were distrusted by citizens because of their desire to protect the bottom line at the expense of workers.³⁵ For example, U.S. Steel paid \$6 billion to acquire Marathon Oil when nearly half of the nation's steel plants were behind

³²Jon C. Teaford, *Cities of the Heartland* (Bloomington, IN: Indiana University Press, 1993), 221. Of the thirty-two major US metropolitan areas that were ranked by their employment growth, Rust Belt cities took the bottom of the list. Cleveland took last place with a 4.6% employment loss. Milwaukee was the only city to experience an increase, with a paltry .06% gain.

³³ Teaford, 228.

³⁴ Teaford, 223. In the 1970's Gary's population declined by 13.4%, while the black share of the population rose from 51 to 73%.

³⁵ High, 119.

schedule for upgrades.³⁶ Companies also angered the unionized base of the region by moving jobs to cheaper, “right to work states.” These areas, mainly in the south, had “better” work attitudes: less likely to unionize, less likely to demand extra benefits, and less likely to complain about workplace conditions.³⁷ According to Sean Safford, a Professor of Organizations and Markets at the University of Chicago, businesses no longer had to care about helping the communities they resided in:

“The evolution of the American economy toward global supply chains, customer bases, and financing; the emergence of national markets for labor, talent, and financing; and the willingness of communities to compete against one another to provide tax breaks and infrastructure improvements have cleaved the economic interests of business leaders from their civic interests.”³⁸

Businesses were now longer trusted by communities to guarantee jobs, which left civic leaders desperately searching for ways to keep towns alive.

Policy solutions in response to deindustrialization were inadequate and failed to successfully address the complex problems resulting from the regions’ economic downturn. In the post-war era a mixture of grants, tax breaks, and labor agreements were the policy mechanisms that aimed to save the manufacturing industry. When industrial cities began to decline in the 1950’s, the federal government set up urban renewal grants to give cities funds to rebuild structures in their urban cores. Even though metropolises like Cleveland and Detroit took advantage of this program, projects were bogged down by administrative problems, slow construction time, and did little to stop economic destruction of the inner cities.³⁹ In the 1970’s Towns like Youngstown, Ohio desperately pleaded with the Carter administration to save their

³⁶ Bluestone and Harrison, 6.

³⁷ Tabb, 13.

³⁸ Safford , 13-14.

³⁹ Teaford, 218.

city, but their request fell on deaf ears.⁴⁰ By the 1970's, most towns were desperate to receive help from the government.

The policy debate eventually shifted to how the government should address industrial decline: through the free market incentives or government policy. The Regan administration's industrial policy focused on reducing government's role in business, mainly through tax cuts and deregulation. Over the course of the decade, the American steel industry lost \$12 billion dollars due to these free market policies.⁴¹ President Ronald Regan's industrial policy in the 1980's was designed was to stimulate business in the Rust Belt, but the overall benefit of the plan was marginal. The President's plan worked against older industrial cities because it encouraged business to substitute capital investment for labor which increased unemployment. It also rewarded already successful firms, most of which had left the region anyway, and it placed a greater tax burden on individual families. The structure of business tax policies was also designed to help growing, newer economies instead of older areas by rewarding them for capital investment and equipment upgrades. Between 1963 and 1976 manufacturing firms in Los Angeles received approximately 15% more tax credits than firms in Philadelphia due to this regional imbalance.⁴² The grab bag of industrial policy that focused around saving the region through a mixture of deregulation and tax incentives failed to take into account the plethora of other factors surrounding deindustrialization.

Advocates for more government intervention faced a multitude of organizational issues as well. Initially, state governments tried to tackle their problems through local economic development policies, which included mixtures of tax incentives and prime real estate locations,

⁴⁰ Teaford , 220.

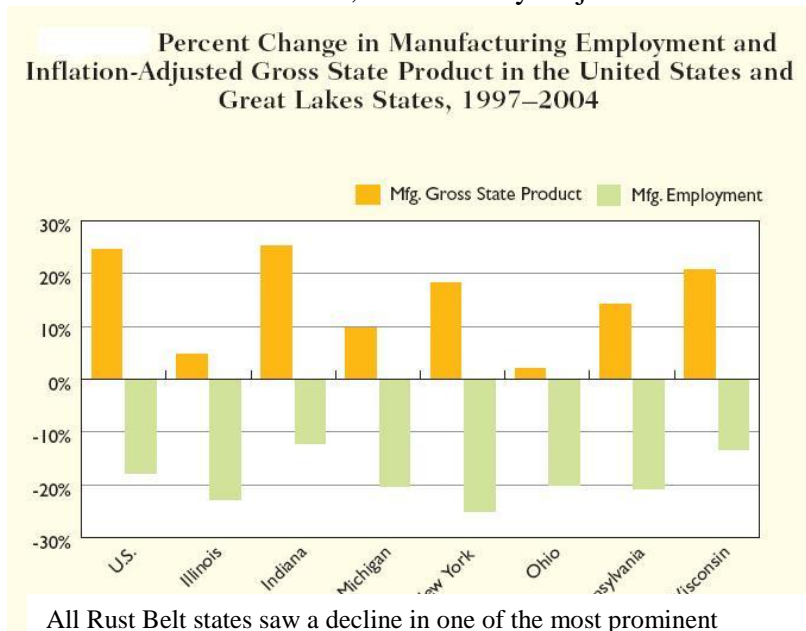
⁴¹ Stein, 273.

