Essays in Economic & Business History
2024, 42 (1): 1-14
Published May 4, 2024

Deindustrialization of Detroit: The Costs of Movement

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Abstract

This article takes a further step in identifying a more complete economic history of deindustrialization. Following the extension of the timeline and its divorce from the 1970s, this article examines the reasons for production facility relocation out of Detroit prior to the 1970s with a particular focus on the auto industry. This article uses multiple collections from the Reuther Archives at Wayne State University, as well as a data set built from census wage data, to show that production facilities relocated away from Detroit in search of lower wages and tax costs.

JEL Classifications: N00, N62, P00, J01, J50.

Keywords: Economic History; Deindustrialization; Detroit, Michigan; Auto Industry.

ISSN 2376-9459 (online) LCC 79-91616 HC12.E2

Introduction

Deindustrialization, initially defined by Barry Bluestone and Bennett Harrison (1982, 6) as a "widespread, systematic divestment in the nation's basic productive capacity", is generally relegated to the decade of the 1970s, with Detroit (or the Rust Belt) as the focal point. In these areas of exit, there is a decrease in manufacturing output, employment, and investment. Making use of this definition, this article looks at areas of production facility entry and exit and the redistribution of this productive capacity. In doing so, it takes issue with this traditional 1970s timeline. Building on the implicit arguments of Thomas Sugrue (1996) and Jefferson Cowie (1999), and the more explicit argument of Jackson Battista (2022), it shows that deindustrialization, or relocation, occurred at least as far back as 1940, thus rewriting the deindustrialization timeline.[1]

This complicates the current narrative as it challenges the frequently-assumed starting point of the 1970s, suggesting that the process began earlier than commonly acknowledged, expanding our understanding of deindustrialization as a historical process. In delving further into this timeline, it is clear that the driving factors behind the relocation of production facilities away from industrial centers are complex yet crucial to understand in developing a more comprehensive and accurate economic history of deindustrialization.

This article examines cost-specific reasons, including labor (wage) and tax costs, that drove the decisions of automobile corporations to relocate their production facilities from 1950 to 1970. Expectedly, the history of this relocation is more complicated and involves a multitude of factors. While others address topics including organized labor, productivity, technology, space, etc., this article contributes an analysis of costs that line up with the new timeline of deindustrialization.[2]

Using a new measure of relocation discounts, constructed from census income and wage data, this article identifies a pattern of relocation that is consistent with movement to lower wage, lower tax, and lower cost areas, by looking at states to which production facilities relocated. Costs played a pivotal role in pushing these manufacturers into making the decision to relocate out of Detroit, and in many instances, out of Michigan.

Review of the Related Literature

Bluestone and Harrison's (1982) seminal work *The Deindustrialization of America* argued, through a discussion of redirecting profits, relocations, and shutdowns, that corporations begin to diversify, and invest in different types of businesses as a means to reduce risks and keep profits high. They show that businesses tend to move to low-cost areas, specifically in the South.[3] However, their reasons for this movement are restricted to the 1970s (as is the majority of their narrative).[4]

Sugrue (1996) analyzes the same process of deindustrialization with attention to the disproportionate negative impact on the African American population in Detroit. In his

[1] For a discussion of the acceptance of the 1970s as the traditional starting point on the timeline of deindustrialization, see the introduction to Battista (2022), where the author discusses prior work on the subject.

[2] By looking at this time period it becomes clear that there was movement pre-1970 and that manufacturers were engaging in a strategy to reorganize production geographically. This is also important, because while some historians have addressed costs, many have not done so with this new, more extensive, timeline of deindustrialization.

[3] For more on this, and the redevelopment of the timeline for deindustrialization and the movement out of Detroit, see Battista (2022).

[4] The Southern geographical movement is based on a restricted timeline. While this is true for the 1970s, it is not true for the decades preceding the 1970s where movement is still present, but to different geographical areas.

discussion, he coined the expression “decentralization”, the means by which employers control increasing labor costs and weaken powerful trade unions, these being two of the reasons that corporations may relocate their production facilities. He further argues that firms will also search for lower costs in the form of reduced taxes.[5]

Jacob Dean Hall (2013) pushes this timeline further back, qualitatively tracing capital flight out of Detroit in years between 1910-1927, including Ford’s move to Springwells and Dearborn, Michigan, Oldsmobile to Lansing, Michigan, and other leading auto-manufacturers out of Detroit. He argues that this movement was driven by a myriad of factors, including the avoidance of taxation, fleeing congestion, purchasing cheap land, maintaining control over government policy, and constructing new communities. Hall argues that this undermined the city of Detroit’s ability to maintain its public services. This argument addresses specific cases in the movement out of Detroit during a different time period, and movement to close suburbs of Detroit, a different kind of movement from that addressed in this article. This movement changed land values, property tax rates, and other elements of local governance (all of which Hall identifies), but not state level taxation or specific labor legislation that these production facilities faced. Therefore, while confirmation that taxes and other factors are indeed an important consideration of movement are provided here, the movement mid-century is a different kind of movement, not simply a different degree.[6]

Cowie (1999) also addresses reasons for plant relocation by documenting the history of an RCA electronics factory as it moves from Camden, New Jersey from 1929-1950, to Bloomington, Indiana from 1940-1968, to Memphis, Tennessee from 1965-1971, and Ciudad Juarez, Mexico from 1964-1978, while simultaneously returning to Bloomington following the shutdown of the plant in Memphis, Tennessee. Among the factors that Cowie sees as reasons for relocation, he addresses low taxes, the absence of unions, and a large reserve army of labor. In each case, the result was the movement of the factory or production space to a new geographical location, but management did not move for the same reasons in each instance.

