

**Enablers of Green Industrial Policy:
The Case of Budd's Gindy Acquisition and the Bombardier Trade Dispute**

May 13, 2016

**Paper to be presented at the conference,
"The Role of industrial policy in European re-industrialization,"
Cracow University of Economics, Krakow, Poland**

**Sponsored by the European Association for Evolutionary Political Economy, Cracow
University of Economics, National Technical University of Athens**

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1. Introduction

In this study I examine the limits of certain forms of industrial policy measures to promote economic activity linked to green manufacturers and green jobs. I define green jobs and manufacturing by reference to passenger rail transportation which has ecological advantages in comparison to other modes of travel. I explore the constraints on the industrial viability by examining the historical evolution of the Budd Company, a passenger rail manufacturing company based in the greater Philadelphia area in the United States. My research question is: *To what extent did formal and informal industrial policies prove sufficient or insufficient for maintaining the competitive viability of the Budd Company as a green manufacturer?* I answer this question by reference to three key theories.

First, the theory is that industrial policies will be limited if they either: (a) fail to enhance the industrial competence of the firm or (b) cannot transcend how limits in the competence of the firm place constraints on its ability to absorb or exploit the benefits of industrial policy. By “industrial competence” I mean the combination of knowledge (learning) and power (resource management and allocation) which influences the relations of production internal to firms and their decision-making choices related to innovation and industrial organization. Here my focus is on managerial decisions regarding innovation investments, acquisitions, and organization of production. Managerial failure is a potential variable to consider and this can be linked to barriers between integration of various resources, e.g. innovation and production.

Second, I explore the utility of mergers and conglomerate forms as a means of promoting competitive viability. Here my analysis looks not simply at a company’s decision to diversify or make an acquisition and develop its conglomerate form. I also examine the sufficiency of government policies related to antitrust and conglomerate firms to promote competitive viability in a firm.

Third, I examine the extent to which differences in national or local state industrial policy regimes influence outcomes regarding a firm’s competitive viability. These regimes are partially based on key decisions made by presidential administrations at the national level, but also potentially the local state regime corresponding to actions by local transit agencies. These agencies constitute procurement agents potentially influencing their firm partners.

I answer my research question by exploring two case studies covering a time period beginning in the late 1960s and ending in the early 1980s. During the first part of this time span, Budd acquired the Gindy corporation (involved in trailer manufacturing) as part of its general diversification efforts. During the latter part of this time span, Budd attempted to win but lost a key subway order for subway cars with the Metropolitan Transit Authority (MTA). Throughout this period, Budd was a conglomerate firm linking automotive, rail and trailer divisions. My general conclusion is that in the long-run: (a) limits to managerial decision-making (industrial competence), (b) the inadequacies of merger and conglomerate policy and (c) shortcomings in industrial policies helped limit (or proved insufficient to support) the competitive viability of the Budd Company and its ability to serve as a green producer. Over the short-run, however, certain managerial decisions made sense, the conglomerate form proved successfully promoted certain objectives, and the inadequacies of industrial policies were not the sole cause of Budd’s failures.

2. Background

The transportation system represents 26 percent of global CO₂ emissions. Yet, the carbon footprint of transportation can be reduced by shifting from single users of cars to other transportation modes and arrangements such as passenger rail (Chapan, 2007). The advantages of a green industrial policy should be readily apparent. On the one hand, most European states face a major employment crisis, with about 22 million unemployed in December of 2015 (Eurostat, 2015). Given the limited utility of existing markets and the proactive links among government support, innovation, market stabilization and sector development, industrial policy is a necessary tool for combatting unemployment (Chang, 1993). On the other hand, the advancement of green technology is a necessary condition for promoting sustainable growth and would help provide a means for substituting more for less sustainable technologies (Commoner, 1990). Another advantage of a green industrial policy and associated Green New Deal is that they can contribute to overcoming divisions between environmentalists and labor unions or claims that ecological concerns destroy jobs (Commoner, 1977; Feldman, 2010; Jones, 2008). The Green New Deal is another name for procurement or budgetary policies which support green jobs and industries. Sometimes the public procurement policies facilitating manufacturing and industrial development are studied in their own right (Lember et al., 2014; Pollin, Heintz and Wicks-Lim, 2015).

A key target of green industrial policy in various nation states could be to develop components, subsystems or completed systems for mass transportation. There are several reasons why this policy makes sense. First, mass transportation goods are necessary for states to develop and deploy to fight congestion, climate change, limit energy demands and reduce land use demands in contrast to the use of petroleum-dependent automobiles, highways and associated sprawl-based land use patterns. Second, mass transportation goods are among the most capital-intensive goods which a local state procures. Therefore, purchase of such goods is a way for the local state to gain leverage vis-à-vis a jobs and economic development platform. Third, the sometimes large procurements of mass transit divisions can create a political base for corporatist coalitions linking labor, firms and the state (Feldman, 2010) or a platform for further linkage to alternative energy systems (cf. Rynn, 2010). Finally, even if a locality or state can't produce all of a mass transportation vehicle within its own domain, it can still make components; local production can have cost and ecological advantages as well as potential advantages in user-designer interfaces (cf. Feldman, 1998).

In the United States an extensive part of economic activity has been geared to service large industrial complexes. Central among these have been the military and automotive industrial complexes (Luger, 2000; Melman, 1983). Therefore, companies which potentially can access the resource base of such complexes can grow. Essentially, the revenue stream from linkages to the military and automotive industrial complexes acts as a kind of investment bank for growth providing human or financial capital for firms. The problem, however, is that the gains from these complexes can sometimes be positive and other times negative. The multidivisional or conglomerate firm is the bridge between these complexes and mass transportation projects or divisions (cf. Feldman, 1998; Hooks, 1990).

3. Three Key Theoretical Approaches

Introduction

In this section, I first review some of the limitations to established academic literature on green industrial policy. The central problem in this literature is that some of the literature is not firm-specific (not micro enough) and other literatures are not well informed by the role played by specific political conjunctures (not macro enough) or much research does not necessarily combine the linkages between macro and micro processes. I therefore explore three key theories related to micro and macro scales to help me answer my research question regarding the sufficiency of industrial policies as mechanisms to promote the industrial viability of the Budd Company as a green manufacturer.

Literature Gaps

The limitation to discussions about green procurement and Green New Deals is that they sometimes do not consider the characteristics of the firms which are their supposed beneficiaries. Previous research has shown that some firms are better equipped than others as promulgators of green technologies like mass transportation (Feldman, 2010). Therefore, the firm is a central category of analysis.

Despite the contributions of the literature related to green industrial policy, it suffers from several problems. First, most of this research is hardly ever firm specific, failing to examine theorized impacts on the firm level other than through highly aggregated data or secondary news reports. Various scholars have conceptualized the need to create a green industrial policy, organizing their arguments based on assemblages of economic data, sometimes complex mathematical models or abstract arguments using various paradigms (Rodrik, 2014; Schwarzer, 2013; Walz, 2015). Sometimes the research is sector specific, supporting industries and associated technologies which can be classified as environmental friendly (Lütkenhorst and Pegels, 2014; Renner and Gardner, 2010). Yet, there is a need to “bring the firm back in” because hypothesized demand stimulants through industrial policy need not necessarily produce growth because demand does not create its own supply (Colander, 2001; Feldman, 2010). One reason is that firms may differ in their capacities to respond to demand, with the more competent or competitive firm winning bids or contracts (Feldman, 2010). As a result, industrial policies using budgetary procurements aimed at green industries may end up helping foreign competitors (Hill, 2010).

Second, the literature does not examine the competition to effective industrial policy based on extra-firm and intra-firm competition. The extra-firm competition is rooted in industrial complexes which potentially compete with green industries, e.g. the auto industry (Luger, 2000). The intra-firm competition is based on intra-divisional competition over personnel and human resources, potentially retarding new, ecological projects (Feldman, 1998). In 1989, the MIT Commission on Industrial Productivity issued a report, *Made in America: Regaining the Productive Edge*, which—while not focused on green industrial policy—did address this problem (Dertouzos et al., 1989: 94-107). Given such competition as a potential constraint, we need to identify the extent to which and how green firms gaining industrial policy supports succeed.

Third, the green industrial literature discusses extra-firm assistance without usually examining labor-relations systems; such systems potentially aid firm growth and therefore extend the impacts of supporting industrial policies (Best, 1990).

Theories of Managerial Competence and Integration

In *Engineers and the Price System* (published originally in 1921), Veblen warned that experts, technologists, and engineers required autonomy to organized work properly. They needed to be “unhampered by commercial considerations and reservations.” They did not benefit from “any supervision or interference from the side of the owners.” In contrast, “the absentee owners, now represented, in effect, by the syndicated investment bankers, continue to control the industrial experts and limit their discretion, arbitrarily, for their own commercial gain, regardless” of community needs. Constraints on engineers’ decision-making, defined by “occasional, haphazard, and tentative control of some disjointed sector of the industrial equipment” placed limits on competent production. In contrast “business men” had control over hiring decisions and used their decision-making power “for other than industrial ends,” limiting productive output (Veblen, 1965: 69-71).