⁴² Michael I. Luger, "Federal Tax Incentives as Industrial and Urban Policy," in *Sunbelt-Snowbelt: Urban Development and Regional Restructuring*, ed. Larry Sawers and William K. Tabb (New York: Oxford University Press, 1984), 218.

but studies showed that these policies were largely ineffective, and market forces had a larger effect on employment growth.⁴³ Pro-labor groups recommended that tariff policies be enacted to protect American products against foreign competition, but protectionism became a taboo solution with the advent of the North American Free Trade Agreement. Some mayors gave up on saving manufacturing jobs and turned to entertainment and service industries to save their economies.⁴⁴ The complex nature of the deindustrialization problem has not been adequately solved by any single policy.

Communities are now facing extensive economic and social problems due to the flight of manufacturing jobs from the region. Between 2000 and 2005, almost every major Rust Belt metropolitan area lost

manufacturing jobs.⁴⁵ Due to the current recession, many of the former manufacturing states continue to have double digit unemployment rates.⁴⁶ Local governments depend on these companies for their tax revenue, and it is becoming



All Rust Belt states saw a decline in one of the most prominent sources of tax revenue, manufacturing. Source:Howard and Wial

increasingly difficult to fight other problems related to the unemployment like fixing education

⁴³ Green, Gary P., Arnold Fleischmann, and Man Kwong Tsz. The effectiveness of local economic development policies in the 1980s. *Social Science Quarterly* (University of Texas Press) 77, no. 3 (09, 1996). : 609-625.

⁴⁴ Teaford, 225.

⁴⁵ Howard Wial and Howard Friedhoff, “Bearing the Brunt: Manufacturing Job Loss in the Great Lakes Region, 1995-2005,” <http://www.refworks.com/Refworks/mainframe.asp?tsmp=1256929562605> The Brookings Institution. July, 2006. (accessed September 2009).

⁴⁶ United States Bureau of Labor Statsics, “Regional and State Employment and Unemployment Survey,” United States Department of Labor, <http://www.bls.gov/news.release/laus.nr0.htm> (accessed October 29, 2009)

and rebuilding municipal infrastructure. Dealing with the history, social impacts, and economic issues in the Rust Belt requires a broad array of policies.

Fordist manufacturing companies built the Rust Belt region, but in the wake of deindustrialization, they have been an albatross to the economy and development. While these companies shaped the region's social and economic structure, their extensive influence also played a significant role in the region's downfall. A company's inability to keep up with the changing economy left many people without the stability of a manufacturing job. The social devastation from deindustrialization left many people mistrustful of large industrial companies. legacy of community upheaval, city destruction, and a frustrated citizenry still pervades the region. Rust Belt states are desperately searching for policy that will change their course to a more prominent future.

The Rust Belt Today

There are many complex problems currently facing the Rust Belt. A variety of influences affected the rise and fall of the manufacturing industry including business structure, financial mismanagement, and greed. Growing from economic innovation and optimal resources, the region was once a picture of America where every family could reach the middle class. By the 1970s, deindustrialization had destroyed the idea that prosperity from manufacturing employment could go on forever. The problems left in its wake were enormous and no single solution has fixed all of the problems. Today the region needs to deal with many different business, labor, and social issues in order to revitalize its economy.

After years of plant closings, communities are desperate for jobs, but also weary of companies setting up shop in the region. Out of desperation, cities and states must give millions of dollars in incentives, tax breaks, and infrastructure upgrades in order to attract jobs back to the

region without any guarantee that the company will remain there in the long term. The Electrolux Company located in Greenville, Michigan was able to save \$81 million dollars by moving operations to Mexico, but the company told the town it would stay if incentives came close. The government and local unions were able to come up with \$74.3 million dollars in incentives, infrastructure investments, and wage concessions, but the company moved anyway.⁴⁷ Workers are angry at both companies and the government. Community activist, Phil Kidd, argued that the region is not being helped by anyone:

"We're sick and tired of the empty promises and the same old story line about Youngstown and the mills. The problem is that this is a rubber-stamp Democratic area so they know it's almost a guarantee they're going to get our vote. We just have to hope that this time whoever wins won't forget about us."⁴⁸

The historical tensions between the community and capital interests of the Rust Belt threaten the notion traditional economic incentives (tax breaks) alone will be palatable to citizens of these communities.