Tami Friedman (2003) discusses the relocation of the carpet industry as it moves out of Yonkers, New York through the 1950s. She argues that production disappears in the area of exit. That is, when plants and factories relocate, they are generally not expanding, just moving. Next, she argues that these factories move to locations or restructure to new areas that are more “acceptable” to produce in. This means that the area of entry has to offer a general benefit over the area of exit. While such relocations are deemed “an all-too-familiar tale” (Friedman 2003,19), the textile industry, relocating factories in the 1950s, is a precursor to the auto industry doing the same in the 1950s, not in the 1970s as the traditional timeline would identify.

Looking at the period from 1988 to 2006, Nicole Aschoff (2010) argues that the image of a dying industry with auto investment leaving the US for low-wage sites is misleading. In addition, new investment in the auto industry in the US was not concentrated in the sunbelt states, but was also directed to more traditional automotive areas. In other words, it is not simply a replacement of Northern by Southern infrastructure, but a “stretching” of production

[5] The focus of this article is simply on cost considerations, one aspect of which is wages, as it is not possible to include a full analysis of both costs and of organized labor in a single article. While wages can be seen as being affected by organized labor, it is possible to offer an analysis just of those changing costs and wage differentials. For the role that organized labor plays, see Battista (2023).

[6] In his dissertation, Hall (2013) analyzes a different period, in a much more qualitative setting. This article addresses some similar topics, but analyzes reasons for relocation that are specifically cost-focused and cost-driven. In this case, the two costs that consistently arise in the archival sources are tax and wages costs. Hall also addresses, as this article and Battista (2022; 2023) note, that deindustrialization is a much more extensive phenomenon that takes place over a much longer period of time. Further, while Hall’s work has other facets, the chapter that is important to this current article is his third chapter that directly addresses the process of deindustrialization.

that has occurred. For her, the movement is more accurately viewed as a process of restructuring, instead of a period of large-scale movement out of the US to low wage areas.[7] However, Aschoff's data are limited to larger US regional areas, i.e. US West, US Midwest, US South, and US East. There is no confirmation about what happens on a more specific regional, state, county, Metropolitan Statistical Area, or city level.[8]

Amy Goldstein's (2017) more recent account of Janesville Wisconsin details the demise of the Janesville General Motors Assembly Plant and the rationale for the movement of different production plants as recently as 2008. Goldstein refers to corporate relocation as a "bidding" for new production sites, with General Motors (GM) being able to pick the production site that was most attractive to them in terms of cost of production characteristics. Therefore, the idea of moving production facilities for cost considerations arises again.

The literature discussed here offers us a different lens through which to view the movement of plants and factories. Some authors give more large-scale narrative, while others present more localized accounts. This article adds to this literature by more fully addressing the cost considerations for corporate movement, based on corporate attitudes of the time period, and a more accurate (complete) deindustrialization timeline.

Manufacturers' Attitudes to Costs

Damaging impacts of tax costs, the availability of tax benefits, or higher wage costs did not always directly translate into relocation decisions, and manufacturers did not all respond in the same way or with the same intensity. This decision-making process does not happen in a vacuum and there is a cultural component that is dependent on the current status quo of production. Studies of corporate behavior by Eva Mueller, Arnold Wilken, and Margaret Wood (1961) indicate that relocation decisions were mediated by the attitudes of manufacturers, focusing on the corporate chief executives and presidents. Attitudes are understood to be the degree of satisfaction or dissatisfaction of manufacturers in Michigan in relation to issues such as access to customers and materials, labor conditions, costs of production, taxes, the legal climate, and the industrial climate (Mueller et al 1961).[9]

The manufacturer attitudes were all related to changes in their economic conditions. If manufacturers were content with their current production circumstances, small changes did not elicit a response. In other words, if manufacturers had agreeable production environments, small changes in wages or taxes would not cause movement of a production facility. However, if manufacturers already exhibited a level of dissatisfaction, any small change could prompt a relocation decision (Mueller et al 1961).

[7] Bluestone and Harrison (1982) make an argument similar to this, using regional areas of the United States. However, the timeline Bluestone and Harrison use is different, leading them to a different conclusion. Battista (2022) also shows this movement to the South, while focusing on a more specific regional level, leading to a focus on a different timeline.

[8] Aschoff (2010) thus suffers from the same problem as various other authors, including Bluestone and Harrison (1982), whose data are not regionally specific and therefore do not give us much realistic information at a more disaggregated level.