Veblen’s suggestion that management from above could create problems is hardly an historical anecdote. In 1985 David Moberg, a labor journalist, explained that “Dun and Bradstreet reports...blame managerial incompetence for 40% of business closures” (Moberg as quoted in Clarke and Lustig, 1987: 947). Veblen, and those following in his wake, suggested that managerial steering from above contained risks by separating decision-making from production (Harris, 1997; Melman, 1983; Melman, 2001).¹ In contrast theories of “integration” (sometimes called “managerial” or “organizational” integration) show how innovative capacities (or engineers) can properly be linked to managerial activities, e.g. related to design, production, and marketing, etc. (Bowen et al., 1994; Feldman and Klofsten, 2000; Lazonick, 1991). Companies involved in manufacturing rolling stock can gain advantages over rivals who suffer from “defective decision-making” (Williams, 1975: 221).²

One of the main challenges within a firm relates to the competition over personnel and access to finance (Burns and Stalker, 1961) an issue of resource allocation defined in part by power relations. Integration therefore involves access to resources defined by power relations. One definition of integration “means that all the required resources, both internal and external, are utilized in a timely manner that allows all to contribute and that overlapping efforts with concomitant communication and information contribute to the project’s success” (Bowen et al., 1994: 231). Knowledge integration can be based on “sharing or transferring knowledge,” the “use of similar/related knowledge,” and the “combination of specialized, differentiated, but complementary knowledge” (Tell, 2011: 24, 31). Despite the focus on integration of *knowledge*, various studies see the integration as also encompassing the integration of resources or power questions (cf. Feldman, 1999; Feldman and Klofsten, 2000; Melman, 1983; Veblen, 1964). Given the network relations of firms (Nohria and Eccles, 1992) and considerations to geographic scale (Dicken, 1976; Tell, 2011: 28), we also have to consider knowledge and

¹ “The dynamics of the profit calculation toward bottomline purity...fits in with the dynamics of the indirectness of profit as a decision system on production...this indirectness leads to increased distance between decision-making and the production thereby decided. This distance increases because there is nothing that ties the profit decisions to the content of the production. In consequence profit opportunities that are irrelevant to the production in question will sooner or later be seized” (Harris, 1997: 59-60).

² In “the diesel locomotive industry” some have argued “that the dominance by General Motors of diesel locomotive manufacture is to be explained by default failure among the steam locomotive firms.” While more research was needed, Williamson (1975: 221) found “the evidence more than suggestive that the dominance of General Motors in this industry was the result of ineptitude on the part of the steam locomotive manufacturers and imperceptiveness among potential rivals.”

integration challenges at various levels including the project, firm, or network level, with the last item relating to multiple firms in a collaborative network.

In practical terms, therefore, we can see at least four arenas where the integration of knowledge and power can take place: (a) in relations between engineers and managers (Lazonick, 1991; Melman, 1983; Veblen, 1965); (b) in relations among engineers or managers in divisions or projects within a firm (Feldman, 1998; Feldman, 1999), (c) in relations among cooperating firms (Blomqvist and Levy, 2006) and (d) in relations between an acquired and acquiring firm (Zollo and Singh, 2004). Integration in these four arenas can be assessed qualitatively or quantitatively.

Turning to (a), (b) and (c) the key question is whether individuals or innovators will gain access to or adequately share knowledge or resources. Here, problems can emerge based on knowledge specialization and specialists or competition over budgetary resources (Feldman, 1999). When it comes to (d), we need to consider the “underlying tacitness of knowledge as one determinant of the knowledge integration mechanisms that can be used effectively.” One scholar suggests “that less explicit knowledge requires more elaborate knowledge integration” (Grant, 1996 as cited in Tell, 2011: 31). Acquisitions present problems of integration barriers based on tacit knowledge: “the level of integration between...two merged firms significantly enhances performance, while replacing top managers in the acquired firm negatively impacts performance, all else being equal” (Zollo and Singh, 2004: 1223). In terms of (c), some argue that decentralized patterns in the organization of firms provide a foundation for collaborations and “innovative learning,” carried out for example by “problem-solving teams” and “processual quality standards” (Sabel and Zeitlin, 2004: 388-389).

Theories of the Multidivisional Firm

Oliver E. Williamson distinguishes between *U-form* or unitary firms and the *M-form* company or multidivisional firms. He says sometimes the former “become diversified in slight degree and the incidental parts are given semi-autonomous standing.” A key threshold is that diversification has to reach “at least a third of the firm’s value added.” In contrast, the *M-form* is a “divisional enterprise in which a separation of operating from strategic decision-making is provided and for which the requisite internal control apparatus has been assembled and is systematically employed.” Williamson argued that *M-form* organizations had advantages over *U-form* organizations in internal resource allocation. The *U-form* was dependent on an external capital market which could be less “as a less than efficacious surveillance and correction mechanism,” with informal disadvantages and limited to “nonmarginal adjustments.” By internalizing finance, knowledge and power were integrated. Moreover, this organization could “make fine-tuning as well as discrete adjustments,” allowing a company “to intervene early in a selective, preventative way (a capability the capital market lacks altogether), as well as to perform *ex post* corrective adjustments, in response to evidence of performance failure.” The *M-form* could do this “with a surgical precision that the capital market lacks (the scalpel versus the ax is an appropriate analogy)” (Williamson, 1975: 152-153, 158-159). These ideas help us understand how conglomerates can function as intermediaries to various complexes, e.g. as firms gain contracts from the auto and defense complexes the divisions charged with relating to these complexes bank the capital of those complexes.

As passenger railcar companies become part of highly diversified enterprises the broadened capacities of the resulting firm potentially provided advantages in knowledge

pooling, finance and protection against cyclical downturns in each division's most important sector.³ Yet, diversification via conglomerate forms potentially provides a vehicle for exiting the most troubled sectors or even less profitable sectors. If the division exited is the passenger rail sector, the firm can survive just as the "green production" is abandoned, i.e. success can't be defined simply in profit and loss terms in this instance. Consider the case of Pullman, a diversified company which exited the rail passenger business.⁴ The chain of events leading to Pullman's exit from the rail passenger car business and the reshaping of the industry has been summarized as follows:

...another example of massive corporate divestment to finance diversification is provided by the withdrawal of Pullman Incorporated from the business of manufacturing rail passenger cars, thus leaving only a single domestic producer, the Budd Company (now a subsidiary of Thyssen, a German steel firm). Pullman's new parent firm, Wheelabrator-Frye, will allow it to continue to manufacture freight cars, along with many of the products into which Pullman's managers diversified during the 1970s: oil, petrochemical, fertilizer factories, and truck trailers. Ironically, this occurs at a time when "the energy crisis, environmental problems, deterioration of the central city, and congestion of the highways all point to the need for a dramatic increase in railroad service" (Bluestone and Harrison, 1982: 156 and Moberg, 1980: 6 as quoted in Bluestone and Harrison, 1982: 156).

In sum, the lure and profits of other economic sectors helped speed an exit from the passenger railcar market. Yet, in theory these external sectors could serve as a support system for the passenger rail market, helping even to finance expansion and growth of the passenger railcar market.

Differences in Industrial Policy Regimes

Generally speaking, industrial policy can be defined as "government policy aimed at or motivated by problems within specific sectors." The U.S. problem in the 1980s was that U.S. industrial policy was often "haphazard" (Tyson and Zysman, 1983: 29-30). There are three

³ Charles Perrow (1992: 452) summarizes some of these arguments as follows: "Only yesterday we were told by economists that the success of the multidivisional firm and of large firms in general rested in their ability to innovate and provide for a bewildering variety of styles and models; diversification was the hedge and source of innovative ideas; economies of scale appeared to have no bounds, since the bigger the firm, the more power it would have in the capital market, the more cross-subsidization it could do; and the technological changes permitting flexible and decentralized short-production-run production should be even more available to big rich firms, permitting flexible production. With all these advantages plus their market power, the need to be restructure would be minimal."

⁴ While the company was "best known for its coaches, sleeping cars and diners," Pullman became a "diversified multinational." The company became "the largest nongovernmental manufacturer of rail freight cars in the world and among the largest producer of highway truck trailers and freight containers." The most significant part of the firm's business was "in the engineering and construction of roads, mines, foundries and petrochemical plants." In 1979, Pullman became "the pre-eminent foreign company in China" and the "Pullman Swindell division was one of the first American industrial corporations to do business in Moscow." The passenger car market was then only about \$150 million in contrast to total sales for the firm of \$2,599,900,000 in 1978, i.e. about 5.8 percent of Pullman's total sales. In response to such considerations, "the decision to get out of the passenger-car business was seen by financial analysts as a smart, if belated move." The market was considered small, depending upon erratic sales, where most of the market is organized on a custom basis, where companies must go from one contract to the next. In contrast, "aggressive foreign competition, particularly from Japan, Italy and France" pushed out other U.S.-based manufacturers (Schuyten, 1979: 11).

classification schemes which this paper will use in order to understand the relationship between industrial policy on the one hand and success indicators on the other.

First, industrial policy regimes can be defined by differences in (a) time and (b) space. Turning first to (a) time, Stephen Skowronek's theory of regimes explains how "presidential leadership occurs through regimes of political time; political time defined as the various relationships and patterns incumbents project between previously establishment commitments of ideology and interest" as well as "their own actions in the moment at hand" (Skowronek, 1997 as cited in Untiet, 2008: 6). Similarly, Jin-Young Bae (2001) discusses changes in industrial policy regimes over time. David Resnick and Norman C. Thomas in reviewing different political cycles, discuss the notion of Stephen Weatherford that differences in presidential administrations can shape outcomes with some regularity (Resnick and Thomas, 1990: 14). In any case, we can use such theories to read down from potential political and ideological structures (presidential regimes and their philosophies) to assess potential outcomes on the firm level, although any political decision will relate to the nexus of competing influences that may be temporally-specific.