Globalization is making it more difficult to bring back the region's economic infrastructure. Workers are still confused about who to blame, but government's steadfast reliance on free trade will affect the structure of work in the region for years to come. The rise of other global economies creates a giant competitor for the region. The former Vice Chairman of the Federal Reserve, Alan Blinder, bluntly articulated the Rust Belt's status in the new economy, "Trade has winners and losers, and there have been a lot of losers in Ohio."⁴⁹ Even with generous benefits, communities have a hard time keeping up with the low cost of labor in

⁴⁷ Longworth, Richard C. *Caught in the Middle: America's Heartland in the Age of Globalism*. New York: Bloomsbury, 2008. 54-56.

⁴⁸ New York Times America Section, "Obama and Clinton vie for Blue-Collar votes in Ohio" http://www.nytimes.com/2008/02/26/world/americas/26iht-26ohio.10430005.html?pagewanted=1&_r=1 February 22, 2008. (Accessed November 5th, 2009), 55.

⁴⁹ Economic Scene, "The Politics of Trade in Ohio," http://www.nytimes.com/2008/02/27/business/27leonhardt.html?_r=1&ex=1361768400&en=e420a9eb38842631&ei=5088&partner=rssnyt&emc=rss February 27, 2008 (Accessed October 30th, 2009).

developing countries. Other macro economic factors play a large role in affecting US manufacturing employment. There is evidence that the rising trade deficit accounted for one-third of manufacturing job losses from 2000 to 2004.⁵⁰ Relying on manufacturing companies to provide jobs is becoming more difficult in the wake of free trade and international business.

The Rust Belt must also deal with the problems stemming from the destruction of the urban centers. Cities are currently facing budget shortfalls, massive unemployment, and extensive poverty. The city of Detroit is facing a \$300 million dollar budget shortfall just to provide miniscule services and its unemployment rate is now 28.9%.⁵¹ The budget problems facing Rust Belt cities are disproportionately affecting African Americans as most of these cities have significant minority populations. These groups are less able to move to the wealthier suburbs and have significantly less opportunities to obtain middle-class jobs. High school dropout rates amongst African Americans in Chicago hover near 50% and only 5% of incoming high school freshmen will go on to earn a college degree.⁵² With the siphoning of low skill jobs from cities, most urban Rust Belt residents have little hope of finding jobs that they will be able to obtain. The loss of the high paying jobs from the city left a significant part of the population stuck without much hope for a future.

The issues facing the Rust Belt are numerous, complex, and not easily solved. The economic and social success of the region came from large manufacturing firms providing thousands of easily accessible jobs and unions fighting for strong benefits. The corporation became embedded into the fabric of communities all across the region. The Rust Belt became the standard bearer of the “American Dream” lifestyle. Deindustrialization gradually suffocated the

⁵⁰ Josh Bivens, “Trade deficits and manufacturing job loss: Correlation and causality,” *Economic Policy Institute* 171, (March 14, 2006), <http://www.epi.org/publications/entry/bp171/> (accessed January 4th, 2010).

⁵¹ Okrent, Daniel. “Detroit’s Future: The Death- And Possible Life- Of a Great City,” *Time Magazine*, <http://www.time.com/time/nation/article/0,8599,1925796-3,00.html> (accessed October 26, 2009).

⁵² Longworth, 170.

region's economic livelihood and both workers and companies were unprepared to deal with a globalized society. In the wake of these extensive job losses, communities were left with a myriad of problems including decaying infrastructure, tattered towns and a frustrated populace. Policies tried to alleviate these problems, but their inadequacies in fixing these problems are still seen in the region today.

Saving the Rust Belt

Even though the region experienced steep economic decline in the past few decades, the manufacturing industry remains essential to the vitality of the Rust Belt, and the United States economy as a whole. Even though total manufacturing employment numbers are declining, these jobs still provide a backbone to the nation's economy. Total overall output in manufacturing increased 38 percent from 1997 to 2008 which is much higher than other employment sectors.⁵³ One manufacturing job creates an additional 2.9 jobs in other related sectors (such as finance, or construction).⁵⁴ Moreover, workers in manufacturing possess important trade skills that are valuable to our nation's economy. Vice President Joe Biden described the importance of these workers, "There are far too many valuable resources, too much valuable capital and especially too much human skill and know-how embedded in America's manufacturing sector to allow it to go to waste."⁵⁵ Manufacturing jobs provide a beneficial source of employment that creates a positive financial impact on the surrounding region, as well as the rest of the country.

The symbolism of the Rust Belt is at the core of our nation's character. Success coming from being employed in physically demanding work is an ideal that came from the structure of

⁵³ Wial and Friedhoff

⁵⁴ Apollo Alliance, "Make it in America: The Apollo Green Manufacturing Action Plan," http://apolloalliance.org/wp-content/uploads/2009/03/greenmap_proposal031109.pdf (accessed October 6, 2009).