[9] Mueller et al take a random sample of manufacturing firms in 1961. This includes 239 manufacturing firms in Michigan and 57 manufacturing firms in Ohio (analysed separately). Here the term "firm" is used for production facility. Their study covers manufacturing as a whole and does include extensive comments and results from the Big 3 auto manufacturers. All plants that had 1800 or more employees were included in the sample. There was a single interview done per firm to avoid any duplicate responses. If more than one firm that was owned by the same company was chosen for the study, the headquarters was interviewed instead of both firms. Finally, the larger the firm, the more weight was given to their replies in any calculations that were done.

Manufacturers in Michigan confirmed as much about the degree to which cost changes would affect their decision to relocate, given their current production satisfaction. Therefore, in discussing production relocation, it is possible that manufacturers were satisfied with their arrangements, but there was a significant cost increase that prompted a relocation response, or that a small increase in cost simply confirmed manufacturer dissatisfaction and triggered a similar response (Mueller et al 1961). Thus, relocation is clearly a determinant of the responsiveness of manufacturers to changes in their economic environment, taking into account their initial level of satisfaction or dissatisfaction.

Mueller and James Morgan (1962) determined that, beginning in the 1940s, there was a strong dissatisfaction with production and plant sites in Michigan. This was compounded in Detroit, where only 36 percent of manufacturers in the city were satisfied with their production arrangements.[10] Mueller et al (1961, 27-28) found that satisfaction or dissatisfaction was a function of taxes, wages, labor productivity, labor supply, and pressure from organized labor. For example, low taxes and low wages were more likely to create an attitude of satisfaction, whereas higher costs or union pressure, were more likely to produce an attitude of dissatisfaction.

In the case of Michigan and Detroit, manufacturers were typically frustrated with wages costs and tax costs during the period leading up to corporate exit (Battista 2022). However, as mentioned, there were sensitivity and threshold effects at play. For example, if owners were already approaching a threshold with labor costs (or other factors), relatively small changes in taxes pushed (or pulled) them beyond the threshold and they explored out-of-state options much sooner and/or with greater intensity (Mueller et al 1961). The point here is that the current state and the extent to which it impinged on corporate profitability informed the corporate response to other cost considerations.

Evidence of Corporate Movement to Reduce Costs

Auto-manufacturers were worried about developments that negatively impacted industrial operations in Michigan. By 1960, the greatest number of complaints made by manufacturers about producing in the state included high labor costs and high business and property taxes, that can be categorized under rising costs of production (Mueller et al 1961, 26).

Of those corporations considering relocation of their plants and factories, 32 percent cited high labor costs and union power in Michigan, 20 percent high taxes in Michigan relative to other states, 10 percent local incentives offered by states but not matched by Michigan, and 4 percent reasons related to other general costs. For example, one producer stated that they were relocating to Tennessee because “the state has a better trial climate, lower taxes, lower labor costs, and [their] competitive position will be strengthened” (Mueller et al 1961, 55-56). Another producer mentioned moving to another state in the Midwest out of Michigan because “[they] could secure a less expensive plant … less expensive labor … [and] improve [their] labor contract” (Mueller et al 1961, 56). Finally, another manufacturer was considering a short-distance move to Indiana because “they have less taxes … and there is some inducement offered by the local people in the form of tax concessions” (Mueller et al 1961, 56).[11]

Therefore, while circumventing organized labor does top the list of reasons to leave Michigan, corporations also moved to reduce costs, which in some ways are related.

[10] Mueller and Morgan (1962) also document that the larger the production facility, the more likely was a manufacturer to be dissatisfied with their production arrangements during this time.

[11] The clear trend presented here is that these production facilities moved to lower cost areas that offered some kind of cost benefit. Logically, if one company does this, it makes them relatively more competitive, likely forcing other companies to do something similar with their production facilities. However, the main point here is that there was a move on the part of auto corporations to reduce costs by relocating production facilities.

Circumventing organized labor may be used as a long-run cost reduction strategy. In the short-run, the strategy may simply undercut the negotiating power of organized labor and increase the geographic distance between organized labor and production, moving to areas where wages costs were lower. In other cases, factories were moved to areas for lower taxes or more favorable tax considerations, as evidenced below.

Inducements to Relocate

The reduction of tax costs played a significant role in plant and factory movement, and corporations cited “excessive” taxes as a determining factor in their relocation decisions out of Detroit (Sugrue 1996). However, the evidence of Sugrue (1996) that taxes were a consideration for production relocation is suggestive rather than overwhelming, and this article addresses specific cases on increased taxes and how that movement was driven. Higher taxes levied on corporations pushed companies out of urban areas to other areas of Michigan, leading to layoffs and redistributing employment. The lure of lower taxes in other regions had similar relocation effects, causing production to move, generating the same negative impacts on employment within the exit locations. This also makes it cheaper for the capitalist to produce in locations where taxes were lower, rather than remain in the same locale.