Turning to (b) space, differences in industrial policy systems are usually described within the broader framework of the "National System of Innovation" approach. This idea can be traced by to Friedrich List who conceived of "The National System of Economy" in 1841. Differences in innovation systems came into focus when "Japanese products and processes began to out-perform American and European products and processes in more and more industries" (Freeman, 1995: 5, 11). Japan's differences were other nations explained in terms of R&D intensity, proportion of military/space research and development, design of financial support systems and production systems (Freeman, 1995: 11, 12; Womack et al., 1990). Certain U.S. industries have claimed that their "growth is limited by the availability of investment finance" (Tyson and Zysman, 1983: 31).

Second, it is possible to distinguish between what can be called *formal* and *informal* industrial policies. Ann Markusen, an economic geographer, describes one *informal* industrial policy as follows: "Informal industrial policy...has been [a]...powerful regional developer in the postwar United States. Since World War II, the U.S. government has devoted considerable resources—between 5 percent and 7 percent of GNP—to military preparedness." This policy has favored some economic sectors (associated with aircraft, communications and electronics) over others (Markusen, 1999: 90). Even if "military spending does create jobs," such spending's efficiency as a job creator is "not proven." Some charge that "the short-term prosperity of the military-industrial sector undermines our ability to compete in the longer run." Unlike the U.S., where military production is significant, Japan experienced "superior performance...in many sectors like steel, autos and consumer electronics, in which the U.S. had a head start so to speak." Aside from being freer from military production burdens, the Japanese developed "a strong business ethic of market saturation, product quality and reliability, and cost minimization" (Markusen, 1986: 111-112). Military spending also represents a potential budgetary diversion from mass transit production by underfunding public goods (Feldman, 1991) or creating great profit for firms in competition with less profitable mass transit markets, leading companies serving military and mass transit manufacturing markets to exit heavy rail production (Feldman, 1998).

Another argument is that even Japanese industrial policy has been characterized as “essentially” being “informal and lacking in judicial intervention.” Such informality and lack of judicial intervention has been linked partially to the judiciary’s self-restraint, i.e. “the passive judiciary is an indispensable component of the Japanese industrial policy system.” In Chalmers Johnson’s framework, found in *MITI and the Japanese Miracle*, “a preference for informality is inherent in the developmental model that stresses national goals and is required for effective bureaucratic leadership to attain those goals.” The interacting components of the development state include “informality and a strong economic bureaucracy” (Abe, 1990: 1072, 1074).

A contrast to the Japanese model of formality can be seen in those who argue that placing constraints on anti-trust activity and promoting conglomerates constitutes a kind of pro-active industrial policy measure (linked to legal policies). In the early 1980s, leading economists like Oliver Williamson praised state policies which facilitated conglomerate forms, just as more radical economists like Barry Bluestone and Bennett Harrison were raising questions about how certain conglomerate forms were associated with deindustrialization (Bluestone and Harrison, 1982; Williamson, 1983). Paul Krugman wrote in 1981 that “for more than a generation the United States adopted a legalistic approach to trade policy, relying on international agreements and its own legal machinery to defend against ‘unfair’ trade practices of foreign governments.” Krugman raised the question as to whether the legalistic approach was insufficient (Krugman, 1984: 77-78).

Krugman’s question takes us to the third type of system to assess industrial policies: more and less comprehensive measures. The more comprehensive measures involve moving beyond the legalistic approach to industrial policy. Krugman argued that the central question was whether foreign nation’s “industrial policies in fact damage the U.S. economy.” His conclusion was that the U.S. economy was “probably not...seriously hurt” by the policies of foreign governments. Krugman argued that “the industrial policies of foreign governments have not been a serious problem for the United States,” even though industrial targeting from one nation could hurt another and that one shouldn’t be complacent about “any future foreign policies.” Foreign nations were blamed because of a “disappointing” U.S. economic performance; it was “simply easier to blame foreigners than ourselves” (Krugman, 1984: 78, 113, 115). Krugman correctly highlighted how firms could hide behind protectionism and thus avoid organizing more competently. Nevertheless, a firm’s capacities could be seriously undermined by the lack of a supporting industrial policy that was more *comprehensive* (than protectionist measures).

Krugman argued that foreign supports could cause harm if they aggravated domestic structures in the U.S. economy, but he doubted such effects:

...to establish serious injury to the U.S. economy, one must show that foreign practices interact with the imperfections of our domestic economy in such a way as to aggravate them. Such aggravation does not necessarily occur. For example, although subsidized foreign competition might hurt the United States by discouraging some activity that yields valuable external benefits, it might also help by promoting competition in an industry whose firms would otherwise have too much market power (Krugman, 1984: 80).

While raising doubts about the ease with which one could quantify industrial policy support systems, Krugman said that “financial support should be the easiest form of [foreign] targeting

to quantify.” He suggested that such support was “a much smaller factor in industrial targeting,” than suggested by “the level of rhetoric,” although in the electronics area U.S. firms benefit from U.S. Department of Defense financial support (Krugman, 1984: 82).

One can take Krugman’s comments as providing intellectual support for less comprehensive industrial policies. In contrast, others defend more comprehensive industrial policy. One way to think about comprehensive industrial policies is that they are not simply defined by either legal or macroeconomic interventions. In the early 1980s, “the general orientation of economic policy in the United States during the postwar period has been a macroeconomic one.” A major premise “has been that most economic decisions at the microeconomic level, meaning the industry or firm level, are best made through the market mechanism” (Tyson and Zysman, 1983: 29).

Where Krugman identified how free trade could promote competition within incumbent U.S. firms, others have identified how industrial policy could do so. For example, in the agricultural sector, the U.S. government “introduced a set of coordinated policies with the explicit purpose of influencing production levels, input usage, prices, and incomes.” In other words, industrial policies could influence *the microeconomic structures* of firms. In contrast, industrial policies would likely be “ill-conceived and badly implemented” if industrial policy was limited to the false (or limited) “between protection or free trade” (Tyson and Zysman, 1983: 30, 32). Some observers distinguish between *industrial policy*, which “usually refers to the targeting of certain industries or technologies for public subsidy,” and *strategic trade* involving “the use of quotas, tariffs, market-sharing deals, and similar devices aimed at capturing national advantage” (Kuttner, 1996).

A comprehensive industrial policy therefore includes more than trade regulation. It involves a broader range of solutions (such as those espoused by industrial policy advocates or corresponding to countries’ practices). Beginning in the 1980s and continuing thereafter, there were roughly six areas of concern corresponding to problems related to firms’ resources, international competition, and the need for companies to modernize or increase their competitive viability (Kenworthy, 1990). To address problems in these different areas, industrial policy advocates proposed seven general kinds of measures. Some of the different kinds of industrial policy problems and measures discussed at this time are summarized in Table 1.

Table 1: Key Industrial Policies in the U.S. Context: 1980s

Area of Concern	Potential Problems	Potential Delivery Industrial Policy Systems/Solutions
Research and development support	Lack of scale of resources necessary for international competition; closely related to finance problems enumerated below.	[a] “Multifirm consortiums for pooling research efforts”; [b] The Defense Department has “provided substantial amounts of funding for R&D and a guaranteed market...making possible risky, long-term research projects.”
Finance: Subsidies and capital	Firms using “equity sales for finances face shareholders’ notorious short-term focus.” “Firms which hold an established position in the world market for a particular product may lack the funds to adopt new technologies needed to remain competitive.” Foreign competition/need for modernization.	[c] Lobbying for protectionism (and/or state support for tariffs and quotas) [d] Diversification (rather than investing in modernizing incumbent products). [e] “Government funding or backing of private loans,” “targeted government subsidies.”
Procurement	Modernization barriers.	[b] Defense Department support. [f] State procurement (by civilian agencies).
Import restrictions	To address competitive advantages of foreign firms.	[c] Lobbying for protectionism.
Encouragement of cartels or industrial concentration	Anti-trust provisions; foreign competition/need for modernization.	[a] “Multifirm consortiums.” “Competition policy may be relaxed to afford industry the opportunity to construct mergers for export purposes or resist the intrusion of foreign firms.” [g] “Creative linkages between the state, industry, and educational institutions.”
Change managerial commitments to new products	Product decline.	[d] Diversification (in response to long-term decline for a product).

Source: Kenworthy, 1990: 235-239.

4. Methodological Approach

This study examines two cases related to the Budd Company's structure as a multi-divisional firm. One key supporting system (through finance, engineering and workers) for the Budd Company's rail division was the *automotive industry*, a dynamic sector in the first decades of the postwar era. Budd was a multi-product firm with its primary focus on being a supplier to the Big Three U.S. automakers including Chrysler. The largest and most significant divisions were centered on supplying the automotive industry. For simplicity's sake, I have collapsed this cluster of activities into something called the automotive division in the diagram (Figure 1) that follows. Budd was part of an industrial hierarchy (cf. Perrow, 1992) in which it partially took orders from its customers. This hierarchy or ordering seems most significant when the customer was relatively concentrated in its purchasing and decision-making power vis-à-vis Budd. For companies serving the military market, the Pentagon becomes the top manager (Melman, 1970). For companies serving the mass transit market, the local transit agency procurer becomes the top manager (Feldman, 1998). Local management established the parameters for distributing human and financial resources among the divisions. They also established a context into which the profits of various divisions were pooled among the various divisions. The extra-firm competition referred to earlier corresponds to the competition among purchasing banks (highlighted in yellow) identified in the figure. The intra-firm competition refers to the competition among divisions (highlighted in blue).