⁵⁵ The Middle Class Task Force, "White House Task Force on Middle Class Families Holds Meeting on American Manufacturing in the 21st Century," The White House http://www.whitehouse.gov/the_press_office/White-House-Task-Force-on-Middle-Class-Families-Holds-Meeting-in-Ohio-on-American-Manufacturing-in-the-21st-Century (accessed October 23, 2009)

the Rust Belt. Even though manufacturing work was difficult and tedious it created the bedrock social group of our country, the middle class. This group expanded rapidly here in the post WWII economic boom. Everyone from politicians to rock stars likes to flaunt their factory town credentials. Billy Joel's song "Allentown" reflects the hard realities of living in a dying factory town, even though Joel was originally born in New York. The current presidential administration launched a "middle class task force" to address the problems facing this important social group. The symbol of the American Dream, hard work, and the middle class are rooted in the Rust Belt, and it is important to recognize the impact it had on our nation's development.

During the 2008 election season, promises to save manufacturing jobs were central to campaign messages in the region. Most of the Rust Belt is made up of political swing states, so many candidates spent large amounts of money and time in the region. Candidates spoke extensively about the issues about jobs and how to keep them in the region. Voters raised concerns raised about NAFTA and increasing job losses, but candidates only made half-hearted promises to rescind the trade agreement. The messages focused on restructuring the economy through infrastructure investment, health care reform, and creating a new economy. Appealing to the hardworking nature of the region, candidates placed fixing the Rust Belt economic woes at the top of their political agendas.

Even if the public does not endorse continued support for the manufacturing industry, political interests within the region will make sure it is kept on the national agenda. The states of Wisconsin, Michigan, Ohio, Pennsylvania, and Indiana have a combined 75 electoral votes which means they carry heavy political clout. Most are considered swing states, so both political parties lobby intensely for their votes. Manufacturing companies and workers spend millions of dollars every year on lobbyists in Washington, and politicians have a hard time winning elections

without the support of these special interests.⁵⁶ Unions and automobile companies demonstrated their power in 2009 by successfully getting billions of dollars from Washington in bailout money. The Rust Belt has major political players that will surely affect the economic future of the region.

Green Jobs in the Region

Green Jobs are lauded as a savior for the Rust Belt. Politicians, businesses, and unions are speaking about the new “green economy” Projections range from tens of thousands to millions depending on the amount of private and public investment. This idea sees the region coming back to its manufacturing greatness by employing thousands in an industry that helps the American economy and environment. Building components for the new green economy is a powerful idea that is being supported by a strong coalition.

There are many different phrases to describe the transition to an economy that is better for the environment. These include: low carbon economy, green economy, clean energy economy and the green collar economy. These all have the common thread of producing jobs that benefit the environment by lowering CO2 emissions through energy efficiency and production of renewable energy. Politicians and economists believe that with the right incentives millions of jobs would be created by manufacturing and installing wind turbines, solar panels, and energy efficient batteries. Many experts believe that numerous green jobs can be created in with the right policies and adequate financial investments.

Many activists, politicians and other interest groups have the same goals with implementing green jobs: to make saving the environment a down to earth activity that creates

⁵⁶Center for Responsive Politics. “Industrial Unions: Long Term Contribution Trends,” <http://www.opensecrets.org/industries/indus.php?cycle=2010&ind=P02> ,(accessed October 30, 2009)

worthwhile jobs for everyone. Activist Van Jones describes green jobs as a blue-collar, common man solution to saving the environment,

“When you think about the emerging green economy, don’t think of George Jetson with a jet pack. Think of Joe Sixpack with a hard hat and lunch bucket, sleeves rolled up, going off to fix America. Think of Rosie the Riveter, manufacturing parts for hybrid buses or wind turbines. Those images will represent the true face of green-collar America.”⁵⁷

There are hundreds of jobs that the average American worker will be able to do, including energy efficient construction, retrofitting houses, or manufacturing clean energy components.

The goal of this movement is to show that saving the environment is also economically beneficial to the economy.

There is a strong desire within the private sector and the government to catalyze the green economy. There is evidence that thousands of jobs related to clean energy production are unfilled because companies cannot find skilled labor to do the work.⁵⁸ Many books, supporters, and state policy ideas have come out with advice on how to grow the green economy. In the 2008 campaign many presidential candidates spoke about the need to develop a new green economy and mentioned the environment related to jobs.⁵⁹ The PEW charitable trust estimates around 770,000 jobs in the green sector were created in the past ten years.⁶⁰ While the clean manufacturing sector of green jobs is still small, with clean technology providing approximately 87,000 jobs in the United States in 2007.⁶¹ However, the industry is growing fast and large

⁵⁷ Jones, Van, Ariane Conrad, and Robert Francis Kennedy. *The Green-Collar Economy : How One Solution can Fix our Two Biggest Problems*. 1st ed. Vol. xiii. New York: HarperOne, 2008, 10