By the late 1950s, Detroit officials were keenly aware of corporate fears of high property taxes and were concerned that this would drive corporations out of Detroit. This was a legitimate fear because property taxes in Ohio, Pennsylvania, Illinois, and California, were all a quarter to one-third of the levels in Michigan (Sugrue 1996). The lower property taxes in these states offered a significant benefit, and incentivized companies to relocate production to these lower tax states, even though they were all categorized as higher union density states. Thus, movements of auto corporations to these states were primarily a function of lower property taxes, with the added benefit of slightly lower unionization rates than Michigan. Therefore, taxes play a distinct role in the movement of corporations, and in many cases facilitate the decentralization of production. In the case of Ohio, Illinois, and California, it provides not only the motivation for movement, but also provides the spark needed to take advantage of other aspects of production in those states, like lower unionization rates.

There are typically positive returns to states and regions that offer discounts, subsidies or other incentives to corporations to attract them to a certain production area (Sugrue 1996, 196). The fact that lower costs of production are an option, is enough to pull plants and factories out of Detroit, specifically, or Michigan, more generally, to other locales (Mueller et al 1961). Even corporations that are not planning to move are open to the allure of recruiting strategies that offer lower wage and/or tax costs. In fact, Michigan manufacturers accounting for more than 84 percent of employment in manufacturing at this time believed that financial assistance was significant in the corporate movement out of Michigan; 57 percent of the same group believed this to be strongly significant (Mueller et al 1961, 66). These financial incentives included lower taxes, lower rents, development loans, and the promise of lower labor costs.

Michigan manufacturers were not merely passive participants; they were actively searching for states that could offer them the best wage deals and production cost discounts. In 1961, roughly 80 percent of manufacturers sampled had inquired about wage rate and other labor cost information from potential states of relocation. Additionally, nearly 60 percent of manufacturers in Michigan had obtained tax rate information from other states, with the intention of relocating (Mueller et al 1961, 72). These inquiries indicated that capital was on the move, but also reveal what determinants figured most prominently in that relocation decision. Further, as industry was tempted by lower taxes in areas outside of Detroit, they used the threat of mobility to attempt to push for changes in the tax laws that would be beneficial to industry (Sugrue 2017).

However, the impact of these cost (or other) determinants on the decision to move also depended on the degree of satisfaction the manufacturer had in their current location. If a manufacturer was satisfied with their current location, it would take very large incentives to entice them away from their preferred habitat. On the other hand, if a manufacturer was dissatisfied with their current location and conditions, even slightly lower taxes and/or labor costs could nudge them out of their current location (Mueller et al 1961, 57-58).

The Case of Hurd Lock and Manufacturing

In 1962, Hurd Lock and Manufacturing Corporation ("Hurd Lock" hereafter) decided to move production out of Detroit, to take advantage of the lower tax costs in the South, specifically to Greenville, Tennessee. The South offered much lower property taxes compared to the consistent annual increases in Detroit at the same time (Sugrue 1996).[12] However, the story of this movement is unique. While this is a narrative about moving to reduce tax costs, this movement is more complicated.

Hurd Lock, owned by Avis Industrial, produced security products for both automotive and industrial applications, including keys and locks, as well as mechanical fuel pumps. In 1962, Hurd Lock moved its plant from Detroit to Greenville in the middle of a United Auto Workers (UAW) contract, with the intention of moving to a lower tax area.[13] This offers a particular instance, in which a production facility relocated, in the face of potential mandated payout from the courts. Hurd Lock moved with little regard for the UAW, with their focus set on broader (and larger) cost considerations.

The UAW and Hurd Lock came to an agreement that Hurd Lock would pay $200,000 in a settlement of lost wages and benefits to the 237 workers who were abandoned by the plant. They reached this agreement after the union charged Hurd Lock with violating the recognition and duration clause of its contract with the UAW and its affiliated workers. The 3-year contract period was from November 1,1960 to November 1,1963, and the plant moved during that period, in 1962.[14]

Before settling, Hurd Lock asked the Federal Court in Detroit to dismiss the charge from the union on the basic grounds that "it stated no cause of action".[15] The presiding judge, however, denied this motion. The UAW, Region 1[16] Co-Director, George Mirelli, stated that:

> The court's action and the settlement of the suit has significance for every union member … it may lead other companies to the realization that they may be violating their union contracts, and therefore subject to damages, if they move plants away and abandon their workers during their contracts.[17]

Corporations that are accustomed to working with unions and negotiating contracts would know if and when they were in violation of the contract. That is, it seems that Hurd Lock had decided that the benefits of movement outweighed the costs of defaulting on their UAW contract. Regardless, even though this is a net benefit for them, Hurd Lock could have still gotten away with not paying the settlement costs if the courts saw it their way. Further, both the UAW and auto corporations were fully aware of corporate migration out of Detroit as early as 1940, and the negative impact on workers left behind. Finally, unless it was cost-prohibitive,

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[12] UAW Press Release. Thursday, January 30, 1964. Reuther Archives.

[13] Ibid.

[14] Ibid.

[15] Ibid.

[16] The UAW Region 1 was established in 1942 and served the East Side of Detroit, Macomb and St. Clair Counties. In 1966 it was split into 4 constituent parts: Regions 1, 1A, 1B, and 1E.

[17] UAW Press Release. Thursday, January 30, 1964. Reuther Archives.

plants were likely to move at their convenience and not to accommodate workers, the UAW, or to adhere to the provisions in the contract.