The significance of each theoretical approach to explain outcomes will be assessed by means of a case study of the Budd Company. Within the United States, Budd was estimated to control about half of the \$150 million to \$200 million passenger railcar market, with the St. Louis Car Company controlling about 35 percent of the market, with Pullman, Inc.'s Pullman Standard Manufacturing controlling the remainder in 1970 (Bedingfield, 1970: 55). These manufacturers of passenger railcars for heavy rail (subways), commuter rail and long haul passenger traffic all exited from the business (Sterngold, 1995). Given that Budd was the largest of and last survivor of the biggest domestic manufacturers, it is useful to study this company as the case which in theory may have avoided other problems which led their competitors to fail.⁵ When Larry Salci, a top manager of the transit group, joined Budd in the early 1980s, about 70 percent of its \$3.5 billion business was based on the auto market. The railcar business represented only \$7 million to \$8 million a year in profits and between twenty to twenty-five percent of sales (Salci, 2006).

I will look at two subcases at the Budd Company. First, Budd's acquisition and later merger of the Gindy Manufacturing Company. I examine whether or not the acquisition contributed to the overall viability of the Budd Company and hence whether policies to encourage such acquisitions were sufficient for contributing to Budd's viability. If the acquisition did not contribute to Budd's long-term viability, then one can conclude that encouraging such acquisitions *as policy* would prove insufficient for Budd's viability. I measure viability in three ways corresponding to short-term and longer term considerations and matching variables. The relevant factors influencing outcomes are internal (corresponding to managerial competence in deciding to acquire a firm and how that firm is managed internally and in cooperation with other units) and externally (corresponding to government actions and the larger field defining market conditions and competitor's viability) (see Figure 2).

⁵ Another company, Morrison Knudsen, survived after Budd, but were far smaller than Budd.

Figure 1: Management and Distribution of Resources in the Multi-Product Firm

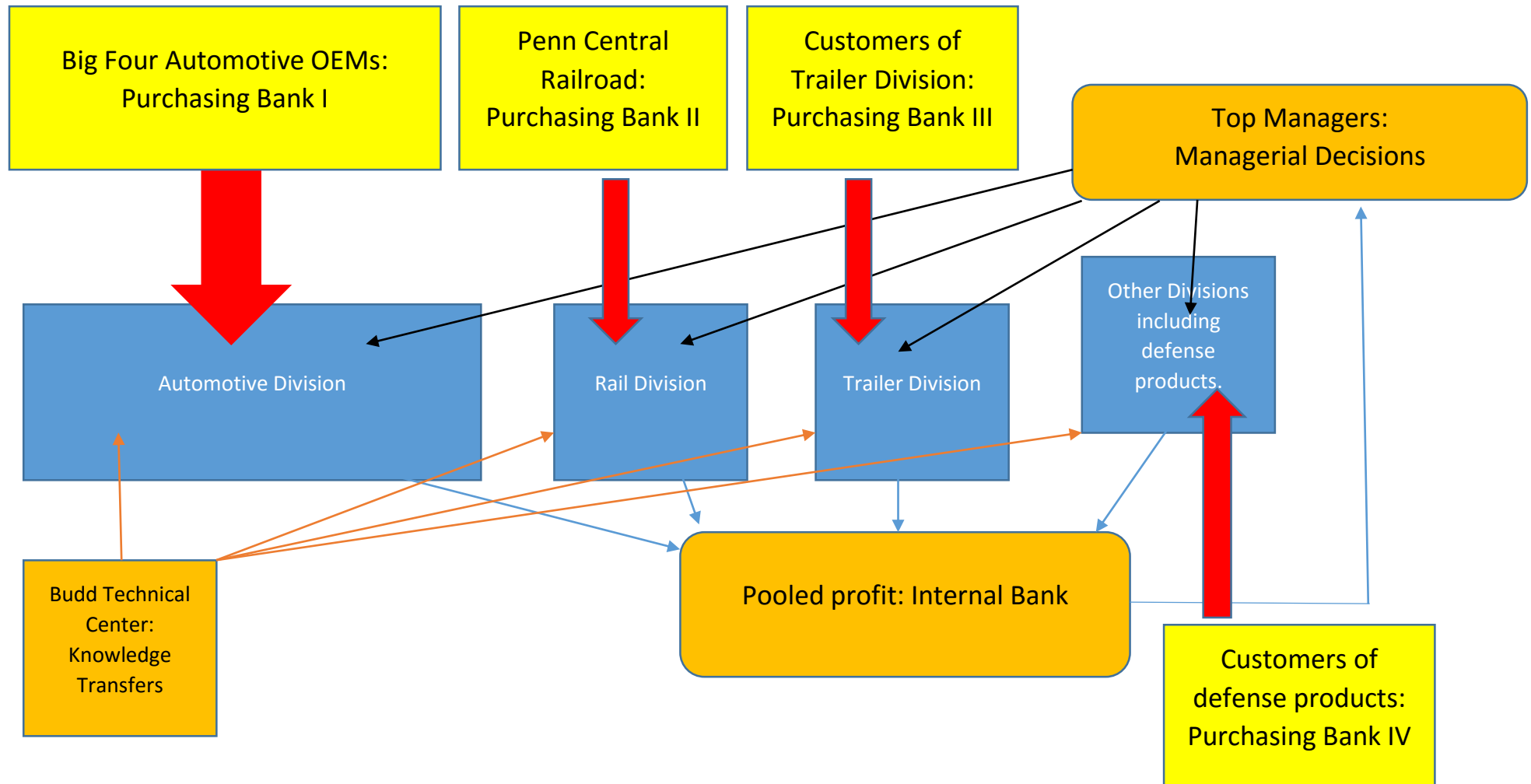
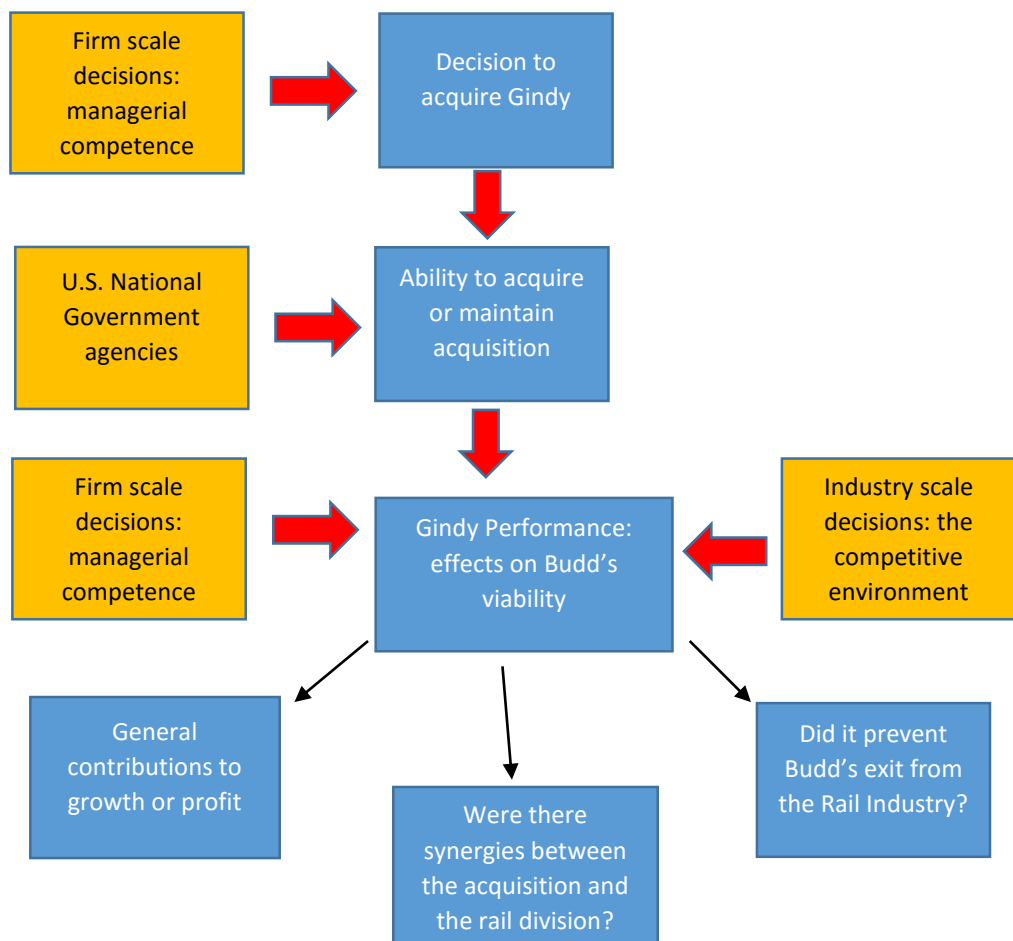