⁵⁸ Sarah White and Jason Walsh. “Greener Pathways: Jobs and Workforce Development in the Clean Energy Economy,” Center on Wisconsin Strategy <http://www.greenforall.org/resources/greener-pathways-jobs-and-workforce-development-in> (accessed September, 2009)

⁵⁹ Grist “Compare the Candidates” http://www.grist.org/candidate_chart_08 (accessed October, 2009)

⁶⁰ This includes jobs in green training, conservation and pollution mitigation, energy efficiency, clean energy, and environmentally friendly production http://www.pewtrusts.org/our_work_detail.aspx?id=690

⁶¹ The PEW Research Trust. “The Clean Energy Economy: Repowering Jobs, Businesses and Investments across America” (June 2009). 17

amounts of money are being funneled into the industry. Clean energy was the source of approximately \$8.73 billion in venture capital investments between 2007 and 2009.⁶²

Implementing an economy that relies heavily on renewable power will create thousands of jobs, especially in the manufacturing sector. According to the Apollo Alliance, a \$50 billion dollar federal and private investment would create 250,000 direct manufacturing jobs in the US.⁶³ The components required in wind turbines, solar photo voltaic cells, and energy efficient cars require many different components from different manufacturing firms.⁶⁴ The manufacturing belt states of Illinois, Ohio, New York, Pennsylvania, Indiana, Wisconsin and Michigan all have been listed as top sites for renewable energy manufacturing jobs.⁶⁵ Experts believe that the most efficient way to grow green jobs is to build them around the existing skills of the workforce.⁶⁶ This includes workers who are familiar with the areas of construction and manufacturing. With high projected growth in the renewable energy market oncoming, the Rust Belt stands to benefit from the rapidly expanding green economy.

Analysts have shown that a number of manufacturing companies can easily transform into creating renewable energy components. According to a report done by the Renewable Energy Policy Project, the firms that have the technical potential to enter the renewable energy market are classified under codes 32 and 33 in the North American Industrial Classification System.⁶⁷ This is beneficial to the region because a majority of industries under this

⁶² PEW Research trust, 25.

⁶³ Apollo Alliance, 2009.

⁶⁴ George Sterzinger and Matt Svrcek. "Wind Turbine Development: Location of Manufacturing Activity," Renewable Energy Policy Project, <http://www.repp.org/articles/static/1/binaries/WindLocator.pdf> (accessed Sep. 2009) and George Sterzinger and Matt Svrcek, "Solar PV Development: Location of Economic Activity," Renewable Energy Policy Project, <http://www.repp.org/articles/static/1/binaries/SolarLocator.pdf> (accessed Sep. 2009)

⁶⁵ Blue Green Alliance, "How to Revitalize America's Middle Class with the Clean Energy Economy," <http://www.bluegreenalliance.org/admin/publications/files/0012.4.pdf> (accessed Sep. 2009)

⁶⁶ White and Walsh, 3.

⁶⁷ This includes steel and plastic gear manufacturing

classification relocated in the Rust Belt region.⁶⁸ For example, wind turbines have many different components including rotors, nacelles, gearboxes, and generators. According to the a report done by the Renewable Energy Policy Project, Ohio has some of the most firms with the potential to create these components. Over 11,688 jobs would be created in the state with a \$3.9 billion investment. The other Rust Belt states of Michigan, Indiana, Pennsylvania, New York, and Wisconsin also rank in the top ten in the potential to enter the wind manufacturing market.⁶⁹

Politicians threw their support to green jobs to benefit the states that have been hit hardest by deindustrialization. On the campaign trail, nearly every major presidential candidate mentioned the green economy in the former Rust Belt states. Presidential candidates made pitches to the desperate voters of Ohio promising to rebuild their economy. Barack Obama promised five million new green jobs through investing \$150 billion dollars in developing clean energy.⁷⁰ These solutions garnered voters' attention because they demonstrated a new potential for the economy. The region's infrastructure would be utilized and workers could adapt to green jobs with a minimal training. In a desperate area of the US, the potential of green jobs is well recognized by politicians.

While a diverse coalition supports the idea of green jobs, there are still many questions on how to develop the environmentally friendly economy. The measurement, definition and development of green jobs lack cohesion and clarity amongst policymakers and interest groups. The United States Labor Department does not have an official measurement of how many green jobs are actually in the economy. In order to grow green jobs, analysts have made many different recommendations. There are many different state and federal green jobs proposals in the works.

⁶⁸ Sterzinger and Svreck, 5.

⁶⁹ Sterzinger and Svreck, 6.

⁷⁰Political Intelligence. "Obama Talks Competiveness in Michigan"

http://www.boston.com/news/politics/politicalintelligence/2008/06/obama_talks_com.html June 16th, 2008.