The Hurd Lock confrontation is not necessarily a worker-triumph narrative even though labor forced capital to pay reparations. In the end, Hurd Lock relocated to Tennessee, regardless of the contract or the negative effect on workers, because it was cheaper for Hurd Lock to move to the South and pay the penalty for moving, than it was to remain in Detroit and avoid it. These workers, regardless of the fact that Mirelli had interpreted the payout as a win, were victims of deindustrialization.[18]

The Tax Exemptions of General Motors

Migrating to areas with lower taxes was not unique to Hurd Lock. Manufacturers in Detroit were quite familiar with the unfavorable tax environment in Michigan. For example, one manufacturer stated that, "… we've got a very bad tax climate, we know that we are paying three to four times more than our competitors are paying [in different states]" (Mueller et al 1961, 36). Other manufacturers more boldly asserted that, "the big disadvantage of being located in the city of Detroit is their idea of taxation" (Mueller et al 1961, 37). They claimed that the taxes were simply too high, especially relative to other areas suitable for production.

There was a general consensus among manufacturers in the state that "if [they] had to locate another plant, it wouldn't be in Michigan", because taxes in Michigan had increased every year, and "the tax valuations are from 75% to 90% in excess of any other state" (Mueller et al 1961, 38). Further, these manufacturers producing in the Detroit Metropolitan Area believed that one of their greatest competitive disadvantages was taxes, specifically high local property taxes. For many of these Detroit (or Michigan) based manufacturers, it was just a matter of when, not if, the move would occur.

Like Hurd Lock, GM made a move South to Tennessee. However, while Hurd Lock was lured by the lower tax costs of production, GM was induced to move by allowing it to issue tax-exempt bonds.[19] To entice GM to move South, the state of Tennessee allowed the corporation to function as a municipality and issue municipal bonds. Whereas interest on corporate bonds is taxed at the federal, state and local level, interest on municipal bonds is not taxed at the federal level and are also exempt from state and local taxes for those living in the state or municipality of issue. This issue of tax-exempt "municipal bonds" advantaged GM in the bond market relative to its corporate competitors that did not receive the same benefit, and also allowed them to acquire investment funds at a lower interest cost. GM was pulled South as these cities bid for their production facilities in this way. This allowed GM to more cheaply finance production, enabling them to reduce costs and increase their relative rate of profit.

Many other corporations related to the auto industry moved their factories for tax reduction purposes. Plenty of shops closed in Michigan and moved to a different state where tax-exempt bonds furnished their finances. Among such plant relocations were: Ross Gear Tool & Manufacturing moved to Lebanon, Tennessee; Norge Division of Borg and Warner moved to Fort Smith, Arkansas; and Crescent Brass and Pin Company moved to Americus, Georgia.[20] All were offered lower taxes and/or tax breaks to induce their movement.

However, while the main driving factors for relocation seem to have been tax and wage costs, costs generally also played a role for some manufacturing firms. Daisy Manufacturing Company moved to Rogers, Arkansas, where they were given a one-million-dollar plant, assessed at $100,000 for tax purposes by the city. Scott Valve Manufacturing Company, which produced a full series of industrial valves, moved to a new plant built by the city of Blytheville,

[18] Ibid.
[19] GM Proxy Material. Reuther Archives.
[20] Communication to Frank Fernbach, AFL-CIO, November 22, 1961. Reuther Archives.

Arkansas. Finally, the General Processing Company moved to Crossville, Tennessee where they were also given a factory paid for by the community.[21] While these cost savings present differently than tax or wage savings, the result of the enticement to move production facilities is the same.

This was the seeming status quo for companies big and small that were related to the auto industry. In 1959, as Chrysler plant relocation out of Detroit began to accelerate, Chrysler further threatened to leave Detroit as a production location (Battista 2022; Sugrue 2017).[22] Chrysler Vice President W.C. Newberg's reasoning focused on the tax code. He wanted property tax decisions to be more advantageous to Chrysler production, and stated that if property taxes were not distributed fairly and equitably that Chrysler production facilities may be moved out of Detroit (Sugrue 2017, 57).

Thus, corporations were motivated and incentivized to relocate to reduce costs, in spite of imposed penalties, relatively constant labor costs, or other negative attributes associated with the relocation site. In the case of Hurd Lock, they were lured by the lower taxes regardless of the cost they had to pay to the UAW as they exited Detroit. In the case of GM, their incentives and reduced costs came in the form of tax breaks and lending perks that Tennessee could offer, but that Detroit could not or would not arrange.

Drive to Reduce Wage Costs: Ford and Manufacturing

In addition to the strategies that involved greater control over the production process, moving away from more organized labor, or relocating for tax purposes, corporations also pursued the more straight-forward wage reduction strategies. The relocation data indicate that the auto industry moved plants out of Detroit increasingly to lower wage regions in other parts of Michigan and across the United States. While wages were not the only motivator of corporate relocation, they were clearly important as factories that moved out of Detroit and Michigan, invariably relocated to states (or areas) with significantly lower wages.