Figure 2: The Key Variables in the Gindy Acquisition Case



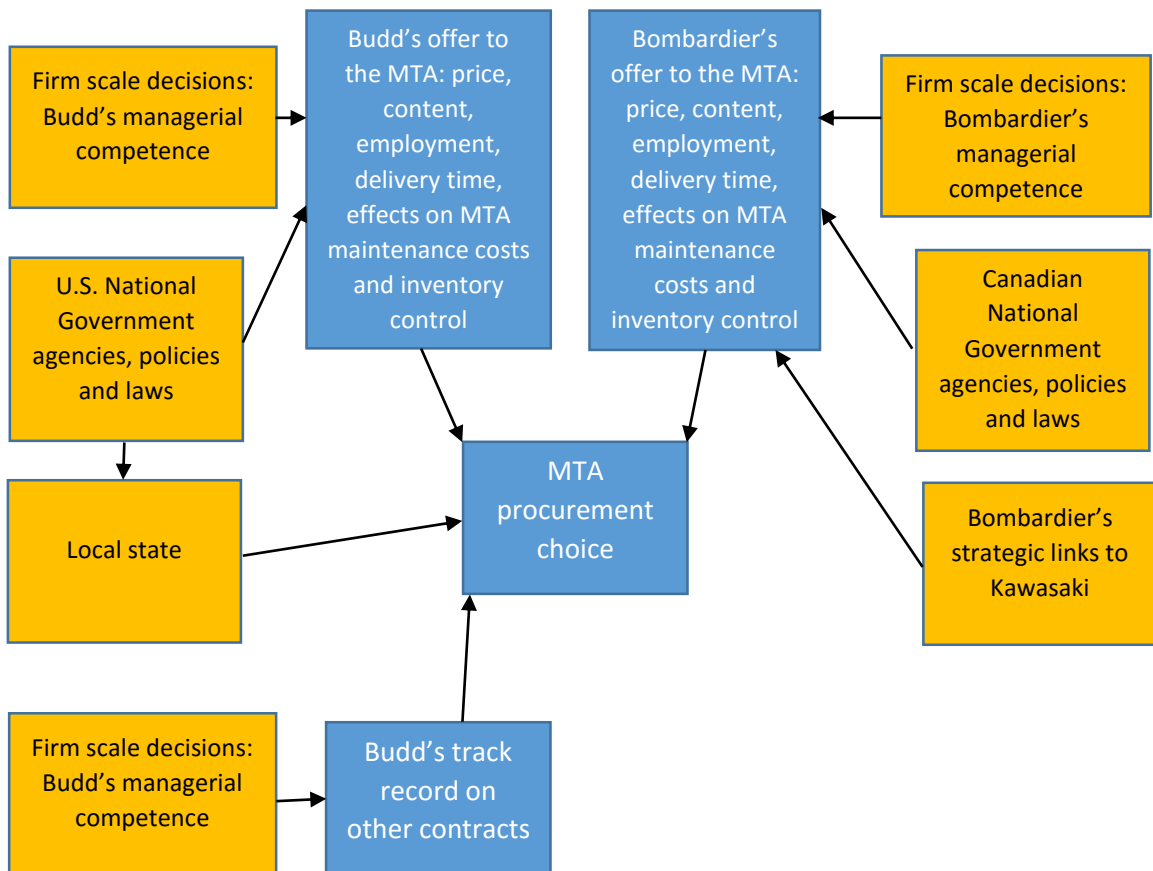
There are three ways to measure the dependent variable in this case. The first variable relates to the acquisition's impact on growth or profits. In the case of Budd, the annual report does not provide data on the specifics of particular divisions, only very general data related to parts of the company. Nevertheless, information available from trade publications gives precise information related to potential sales output. The second variable is based on assessments by company officials related to potential or actual synergies between the acquisition and the rail division or the company as a whole. In some cases these assessments are mediated by the judgments of other observers. The final variable relates to whether the acquisition and merger was *sufficient* for helping keep Budd in the rail division. The idea here is to assess the extent to which this acquisition and merger was sufficient for keeping Budd in the railcar industry. If the acquisition was not, this raises the possibility that more comprehensive policies are needed.

The set of relationships conveyed in Figure 2 amount to a kind of model for explaining how various independent variables or factors influence these three outcomes. Note, however, a potential constraint to this model: It does not measure or assess other kinds of *alternative* industrial policy measures which either negatively or positively likely effected the calculus of Budd's decision-making or its capacities. Rather, it only assesses the informal or weak industrial policy measures attached to anti-trust and conglomerate mergers. Given the tremendous relative importance of the automobile supply market to Budd's bottom line and the priorities given to defense industrial policies in the postwar era, the impact of the Gindy acquisition on Budd's bottom line was relatively small. Nevertheless, Gindy's performance is rather useful for evaluating the industrial policy regime around conglomerate development and antitrust policy.

The second subcase refers to Budd's attempt to secure industrial policy support in competition with the Bombardier Corporation, a Canadian-based manufacturer. This case revolved around whether Budd's winning or losing a key contract with the MTA. was based on the U.S.'s weak or informal industrial policies. Hence, I examine whether having stronger industrial policies contributed to success and weaker policies contributed to failure. If Budd lost the contract on grounds other than industrial policy deficits, one can conclude that having weaker industrial policies measures are *not sufficient* for promoting Budd's viability. If Budd lost the contract partially because of weaker U.S. industrial policies then one could argue that they were at least a *contributing factor* (see Figure 3).

The relationship between the independent and dependent variables in this case can be measured in two ways. First, did the Budd Company loose the MTA contract? The key issue here is the extent to which the competence of the Budd Company, the quality of the competing industrial policies, or some other factors influenced this outcome. Second, did the loss of this contract lead to or facilitate the exit of the Budd Company from the rail passenger business? The central issue here is whether the loss of this order pushed Budd "over the edge," in a highly competitive industry defined by "boom and bust" cycles of procurement.

Figure 3: The Budd Company's Trade Conflict with Bombardier



As discussed for the first case, the potential limitations to this model are based on larger industrial policies that affect or do not influence the key sectors of interest to Budd and this research, i.e. its automotive and rail divisions. I will show, however, that part of Budd's competitive disadvantages were based on U.S. industrial policies which favored the defense over the mass transportation industries. My goal is to see if industrial policies decoupled from industrial competence, merger and conglomerate policies and weak or informal industrial policy measures were sufficient for promoting Budd's industrial viability.

5. Case I: The Acquisition of Gindy Manufacturing Company

Background

The case of Budd's acquisition of the Gindy Manufacturing Company in the 1960s provides us with an interesting test of the utility or sufficiency of *formal* industrial policies (tied to legal policies and judgments) in facilitating growth of companies in which green technologies are embedded. In this case, the *de facto* industrial policy (or state policy with industrial policy implications) relates to anti-trust and judicial moves which facilitated this acquisition.

In 1968, the Budd Company contemplated one of many diversification moves of the postwar era. In May Budd decided to buy Gindy Manufacturing, a manufacturer of truck-trailers and cargo-container makers. In October of that year, the company's shareholders approved the acquisition. The Federal Trade Commission (FTC) challenged the acquisition in July of 1971 and dropped their case in 1975. Sometime later, Budd renamed the Gindy Manufacturing Corporation as the Budd Company Trailer Division ("Acquisition is Approved," 1968; "Budd Agrees to Buy...", 1968; "Budd's Purchase...", 1971; "FTC Drops...", 1975; "Greenblatt v. Budd Co.." 1987).

Donald Manning, who became Budd's Corporate Secretary in 1964, explains the acquisition as part of a series of efforts to diversify: "The top people in the Budd Company recognized for a long time that we were too heavily dependent upon the U.S. automobile industry." The push towards diversification began after the company re-established automobile production as part of the postwar reconversion wave. Then, "the Budd Company started to acquire other companies that we thought might very well be companies that would assist us with becoming less dependent on the automobile industry" (Manning, 2015).

While in theory new acquisitions might bolster Budd's general financial position and therefore its railway division, diversification moves were contemplated as a way to relieve dependency on both the automotive *and* rail businesses. In 1961, Phil Scott (then executive vice president of Budd), "presented a white paper to Budd's top management" which "recommended closing down Budd's Railway Division as it was a losing operation." He also wanted to make Budd "less vulnerable to the whims of Budd's principal customers, the Big Three auto workers, and especially Ford." In 1966, for example, as much as "70 percent of Budd's sales were to the four domestic automobile manufacturers, including 35 percent of sales to Ford Motor Company." Budd managers like Scott believed that their company "had become 'semicaptive' to the Big Three auto makers" and they sought to extricate themselves from what was regarded as a "very dangerous situation." As a result, "Budd decided to broaden its base by going into a proprietary, industrial type product which it would manufacture" and "considered van trailers to be a proprietary product." Nevertheless by 1965, Budd maintained its commitments to the railway car business despite some difficulties. As a result, "it decided

to attempt to add some products that had some relationship to this business” (Federal Trade Commission, 1975).