(Accessed November 5, 2009)

Some policies like Renewable Portfolio Standards and Carbon Cap and Trade create demand for clean energy systems by placing a mandate on production of renewable energy or reduction in CO₂. Other policies create demand for renewable energy by providing tax credits to companies or homes that install or invest in solar or wind systems. States are trying many different avenues to grow green jobs.

One of the major federal policies in the works is a national cap and trade system and many green jobs activists believe it will benefit American manufacturers. However, prominent pro-business organizations like the Association of American Manufacturers and the Chamber of Commerce argue that this type of legislation will drive manufacturers out of business.⁷¹ There are estimates that a Cap and Trade bill would reduce industrial output by approximately 1% over the next twenty years due to higher prices on carbon.⁷² Other concerns with climate legislation are that policies could promote carbon leakage, which would merely shift carbon intensive manufacturing to China and hurt American manufacturing companies.⁷³ Supporting organizations of climate legislation believe that any policy should have generous allowance mechanisms to give companies time to retool their factories without punishment.⁷⁴ Any major climate legislation that looks to catalyze the green economy must be tailored correctly to benefit the economy.

⁷¹ National Association of Manufacturers “NAM Voice Concern over Boxer-Kerry Climate Bill” <http://www.nam.org/NewsFromtheNAM.aspx?DID={DAA0484A-3637-4F17-B416-566C5CF6DEFF}> (September 2009).

⁷² Economist.com “Greening the rustbelt” http://www.economist.com/world/unitedstates/displaystory.cfm?story_id=E1_TONTQRVV August 13,2009. (Accessed October 26, 2009).

⁷³ Alliance for American Manufacturing “Industries Employing 4.1 Million Workers at Risk Under Climate Bill.” <http://www.americanmanufacturing.org/newscenter/pressreleases/2009/10/01/industries-employing-41-million-workers-at-risk-under-climate-bill/> (October, 2009).

⁷⁴ This includes many prominent senators from manufacturing states, see Alliance for American Manufacturing (October, 2009).

Many additional provisions to environmental legislation are being considered to ease the transition to green for manufacturing economies. Some already existing policies will also be leveraged to benefit the manufacturing industry while indirectly supporting the green economy. One important policy is the Manufacturing Extension Partnership (MEP) which provides information so manufacturing companies can upgrade production facilities. ‘Buy American’ policies which would mandate purchase of US made goods do not have much bi-partisan support but are being pushed by labor to protect their jobs.⁷⁵ ‘Pathways out of Poverty’ and set-asides are recommended by social justice advocates to make sure that the poor and disenfranchised are able to be a part of the new economy. Environmental mandates will need to be partnered with other types of policies in order to fully bring about a green economy.

“Green jobs” is a popular buzzword in capitals, union halls, and board rooms all across the old industrial Midwest. This innovative solution is popular because it could help stop environmental problems, put people back to work, and become central to the region’s future economic activity. Environmental activists are calling for policy to reduce CO₂, and manufacturing renewable energy systems is vitally important to achieving any emissions goal. Green economic redevelopment could potentially put thousands of people back to work which is extremely important in today’s economy. However, there are many issues surrounding how to develop green jobs. The Rust Belt’s industrial assets and infrastructure could be central to the development of the green economy, but proper attention needs to be placed to make sure the industry does not develop in an economically unsustainable way; much like the manufacturing companies did in the last part of the 20th century.

⁷⁵ Apollo Alliance, 2009.

Analysis

Green economic development is pegged as the savior for the industrial Rust Belt. Initial economic estimates show the region could potentially be a hub for green manufacturing. However, there are significant economic and social issues which will need to be addressed in future economic development proposals for the region. Due to the issues stemming from deindustrialization, green jobs will need to develop according to a new industrial model. Former steel and automobile jobs will not come back to the region by simply providing monetary incentives. In order to revitalize the region, green jobs policy needs to rethink industrial organization, leverage more than just financial incentives for companies, and address significant social issues. Business, political, and community leaders need to develop new ways to bring the region back to economic prominence.

Innovation needs to be promoted within any economic development policy. An example of a successful policy that has embraced this idea is the Ben Franklin Technologies Partnership, a Pennsylvania business incubator that promotes technology start-up firms. The program connects companies with other regional players, like universities, in order to encourage partnerships to promote new ideas. The company has helped create 2,400 jobs and has generated over \$560 million dollars since its inception in 1980.⁷⁶ Urban theorist Richard Florida believes that these types of innovative networks are necessary for cities to survive economic distress, “In order to grow bigger and overcome diseconomies of scale like congestion and rising housing and business costs, cities must become more efficient, innovative, and productive... Unlike many other places [innovative places] can overcome business failures with relative ease.”⁷⁷ In a twenty first century economy that is based on knowledge instead of mass production, innovation and

⁷⁶ Safford, 119.