Table 1 below pairs up these relocation patterns with wage rates across the states that were sites for relocation.[23] It uses Census data to provide decadal snapshots of the relocation discount in terms of wage savings, allowing us to ascertain whether plants, on average, moved to lower wage locations, and to also determine the role that wages played in the relocation decision. A negative number signifies a discount. The larger the number, the larger the wage discount that the movement to that state would bring in percentage terms. For example, taking Alabama in 1950, a movement to Alabama from Michigan would have yielded a 37.01 percent wage discount from Michigan.

Throughout the 1950s, 1960s, and 1970s, plants migrated from Michigan to lower wage states. In 1950, every state of (auto) corporation relocation posted lower wages than Michigan, as measured by median income in manufacturing, with the exception of California and Wisconsin. In fact, even states like New York and New Jersey with their own industrial centers, exhibit lower manufacturing wages than Michigan. As expected, the southern states had drastically lower wages. For example, in 1950, migration from Michigan to Mississippi, Arkansas, or South Carolina guaranteed the greatest wage discounts of 57 percent, 50 percent, and 48 percent, respectively, while migration to their neighboring states of Georgia, Florida, and Alabama, generated wage discounts between 35 and 40 percent. This wage-

[21] Ibid.

[22] For more information on the pattern of Chrysler relocation, see Battstia (2022), in which the locations of movement and pattern of movement is mapped.

[23] These relocation sites are pulled from Battista (2022), who documents the areas that auto-production facilities moved to following their exit from Detroit, over this time period. That is, all of the states included in this table are entry locations for auto facility relocation.

migration match-up indicates that corporations, on average, migrated to areas that had lower labor costs, on average.

Table 1
Wage Relocation Discounts, 1950-1970 (%)

State Name	1950 Relocation Wage Discounts	1960 Relocation Wage Discounts	1970 Relocation Wage Discounts
Michigan	0	0	0
Alabama	-37.01	-45.47	-40.20
Arkansas	-50.26	-48.81	-41.04
California	1.92	14.68	-0.21
Connecticut	-9.22	9.23	-7.85
Delaware	-4.55	-16.60	-19.98
Florida	-37.47	-33.08	-36.00
Georgia	-43.79	-48.69	-39.77
Illinois	-1.59	16.99	1.80
Indiana	-4.55	-0.90	-9.39
Iowa	-6.81	-0.99	-15.97
Kansas	-8.24	-9.74	-25.37
Kentucky	-22.41	-32.99	-27.99
Louisiana	-29.98	-36.72	-34.46
Maryland	-12.64	-9.32	-12.53
Minnesota	-6.29	-4.87	-15.63
Mississippi	-56.95	-56.27	-47.38
Missouri	-13.74	-6.23	-15.85
New Jersey	-2.90	15.01	2.05
New Mexico	-18.90	-30.44	-37.09
New York	-4.98	12.54	5.96
Ohio	-4.18	6.44	-0.37
South Carolina	-48.34	-52.81	-42.51
Tennessee	-32.40	-42.02	-38.24
Texas	-11.76	-34.98	-35.84
Virginia	-30.26	-37.38	-34.06
Wisconsin	1.05	0.91	1.05

Source: Author's calculations based on US Department of Commerce, Bureau of the Census (1950;1960;1970).
Note: No data are available for 1940 and 1980, given the collection methods. However, data for 1950, 1960, and 1970 are available. The 1950 data detail the median income in each state in manufacturing whereas the 1960 and 1970 data detail the median income of male laborers, except farm work, which is the category that most aptly maps onto manufacturing. The calculated discounts therefore are median percentage wage discounts of male workers in manufacturing for each state relative to Michigan.

This was true of Fruehauf Trailer, who manufactured truck trailers and other machinery and equipment. They were headquartered in Detroit, but by 1950 they were feeling the increased relative cost burden of labor. They followed suit, as did many other companies, in their movement to reduce labor and wage costs. In the process, they closed their Detroit facility, laying off 3,500 Detroit workers when they moved their plant to Avon Lakes, OH. They then reduced their workforce to 2,500, cutting wages by $0.25 an hour (Sugrue 2017). This is not unique to this company and was common across the board, with some companies making this strategy very clear.

Benson Ford, Vice President of Ford Motor Company (FMC), stated that FMC moved their production facilities out of Michigan to keep wage costs down and prices low.[24] He contended that, "current price increases reflect automatic labor cost increases that were built into the automobile labor contracts in 1955 and in prior years".[25] According to Ford, these wage increases did not generate increases in productivity, and therefore FMC must act to reconcile and counter these increased wages. The argument was therefore that consistent increases in wages had no benefit to FMC, and therefore led to relocation of production to areas with lower labor costs.[26]

Ford believed that the South should relax wage restrictions and open themselves up to pay auto workers significantly reduced wages, as compared to their Detroit counterparts.[27] FMC was in search of lower labor costs, in contrast to what he believed were exceedingly high wages in Detroit. These lower wages provided the impetus for the southern migration of the FMC.

To clarify, this does not suggest that corporate movement is the responsibility or fault of labor. What this implies is that capital's objective of reducing costs to garner a higher relative rate of profit was constrained by organized labor. Thus, the UAW (or unions generally) did not drive companies out of production centers like Detroit with high wages. Rather, the UAW constrained capital's ability to reduce wages or other labor related costs, and shift labor shares to capital shares, which compelled companies to move production outside of industrial centers into lower wage areas.