During the spring of 1967, Dudley Ward, the chief financial officer of Budd and a vice president of the firm, interviewed a trucking company owner to demonstrate Budd’s intent to enter the van trailer market. Budd had previously been involved with highly trailers and was interested in manufacturing them. Ward initiated a study of trailer manufacturers and how they compared from the trucker’s point of view. The study was sent to Scott who was then the president of Budd. Scott produced a memo related to Budd’s future expansion plans on August 9, 1967. Ward explained that this memo contained ideas reflecting a plan that “had been evolving and had been the subject of discussion by Mr. Scott and myself (Ward) almost from the day I joined the Budd Company in 1964” (Federal Trade Commission, 1975).

The Competitive Field

One argument in favor of the Gindy acquisition was that it could be considered a related diversification. As Manning explains: “Gindy was a producer of trailers, truck trailers. And they had several plants in Pennsylvania and we knew the trailer industry. And it seemed to be a[n] absolute natural” (Manning, 2015). Before Gindy was acquired, Budd served the transportation equipment sector, “including manufacturers of van trailers and containers and chassis.” Budd was a major manufacturer of both metal stampings and parts including drums, hubs, rims and wheels. Therefore, Budd “made many of the parts used in the manufacture of van trailers and container chassis.” Moreover, Budd had “designed and produced components used in the manufacture of stainless steel dry freight van trailers and aluminum containers.” Around 1956 or 1957, Budd even considered entering the van trailer market. From 1956 to 1984, “Budd manufactured the primary portion of a van trailer, stainless steel shells,” with one of their customers being Fruehauf which “incorporated them in complete van trailers.” By the mid-to-late 1960s Budd was “a substantial manufacturer and supplier of transportation equipment and component parts” with both sufficient “financial resources” and “marketing knowledge” necessary for manufacturing van trailers, containers and chassis (Federal Trade Commission, 1975).

Ward described Budd’s relatedness to Gindy as follows:

One of the things that was different about Gindy, which appealed to me, was the fact it was not subject to the same automotive styling cycle that we had been confronted with before and yet the business of manufacturing and marketing of trailers did not seem to me to be so vastly different from the business that we were currently engaged in as to present a serious management problem (Ward as quoted in Federal Trade Commission, 1975)

In 1967, Budd thought that it had the necessary managerial staff to manufacture trailers. Scott explained at that time that he thought Budd was “able to learn and understand the trailer business.” He acknowledged that Budd could not “go out and run a plant immediately and make trailers as such.” Yet, Scott argued that “if it involved the formation and welding of metal, this is something that Budd Company management and talents knew something about and could learn more about if they had to” (Scott as quoted in Federal Trade Commission, 1975).

Another manager at Budd, agrees that the acquisition was part of a market diversification move, but also suggests some limits to the *relatedness* of this diversification.

Aaron Gellman, a Vice President of Planning for the Budd Company, was “very involved” in the acquisition. On the one hand, he confirms that Budd’s substantial capacities in working with stainless steel was “one of the reasons why they acquired Gindy.” He also explained their proximity to Budd’s facilities centered in the Philadelphia area: “I was going to use Red Lion, at least part of it, for trailers.” There were limits to the similarities of this acquisition to the *rail market*: “building a trailer is a very modest technological challenge compared to building a safe railcar” (Gellman, 2015). Nevertheless, testimony by Ginsburg himself and other sources used by regulatory bodies related to Budd’s acquisition found that “Budd had an engineering and railroad car manufacturing business, which would have provided a solid base from which Budd could have developed its own van trailer, container and chassis products.” Ginsburg argued that the Red Lion plant where railroad cars were produced in 1968 could have produced van trailers, containers and chassis. Various sources noted that “the producers of railroad cars are among the most likely entrants into the manufacture of van trailers, containers and chassis.” For example, “several foreign producers of railroad cars have entered into the manufacture of van trailers or containers and chassis” including Societe Novuelle Des Ateliers De Venissieux, Cravens Homalloy Limited and “a former Budd licensee for railroad cars.” Both the machinery and capital equipment necessary for manufacturing railroad cars and van trailers are similar. Budd also had capital equipment from its automotive components business that was related (Federal Trade Commission, 1975).

Gellman’s position partly reflected company precedent. When Budd’s contracts with Fruehauf were soon going to be terminated, they approached the Brown Trailer Company, a supplier van trailers. Budd wanted to acquire this firm or develop it as a customer or a distribution arm for its own stainless steel trailers. Budd made aluminum containers which they sold to Union Carbide at the Red Lion plant between September 1960 and September 1961. The Red Lion plant manufactured aluminum containers in 1961 (Federal Trade Commission, 1975).

While the acquisition was not a direct service to the rail business, however, it was designed to service the general operations of the firm: the acquisition “related to generally building up the company’s revenue base in other areas than supporting the competitiveness of the rail business.” The acquisition was primarily motivated for market and financial reasons: “One of the thing that Gindy had was demand. Their shop, which was not far away, was just jammed pack with business.”⁶ The acquisition of Gindy was based on a drive “to move into a new market and generate a lot of cash” (Gellman, 2015).

Gellman’s observations are confirmed by information collected about Gindy and the acquisition by the Federal Trade Commission (FTC):

Prior to its acquisition, Gindy was a very profitable company and never lost money in any single year...Indeed, Budd was interested in acquiring Gindy because of the latter’s profitability...Gindy’s average rate of return on sales before taxes in the five years preceding its acquisition was over 10 percent...In the year preceding its acquisition, Gindy’s average rate of return on

⁶ Gindy’s main plant was in Downingtown, Pennsylvania (“Budd is Seeking...,” 1968: 57), which was about twelve miles from the Red Lion plant.

stockholders' equity, before taxes, was 27.1 percent...one of the highest in the industry (Federal Trade Commission, 1975).

Scott believed that Gindy's profit rate was "interesting" and he said that the profit level at Gindy, measured as a return on the sales dollar, was "a great deal better than Budd's was" (Scott as quoted in Federal Trade Commission, 1975).

In addition to these subjective indicators, there are also objective indicators related to Gindy's viability about a year or so prior to the acquisition. At the close of 1966, Gindy was completing the construction of a new, multi-million dollar central office and manufacturing complex in Downingtown, Pennsylvania. The plant, designed to manufacture truck trailers, containers and a new line of platform containers, would represent a 25 percent increase in the company's manufacturing area ("Gindy Building...", 1966: 2). Even though Gindy was profitable, it faced a "tight money situation," unable to secure financing it required "to expand its position in its various markets as rapidly as it had been expanding," even though it had a four-to-five month backlog of orders" at the time of its acquisition. The company increasingly turned to up front financing to support sales. For example, "from 1965 through 1969, the number of van trailers Gindy sold with virtually no down payment increased steadily from 46 percent to 64 percent" (Federal Trade Commission, 1975).

Regimes, State and Industrial Policy Action

In this case, we have two kinds of regimes to consider. First, the regime of the national governmental administration represented by Presidents Richard Nixon (January 20, 1969—August 9, 1974), Gerald Ford (August 9, 1974—January 20, 1977). Second, the regime represented by anti-trust, merger and conglomerate activity as policy regime with industrial policy implications. The merger was approved by Budd at the tail end of the President Lyndon Johnson's second term of office, the month before Nixon was elected. About nine months into Nixon's term, a news story declared that Nixon's administration "has mounted the biggest and broadest antitrust crackdown since Franklin Roosevelt's New Deal." Richard W. McLaren, Nixon's antitrust chief, "filed antimonopoly suits against some of the biggest conglomerates" (Green, 1969: 7A). This initial expansion of regulatory control was also reflected in Nixon's establishment of the Environmental Protection Agency and the Occupational Health and Safety Administration and his embrace of New Deal liberalism. As the U.S. economy worsened in the 1970s, however, the liberal regulatory approach was challenged by "leaders in and out of government" who embraced "market-oriented efficiency theories supporting deregulation." One key group was University of Chicago economists, led by George Stigler, who "expressed doubt that conglomerate mergers possessed anticompetitive consequences, opposed divestiture, and resisted the need for legislation" attacking "conglomerate mergers through extensive divestiture." Eventually, Nixon embraced "the Chicago theorists' condemnation of the government's prosecutions" against mergers and conglomerates (Freyer, 2006: 137-139).⁷

President Ford claimed that antitrust policy would promote "an environment where free enterprise can operate without a monopolistic development," with the free enterprise system strengthened by competition. He argued that "we can't have big business, big labor—or big government, I might add—dominating our economy" (Ford as quoted in Eisner, 1991: 148). In

⁷ This policy shift also "coincided with dramatic allegations linking the [Nixon administration's] ITT settlement to a \$400,000 political contribution made to the Republican party" (Freyer, 2006: 138).

practice, Ford's antitrust policy had certain constraints: "Ford signed the Hart-Scott-Rodino Antitrust Improvement Act of 1976 (HSR)." The Act reflected "growing community and state agitation over corporate diversification resulting in the loss of local jobs, taxes, and resources." It also authorized "federal funds for state attorneys general to prosecute antitrust actions." Nevertheless, in the 1970s "the Justice Department and the FTC maintained a lenient policy toward mergers" (Freyer, 2006: 146). These changes took place against the longer trends shaping corporate actions and the larger economy. Corporate managers and investors looked for market efficiencies: "The persistent cycle of bust and boom after 1973 promoted an increasing reliance on market costs and gains as a measure of economic effectiveness." U.S. Steel's acquisition of divisions managing coal and real estate properties, with divisions making cement, drums and pails exemplified this trend (Freyer, 2006: 138).