⁷⁷ Richard Florida, “How the Crash will Reshape America,” The Atlantic.com, March 2009, “<http://www.theatlantic.com/doc/200903/meltdown-geography>” (accessed December 15th, 2009), 6.

collaboration are two necessary components that Rust Belt cities will need to embrace in order to survive.

One of the most damaging aspects of globalization affecting the economy of the Rust Belt has been caused by companies demanding huge giveaways from local governments to keep jobs from being outsourced. In order to lighten the burden on public resources, clustering and partnerships should be encouraged between private and public entities. This has been done successfully on a small scale in Toledo which successfully transformed itself from a glass manufacturing town to a solar energy cluster. Through state grants and partnerships with the University of Toledo and the Regional Growth Partnerships, a venture capital firm, the town is now home to the solar firm Xunlight.⁷⁸ Regional partnerships should also be embraced given the vast knowledge of manufacturing amongst Rust Belt businesses, governments, and universities. This is pivotal because unlike other metropolitan corridors (Washington D.C.- New York-Boston,) the distance between Rust Belt cities is much greater, which limits discussion and cooperation between these entities. Richard C. Longworth, author of Stuck in the Middle: America's Heartland in the Age of Globalism recommends that the Midwest embrace a regional approach to development:

“The first step is to create a Global Midwest Forum, a roundtable for the region's best minds to identify the issues and trends that assail the Midwest and set the agenda for future action. The Forum would bring together businesspeople, academics and educators, mayors, scientists, philanthropists, and journalists- all leaders with a stake in the Midwest's future and some ideas for what to do about it.”⁷⁹

The Rust Belt must encourage partnerships to encourage creative ideas, rebuild the region's competitiveness, and prepare the region for a different type of economy.

⁷⁸ Economist.com, “Greening the rustbelt”.

⁷⁹ Longworth, 248.

In order for the Rust Belt to succeed economically, manufacturing companies need to be significant role players in communities. This is due to the significant role Fordist type companies historically played in the community. In comparing the development of two former industrial cities, Youngstown, Ohio and Allentown, Pennsylvania, Professor Sean Safford argues that Allentown successfully redeveloped their economy because their community's social structure was intact in their post-industrial economy. The main business in the city, Bethlehem Steel, was a key player in different community groups and organizations, hence making it more open to collaboration and discussion within the community. Allentown has blossomed in the post industrial society because of this partnership. On the other hand, Youngstown's community failed to produce any prominent business or civic leader that crossed class and cultural ties, which severely limited dialogue on how the city should redevelop.⁸⁰ The Pennsylvania town is now home to over 45 venture start up firms, compared to Youngstown's sixteen.⁸¹ Firms are interested in areas with robust organizational networks because it is easier to tap into the area's collaborative and innovative power. Manufacturing companies were once the main source of community involvement for many towns, and this role needs to be reaffirmed by business leaders.

Fixing the damaged physical and social infrastructure in the Rust Belt is necessary to make the region an attractive place to do business again. The landscape of dilapidated buildings in many Rust Belt cities decreases property values and makes it less attractive for businesses to relocate there. As was stated previously, many young people in Rust Belt cities see this as a sign of hopelessness and disregard the importance of education for their future. This problem has disproportionately affected minorities in the inner cities. More opportunities must be provided to

⁸⁰ Safford, 93.

⁸¹ Safford, 120.

low-educated and low-income people because of the increasing difficulty for workers without a post-secondary education to gain a middle class job. Many green jobs related industries are built around construction and there are ample opportunities to remake abandoned buildings green. Apprenticeships have been shown to be a successful way to accomplish this due to the connections it gives students to an industry. Green jobs must fix communities first by rebuilding destroyed infrastructure and giving disadvantaged people the opportunity and accessibility to do these needed jobs.

Environmental incentives will be a pivotal part of any green jobs policy, but these policies must be structured correctly. A cap and trade policy will create demand for renewable energy jobs, but there are different interpretations on how these mandates will affect the economy as a whole. One of the more successful environmental incentives in the region has been a Renewable Portfolio Standard which requires states to get a certain amount of electricity from renewable sources. Pennsylvania has been a world leader and embraced the clean energy mandate as a competitive advantage. This policy was one of the main reasons that the wind turbine company, Gamesa, decided to locate in Pennsylvania. Gamesa spokesman Michael Peck said that the standard has been a benefit for their company: “We’ve had the opportunity through the challenge that’s facing our environment to take this manufacturing DNA and attain world leadership in green energy and manufacturing.”⁸² A national policy will still be in the works for a while; however, states in the region can create demand locally through different sorts of policies.

As was stated previously, many communities are struggling to come up with the financial incentives to retain jobs. Thus the region must utilize other assets to attract new businesses to the region. Among its biggest assets are its universities. According to scholar John Duderstadt, universities are the best choice to lead the Rust Belt’s reemergence because they are free from

⁸² PEW Charitable Trust. 19.

the special interests of political parties, and they can “analyze the economic and social challenges presented to the region by the global knowledge economy, develop a vision and strategic plan to secure its future prosperity, and work with others to execute this strategy.”⁸³

Companies will always be able to find cheap labor in other countries and even in other parts of the US; therefore, the Rust Belt must leverage its educational systems in order to attract more businesses.