A similar pattern is observed for 1960 whereby corporations migrate from Michigan with median manufacturing earnings of $3,324 to mostly states with lower median earnings, supporting the argument that corporations move to reduce costs.[28] Once again, the southern states lead the pack with Mississippi, South Carolina, Arkansas and Georgia offering wage savings of between 45 and 56 percent. However, there are six states that do not fit this pattern. California, Illinois, Ohio, Connecticut, New Jersey and Wisconsin pay a slight wage premium given that the median income in manufacturing for those states is between 1 and 17 percent higher than in Michigan. However, the higher wages in Ohio, Illinois, and California are offset by their lower property taxes, indicating that the move to these states was likely motivated by the benefit of the lower taxes. In fact, Detroit taxes in the early 1960s were just about two times higher than state and local taxes in surrounding states like Ohio and Indiana. Likewise, the benefits of lower property taxes in Connecticut and New Jersey offset the costs of higher median manufacturing incomes in those states (Sugrue 2017).[29] This suggests that taxes were the deciding factor and the higher wages were not high enough to override the relocation decision.

However, during the 1960s, Michigan experienced a 70 percent growth rate in median manufacturing earnings, and by 1970, it exceeded most automobile producing states. While the southern states as a group continued to provide the greatest wage discounts, the typical states for auto plant relocations were more varied in their wage cost savings: Alabama (40

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[24] Address by Benson Ford. Reuther Archives.

[25] Ibid.

[26] Ibid.

[27] Ibid.

[28] Median Income in Manufacturing for 1960 is pulled from the US Department of Commerce, Bureau of the Census (1960). This is the median income of male workers over the age of 14 that work in manufacturing across states.

[29] While this comes from Sugrue (2017), this is not the exact conclusion that he comes to. Instead, it is a conclusion reached from the information presented and comments made by the authors contributing to that volume, as well as the median manufacturing wage data presented in this article.

percent), Missouri (16 percent), Delaware (20 percent), and Kansas (25 percent), to name a few.

Employers left industrial centers with high labor costs. In 1960, Ex-Cell-O Machine Tools and other firms left Detroit and opened new plants in Alabama, citing “labor” and “wage” demands as the reason for exit. The president of Ex-Cell-O, H.G. Bixby, argued that there was something wrong with the business climate in Detroit, specifically to do with wage and labor costs being too high. During this period, they built six new factories outside of Detroit and Michigan, in search of areas where they could exploit cheaper labor (Sugrue 2017). Thus, relocation was a part of a larger, concerted, cost-cutting strategy on the part of capital, who were in search of lower wage areas to which to move production. This argument is reinforced by the observation that Illinois, New York, and New Jersey post higher median manufacturing incomes than Michigan in 1960 and 1970, and there was no active migration to these states in the 1960s and 1970s (Battista 2022).

It is easy to decipher that wages (and costs generally) played a role in the corporate relocation decision.[30] For example, 67 percent of manufacturers producing in Michigan believed that they were disadvantaged relative to other potential geographic production locations. Topping the list of disadvantages were labor costs and taxes (Mueller et al 1961, 33). Corporations, in part, moved their factories to areas where there were lower taxes, and where labor costs were lower.

There was also a strong connection between the relatively high rate of relocation of plants out of Michigan, and the growing dissatisfaction of industrialists with conditions in Michigan. This dissatisfaction drove Detroit producers out of the city, to areas all over the country. Other states took advantage of this plight of Detroit, to encourage manufacturers to move their production facilities out of the city, and to other production locations. Detroit simply could not compete, and the 1950s proved to be a tipping point in the relocation process. Before this, while these production facilities were suffering from wage differentials and other high potential fixed costs, relocations accelerated throughout and following the 1950s. The findings presented here leave very little doubt that tax and labor costs played a major role in factory and plant relocation.

Conclusion

Cost considerations were among the main driving factors of production facility relocation out of Detroit. Companies were looking for a low-cost production alternative that Detroit could not offer. While such considerations tend to appear as more traditional rationales for movement, they must be addressed to be consistent with a longer time horizon for deindustrialization, and to reflect a more accurate historical context. Now that the timeline of deindustrialization has been extended and divorced from its 1970s timeline, the reasons that companies moved their production facilities must also be re-evaluated.

Well before 1970, manufacturers in Detroit and elsewhere in Michigan were predominantly unhappy with their plant locations. Auto corporations were no exception. Given this dissatisfaction, these companies began to move their plants and factories elsewhere. This

[30] While these lower wages tell a story of plant relocation, there is much more nuance to their argument. In many cases, lower wages were also consistent with areas of weaker labor organization. Further, in these lower union density areas, companies necessarily experienced less labor resistance to keeping wages low, and exercised more control over the production process. Thus, the cost-cutting strategies might have immediate and direct effects as in reducing wages, more intermediate effects as in the increasing returns to relocation, or more long-term and somewhat indirect effects as in the ability to dictate (rather than negotiate) future wage costs and working conditions once companies migrate away from more organized labor.

article looked at the causes, effects, and rationales of this movement, to demonstrate the necessity of analyzing the cost related reasons for movement, with specific attention to taxes and wages. This does not always mean movement to areas with simply lower taxes or wages, but to places that offer some kind of incentive in those categories. To show this, this article has focused on those companies that had a connection to the auto industry. However, while this article focuses on only cost considerations, the complete narrative of corporate movement is more complicated than simply cost considerations.