The Chicago School approach can be contrasted with other potential policy measures which define the Ford-regime. During his presidency, "the 1974-75 recession was the longest and deepest since the Great Depression," with more than eight million Americans unemployed. Alan Greenspan was then President Ford's top economist. Greenspan "vehemently disagreed" with a call by Chancellor Helmut Schmidt, a Social Democrat, "stimulate the economy with government spending." Ford attempted to use deflation as a means for combatting inflation which reached 12.2 percent in 1974. In fact, Ford believed that "high federal spending was a root cause of inflation." Yet, the country's problems were far deeper (100, 154-155).

Among the many problems facing the U.S. at the time were the following. First, "few new industries emerged during the 1970s, and few existing ones grew." Second, there was a productivity crisis in manufacturing during the period overlapping with Budd's initial acquisition. Between 1965 and 1970, output per man-hour in manufacturing increased 2.1 per year on average in the U.S., but 3.6 percent in Great Britain, over 6 percent in France, and 14 percent in Japan. Third, the auto industry experienced a major crisis: "by the 1970s, Americans admitted that some domestically produced goods were of shoddy quality," pointing to the "built-in obsolescence" of Detroit-manufactured automobiles, "deliberately manufactured to break down over time and force consumers to purchase new ones." In 1973, U.S. automakers sold 9.7 million cars (a record), but in 1974 sales plummeted to 7.5 million, with U.S. automakers "stuck with a glut of 1.6 million unsold cars," production falling to "its lowest levels since 1962." At the close of 1974, "the automakers had laid off 285,000 workers, almost half of their total workforce" (Mieczkowski, 2005: 98, 100, 151). Budd's changing fortunes over this period can be seen in Table 2. This shows a depression in earnings in the automotive division over previous years and greater profit coming from non-automotive divisions.

Ford placed the fight against inflation at the top of his agenda after he became president in August 1974. Nevertheless, the inflation rate "had been falling the whole year while unemployment was rising." Therefore, Ford's policies "had more to do with ideology than the numbers." Part of this ideology was related to the beliefs of businesspersons "that government regulation always ignored the imperatives of capital accumulation," with "a sharp recession" helping to "sober up" the population. The belief in state failure was tied to "the economic troubles of the utilities, airlines, and railroads" (Stein, 2010: 111-112, 123).

Table 2: Earnings before Income Taxes at the Budd Company

Year	Automotive Earnings	Industrial Earnings
1971	\$6,523,000	\$3,738,000
1972	\$25,100,000	\$3,094,000
1973	\$36,154,000	\$6,830,000
1974*	\$1,889,000	\$12,803,000
1975	\$7,697,000	\$8,023,000

*-Note: In 1974, Budd adopted the last-in, first-out (LIFO) method of determining cost for the major portion of domestic inventories.

Budd Company, 1976: 12.

Table 3: Gindy's Expanding Market Share: Share of Shipments

Year	Share of Van Trailers	Closed-top freight trailers	Container and Chassis
1968	8.4%	10.8%	3.8%
1969	8.8%	12.9%	9.9%

Source: Federal Trade Commission, 1975.

One opening for state action, however, was the anti-trust policies of the Federal Trade Commission (FTC). Under the Ford regime, the state tried to limit anti-trust to facilitate capital accumulation (and thus the economic growth that might come from expanding into new markets via conglomerate organization). In 1975, the Federal Trade Commission (FTC) waved anti-trust restrictions and against Budd Company's acquisition of the Gindy company. The FTC then "dismissed a complaint charging that [the] 1968 acquisition of Gindy Mfg. Corporation violated the Clayton Act" (Richards et al., 1976: 4). The economist Oliver E. Williamson, winner of the Noble memorial prize in economics, hailed the decision as a means for facilitating useful corporate forms. Williamson wrote: "It is a credit to the growing sophistication of antitrust that the 1970s witnessed a shift away from asserted, but often only imagined, entry-barrier effects to consider the affirmative purposes served by new business configurations." In 1975, the FTC vacated the order of the responsible administrative law judge and dismissed a case against the Budd Company. The original complaint "had stressed Budd's importance as a potential entrant into narrowly defined lines of commerce and held that the benefits conferred by Budd on the acquired firm (Gindy) disadvantaged small rivals." In contrast, the FTC argued that the complaint's definition of the market was rather narrow. One key argument was that "the acquisition relieved Gindy of financial and other handicaps that it had experienced previously" (Williamson, 1983: 48-49).

The FTC considered Gindy to be "a substantial manufacturer and seller of van trailers and containers and chassis" in 1968. That year Gindy "ranked fourth in the country in the sale of closed-top dry freight van trailers," "second in the sale of open-top van trailers," and "sixth in the sale of containers and chassis." Their expansion in market segments over the 1968-1968 time period can be seen in Table 3. In 1968, the company also had a 15.9 percent share of open-top van trailer shipments (Federal Trade Commission, 1975).

Outcomes

During the short run, Budd made commitments to improve the performance of Gindy. It took "many steps to increase Gindy's production and sales, including the rebuilding of one plant and the proposed building of another plant to make van trailers." After the acquisition, Gindy also broadened its offerings of van trailer types "by adding furniture and deep drop frame van trailers to its product lines." (Federal Trade Commission, 1975). The full range of these commitments and the potential advantages of the acquisition in this short-run view are outlined in Table 4. The problem, however, that Budd faced was that Fruehauf still had the dominant share of the market. In 1953, Fruehauf filled about 55 percent of the country's demands for lumber concerns and dairies ("H. C. Fruehauf...", 1968: 47). A key problem identified in 1974 was that "it is an advantage for a van trailer manufacturer to have plants located in major market areas throughout the country." Yet, "only Fruehauf" came "close to having a van trailer manufacturing plant located in each major market area" (Federal Trade Commission, 1975: paragraph 165).

Table 4: Key Synergies and Short-Term Advantages from the Budd-Gindy Acquisition

Area	Actions or Results
Design	Budd helped improve the Gindy van trailer's quality partially by redesigning it. Gindy replaced the sliding tandem it used with "a unique roller tandem."
Production and vertical integration	"Since the merger, Budd Gindy had been making parts which formerly Gindy had purchased." Budd supplies wheels, hubs and drums used in manufacturing trailers and chassis. After the acquisition, Budd facilitated integration for Gindy "by starting the production of certain components such as kingpin frames, running gear subframes, landing gear subframes and front and rear ends."
Productivity	"When Budd's corporate manager of facilities became a vice president of Gindy, he applied mass production techniques to Gindy and succeeded in improving the production capability of Gindy's plans."
Production Engineering	"Subsequent to the acquisition, Gindy did call on Budd's engineering skills. Several Budd engineers were brought over to Gindy from Budd. Budd's corporate manager of facilities was transferred to Gindy after the merger and became Gindy's vice president of operations. At Gindy, he set up new assembly lines and built a new facility for producing refrigerated van trailers."
Finance	<p>Budd had capacities to issue "additional common stock" and it did so to make acquisitions in 1968, 1969 and 1970. At this time, Budd's stock was "well accepted," with chief financial officer Ward stating that the financial community considered Budd's results "to be on the upswing" and its stock price attractive which "made acquisition possibilities for stock that much more attractive."</p> <p>Budd raised money through public debt offerings and borrowings. Of \$30 million raised by a public funding, \$8 million was channeled immediately to Gindy to finance an increased installment receivables coming from business expansion.</p> <p>Budd also provided "substantial sums of money" directly and indirectly to Gindy. The parent "spent about \$1.5 million to renovate Gindy's Eagle plant in order to achieve a higher degree of automation."</p> <p>Budd established the Budd Financial Corporation in 1970 "as a wholly-owned subsidiary of The Budd Company primarily to service the installment financing originated by Gindy." At the end of 1970, "Budd had confirmed open lines of credit with banks of about \$113 million, of which about \$34 million was earmarked for Budd Financial Corporation." Budd Finance's equity increased Gindy's capacity to finance van trailer sales. Whereas Gindy previously could borrow only \$16 million to finance its van trailer sales (at the time of acquisition), by May of 1969 this amount increased to \$35 million.</p> <p>Budd's financial ability strengthened Gindy as the "Budd had more leverage than Gindy in the money market." The financial ability of Budd "enabled Gindy to finance trailer sales which it otherwise would have lost"; "increased Gindy's ability to accept, service and dispose of used trailers trade in on the purchase of new trailers"; and "enabled Gindy to finance the sale of containers," which Gindy could not do before as only Budd could have risked the losses.</p>
Marketing	After the acquisition, Gindy's spending on advertising were "considerably higher than previously." Prior to the acquisition, Gindy used primaril dealers and had only three branches to sell its van trailers. After the acquisition, Gindy opened six additional branches.
Performance	After the acquisition, by March of 1974, Gindy was at "maximum capacity," had "a five-month backlog" and was "turning down orders" because of it could not "meet delivery times."

Source: Federal Trade Commission, 1975: Paragraphs 121, 122, 125, 129, 139, 140, 141, 142, 163, 168, 172, 173, 174, 175, 176, and 177.