The region cannot place all of its hope in redeveloping its economy in the same Fordist style as it did in the 20th century. While there are numerous ways redevelopment can occur in the region, it is certain that it will be much different than the glory days of manufacturing after World War II. There are many positive as well as negative development scenarios for the region. Some people believe that the problems in cities have gotten so bad that people should just be paid to move out. Many people question the ability of our public leaders to put forth fair as well as beneficial development policies. Business and labor interests are so powerful in the region that many people believe any policy will be convoluted with giveaways and not really benefit the region at all. With the right policies, jobs will come back to the Rust Belt, but there is no guarantee that everyone will be able to work a lifetime for one company as in the past. The author Joel Garreau, in [The Nine Nations of North America](#) describes the danger in looking to the Rust Belt for the same prosperity through manufacturing jobs as it did in the past:

“Unquestionably, [The Rust Belt] is still a formidable place, one that can make a world of difference. The danger lies in our continuing to view it as a metaphor of the future seeing it as the only place in which North America’s tomorrows are being hammered out.”

⁸³ Longworth, 254.

While the region is teeming with many economic assets, the Rust Belt needs to rethink its development in order to shed the rust of a dying manufacturing industry and become relevant for the future of the country.

What will a green jobs future for the Rust Belt look like? The region will reinvent itself as a collaborative center that will research, develop, and produce components for clean energy instead of just mass produce them. Companies will hire workers based on their knowledge and ability to share ideas, and not just to get cheap labor. Local governments will not be held hostage to give away large sums of money in order to keep jobs. Rather, these communities will build on their educational and social resources to create high quality, innovative place to do business, rather than just having cheap labor. Communities, governments, and businesses will collaborate to recreate the Rust Belt as a green network that will share the best ideas to research and develop green products. Educational opportunities will be widely available for all residents and destroyed inner cities will be redeveloped as green centers to increase. The Rust Belt will successfully evolve from an obsolete, mass production society and redevelop as a collaborative, innovative center for green jobs by restructuring its businesses, rebuilding its communities, and utilizing its educational assets.

Conclusion:

There are many formidable problems facing the Rust Belt. States that once relied on manufacturing for their economic livelihood are facing a considerable number of problems. The Fordist structure of the region developed in the beginning of the 20th century, but also hastened the region's downfall by the 1970's. The affects of deindustrialization included massive layoffs, the breakdown of cities, and a weary citizenry. These issues make redeveloping the Rust Belt a

unique economic and social problem. The policies that will redevelop the region will need to address the problems that came with deindustrialization

One of the most promising signs of hope for redeveloping the Rust Belt lies in promoting green jobs. Green jobs will put people back to work manufacturing and installing clean energy components. It is a politically popular idea backed by a diverse coalition of environmentalists, businesses, unions, and social justice groups. This policy has the potential to work in the Rust Belt because green jobs rely heavily on an industrial infrastructure and a knowledgeable workforce. Many different policies have been put forth to help manufacturing companies retool to develop clean energy components instead of steel or automobiles. Pricing carbon, worker training, and mandating renewable energy are part of the greater green jobs legislation. These policies can work in the Rust Belt, but only if certain conditions are met.

Due to the numerous issues coming from the fordist structure of the Rust Belt, any solution needs to address the issues of industrial organization, community development, and business incentives. Some of the most successful businesses in the region promote collaboration and innovation as part of their business plan. As the world is evolving from a mass production economy to a knowledge-based economy the Rust Belt must utilize its educational resources related to manufacturing in order to compete with the rest of the world. Businesses need to collaborate with other entities like universities, high tech firms, and governments to develop the best green ideas in the twenty-first century. However, in order for this development to happen the Rust Belt's physical and social infrastructure will need to be fixed to make the region an attractive place to live again. Using the region's rich educational resources to their advantage will make the Rust Belt a major economic player in the twenty first century. The Rust Belt must

become a collaborative region instead of focusing on lowering costs because these knowledge assets are valuable resources that can be better utilized for the region to compete in the future.

The Rust Belt region plays a vital role in our nation. In order to successfully promote green jobs the region all of the important players will need to lead, innovate, and develop around ideas and research, not just making lots of goods. Communities will be necessary springboards for development through collaboration and partnerships. Education and equality will be prioritized so that everyone can benefit from the green economy. The idea of standing in a line and solely making things will have to be left behind. In order to shed the rusting mantle of an archaic Fordist industry and catalyze a new green economy, green jobs policy must promote innovation, value collaboration, and prioritize issues that will lead to rejuvenation. If these issues are addressed, green jobs will be the best hope for the Rust Belt's future.

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