Encapsulated within this argument is the continuing conflict between capital and labor over the relative control over the production process. In the case of this article, this occurs through seeking lower tax areas, areas that offered significant tax incentives, or by movement to lower wage areas. Thus, while cost considerations are the focus of this article, it is a simultaneous narrative about organized labor and labor power. In addressing taxes and wages, this article takes another step in creating a more complete economic history of deindustrialization.

Acknowledgements

I would like the express my gratitude to Gerald Friedman who encouraged me in the early development of this project. A special thanks to the research librarian at the Reuther Archives in Detroit.

Works Cited

Aschoff, Nicole. 2010. “Globalization and Capital Mobility in the Auto Industry.” Doctoral Dissertation, Johns Hopkins University.

Battista, Jackson. 2022. “A New Timeline for Deindustrialization: The Movement of Auto Corporations in the US and Detroit," *Essays in Economic & Business History* 40: 84-113.

Battista, Jackson. 2023. “Deindustrialization of Detroit: The Push of Organized Labor.” *Labor History* 64 (5): 631-652. https://doi.org/10.1080/0023656X.2023.2237904.

Bluestone, Barry. 1984. “Is Deindustrialization a Myth? Capital Mobility versus Absorptive Capacity in the U.S. Economy.” *The Annals of the American Academy of Political and Social Science* 475: 39-51.

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

Cowie, Jefferson. 2001. *Capital Moves: RCA’s Seventy-Year Quest for Cheap Labor*. New York: The New Press.

Cowie, Jefferson R. 2012. *Stayin' Alive: The 1970s and the Last Days of the Working Class*. New York: The New Press.

Cowie, Jefferson, and Joseph Heathcott. 2003. “The Meanings of Deindustrialization.” In *Beyond the Ruins: The Meanings of Deindustrialization*, edited by Jefferson Cowie and Joseph Heathcott, 1-18. Ithaca, NY: ILR Press.

Friedman, Tami J. 2003. “‘A Trail of Ghost Towns Across Our Land’: The Decline of Manufacturing in Yonkers, New York.” In *Beyond the Ruins: The Meanings of Deindustrialization*, edited by Jefferson Cowie and Joseph Heathcott, 19-43. Ithaca, NY: ILR Press.

Goldstein, Amy. 2017. *Janesville: An American Story*. Reprint edition. New York: Simon & Schuster.

Hall, Jacob Dean. 2013. "The Myth of the Motor City: Urban Politics, Public Policy, and the Suburbanization of Detroit's Automobile Industry, 1878-1937." Doctoral Dissertation, University of Iowa.

Mueller, Eva, and James N. Morgan. 1962. "Location Decisions of Manufacturers." *American Economic Review* 52 (2): 204-217.

Mueller, Eva, Arnold Wilken, and Margaret Wood. 1961. *Location Decisions and Industrial Mobility in* Michigan*, 1961*. Survey Research Series 22. Ann Arbor, MI: Institute for Social Science Research, the University of Michigan.

Self, Robert O. 2003. "California's Industrial Garden: Oakland and the East Bay in the Age of Deindustrialization." In *Beyond the Ruins: The Meanings of Deindustrialization*, edited by Jefferson Cowie and Joseph Heathcott, 159-180. Ithaca, NY: ILR Press.

Sugrue, Thomas. 1996. *The Origins of the Urban Crisis: Race and Inequality in Postwar Detroit*. Princeton, NJ: Princeton University Press.

Sugrue, Thomas. 2017. "The Damning Mark of False Prosperities: The Deindustrialization of Detroit." In *The Straight Detroit*, edited by Jeffrey T. Horner, 45-75. Solana Beach, CA: Cognella Academic Publishing.

Archival Sources

Walter P. Reuther Library, Archives of Labor and Union Affairs, Wayne State University, Detroit, Michigan (Reuther Archives):

Address given by Benson Ford to the Mississippi Automobile Dealers Association, in Biloxi, Mississippi, Monday, November 4, 1957. UAW Research Department Records, Box 45, Folder 1.

Communication to Frank Fernbach, American Federation of Labor-Congress of Industrial Organizations (AFL-CIO), November 22, 1961. UAW Special Projects Collection, Box 5, Folder 10.

General Motors Proxy Material. UAW Special Projects Collection, Box 64, Folder 5.

UAW Press Release. Thursday, January 30, 1964. UAW Special Projects Collection, Box 5, Folder 10.

US Department of Commerce, Bureau of the Census. 1950. Seventeenth Census, Table 86.

US Department of Commerce, Bureau of the Census. 1960. Eighteenth Census, Table 68.

US Department of Commerce, Bureau of the Census. 1970. Nineteenth Census, Table 68.