Despite the government's supporting action vis-à-vis Gindy, Manning concluded that the company "was a horrible acquisition." Manning argued that this acquisition was a failure:

But one of the things that quite frankly we probably didn't appreciate as much as we probably should [have] was that trailer industry was so completely dominated by Fruehauf, that...other producers (Gindy and others)...got the scraps (Manning, 2015).⁸

In fact, the company's dominance could still be felt in later decades: "Fruehauf had been the largest trailer manufacturer until 1989" (Schenck, 2001). Another manager, Ned McDermott concurs that Budd abandoned Gindy as "a bad investment" because this division "never earned enough money to warrant its acquisition or existence" (McDermott, 2015). Paul Schenck, the editor of Trailer/Body Builders from 1959 to 1999, argues that while the Budd Company was "very well-run...Gindy was not." He surmises that "Budd found there was nothing to buy." He explains, "the president of Gindy is remembered famously as saying: Why do I need a chief engineer to design trailers? I just buy a Fruehauf and copy it." In contrast to Gindy, Fruehauf was innovative, but its scale was not necessarily a determinant advantage. For example, the Strick Corporation was acquired by Fruehauf but was later divested because of competitive problems. Yet, "Strick exists to this day, but Fruehauf does not." Unlike these two firms, "Gindy was not an innovator," but "survived as a low-price trailer builder." Furthermore, even though "Fruehauf was very dominant...many other truck trailer manufacturers survived and expanded to take over the leading positions" (Schenck, 2016).⁹

By May of 1985, Gindy (in the form of Budd's trailer division) was sold to former employee William H. Thayer, President of Thayco Manufacturing. A news report then stated that Budd had sought "a buyer for its financially troubled trailer operations for several months." Budd managers then "said they were considering closing down the division if a suitable buyer was not found." Data from R. L. Polk, the information publisher, showed that while there were 18,000 new Budd trailers registered in 1978, there were only 6,700 in 1983 and only 3,298 in 1984 ("Coopersburg Businessman...", 1985). Thayco's trailer operations and Thayer were plagued with economic and legal problems, owed taxes, and delinquent payments as the trailer division closed down in the late 1980s (Downington Area Historical Society, 2013; Henson, 1990; Moyland, 1988).¹⁰

⁸ In the early 1970s, the Boston Consulting Group (BCG) "proposed that the optimal portfolio of a diversified company could be described in terms of a matrix arraying the market share of each corporation's product (service lines) against the sales growth rate of activity. Lines with both low market shares and low growth rates were nicknamed 'dogs.' BCG recommended that they be abandoned, even if they were nominally profitable, on the grounds that they would probably require reinvestment of cash surplus in order to maintain market share" (Bluestone and Harrison, 1982: 150).

⁹ In 1959 Fruehauf had a 35% market share and Trailmobile had an 18% share. These two companies collectively controlled over half of the trailer market. Gindy, Highway Trailer, Brown Trailer and Lufkin were also among the top ten suppliers at that time. By 2009, fifty years later, each of these leading manufacturers had disappeared or were then bankrupt. There were only two companies, Great Dane and Utility Trailer, "remaining at the top of the list 50 years later" (Schenk, 2009).

¹⁰ A 1990 report explains: "With more than \$293,304 owed in back taxes since July 13, the Thayco Trailer Corp. on Route 100 in Upper Uwchlan Township became Chester County's largest tax delinquent when the defunct trailer-manufacturing firm, owned by William H. Thayer of Coopersburg, Pa., breached its 1989 agreement to pay off its tax debts. But tax delinquency appears to be just a small part of Thayco's financial plight. Since Thayer purchased the property in 1985, more than 20 civil suits have been filed against the firm in Chester County Court, most involving businesses seeking payment from Thayco for past due bills for everything from parts and equipment to unpaid insurance premiums" (Henson, 1990).

Gellman, offers another theory for why the acquisition failed, however: “I was going to use Red Lion [the rail production plant], at least part of it, for trailers. It never happened.” He says that organizational challenges limited the utility of the diversification: “I think it was largely because the Gindy management couldn’t fit in with the Budd way of doing things...I think it was largely a culture clash.” David Ginsburg, the owner, had “alienated Phil [Scott] and he alienated the Ginsburgs and that was the end of that in terms of achieving the goals that were intended in the acquisition of Gindy” (Gellman, 2015). There is also evidence that employees who had worked originally for Ginsburg at Gindy came into conflict with the Budd managers who later took over (“Greenblatt v. Budd Co.” 1987).¹¹

At the very least it is certain that there was a falling out of some kind between the Ginsburgs and the Budd Company. Prior to the actual acquisition of Gindy, Philip. E. Scott, Budd’s president, issue a statement which explained that “Gindy would operate as a subsidiary with the existing management, personnel and policies” (“Budd is Seeking...,” 1968: 57). While Gindy was acquired in 1968, by September of 1969 David Ginsburg was appointed to the Budd Company board of directors and Gindy Corp. was then “operated as a wholly owned subsidiary” (“Founder of Gindy...,” 1969: 5). A Federal Trade Commission report related to the acquisition explains after Budd acquired the Gindy explains that after the firm was acquired, Budd “assumed full control of the operations.” Yet, according to Ginsburg, Budd had promised him and his son Milton that they would run the company. Instead, David Ginsburg “became merely the honorary chairman and his son Milton left shortly after the acquisition.” Ginsburg explained his son’s motivations as follows: “He...felt that they [Budd] were giving orders instead of taking advice” (Federal Trade Commission, 1975). At the end of 1975, “Gindy was merged into The Budd Company” and was “operated as the Trailer Division.” (Richards et al., 1976: 4). David Ginsburg still sat on the Budd Board at least as late as 1976 and 1977 (Budd Company, 1976; Budd Company, 1977).

6. Case II: The Trade Conflict with Bombardier

Background

In the early 1980s, Budd got into a conflict with the Metropolitan Transportation Authority (MTA), the agency charged with purchasing subway cars for New York City. The conflict centered on a 1982 order for 825 subway cars putting Budd into conflict with Bombardier, a Canadian-based firm backed by its government, which won the contract.¹² According to the AFL-CIO’s Industrial Union Department, 25,700 jobs were required to

¹¹ David Ginsburg, who was Jewish, and had a number of Jewish persons working for him. One Jewish manager, Louis T. Greenblatt, was promoted to Executive Vice President of Gindy in May of 1956 and served in that capacity until 1970. Because of his wife’s deteriorating health conditions, Greenblatt tried to renegotiate his responsibilities in the firm and in a related matter got into a dispute with Budd management about his pension benefits. According to claims made in court in which Greenblatt was the plaintiff, Greenblatt “was demoted to the position of Sales Representative of National Accounts... without notice,” in early 1978. Sometime later, court documents report the following: “Henry L. Charlton, Greenblatt’s superior, began at the Trailer Division to harass the plaintiff on a daily basis. At one point Charlton, it is alleged, stated to plaintiff, ‘I hate you goddamn Jews.’ On another occasion, Charlton viciously related to Mr. Greenblatt, ‘Lou, when [Thyssen AG, a German firm] buys The Budd Company they are going to build a special microwave oven to put you in.’ In January 1981, because Charlton’s harassment became unbearable, plaintiff was forced to resign” (see “Greenblatt v. Budd Co.” 1987). Aaron Gellman argues that anti-Semitism was not a problem at the company: “I was the first Jewish officer the company ever hired. I never suffered from it. It wasn’t the reason I left...If there were any [other Jewish managers], they came up through the ranks. I wasn’t, I was brought in” (Gellman, 2015).

¹² The other bidder was Francorail, a French consortium (Lukasiewicz and King, 1982).

produce the cars for this order. U.S. employment was on the order of 10 million persons (Samuel et al., 1982: 117-118). This case tested the utility of the Export-Import Bank, the office of the U.S. Trade Representative, and the Secretary of the Treasury as potential instruments for industrial policy to help the Budd Company. Like the Gindy case, another Nobel prize winner's ideas would be put to the test. At stake potentially was the possibility to maintain if not create U.S. manufacturing jobs. In contrast to the United States and its trade-centered industrial policy regime governing Budd, the Canadians supported Bombardier with generous credit terms because it was "struggling with unemployment even greater than that in the United States" (Farnsworth, 1982). Thus, the trade dispute centered in part on these competing industrial policy regimes.

The New York State Public Authorities Law through Section 1209(3) allowed the MTA to award contracts for subway cars based on negotiations rather than sealed bids if certain conditions were considered during negotiations. MTA wanted this legislation because they believed it would help them reduce subway car prices and attract financing from suppliers on favorable terms. The MTA awarded the contract to Bombardier related to this statutory and other criteria which included "availability and cost of financing, price of the subway cars, delivery schedules, quality of design, engineering, and performance, possible overdependence on one supplier, and New York content." Therefore, financing while important, was not "determinative." For example, the MTA when making its contract with Bombardier, agreed to eliminate or offset any subsidy should they be required by law to do so. The MTA believed that Bombardier's proposal was advantageous even at the higher cost. Yet, the MTA sought legislative changes to permit "negotiated purchase of subway cars" because it "realized it could achieve substantial savings by negotiating the purchase of the cars instead of using the competitive bidding process required by state law." During the first round of bidding, MTA got a low bid from Budd of \$895,000 per car that they regarded as being excessive (Kirschner, 1983: 290-293).

In May of 1982, James H. Lundquist (a lawyer retained by Budd) said he sent a telegram to the MTA's chairman, Richard Ravitch, where he described the award as "an unfair foreign financial subsidy." Lundquist claimed the award was "illegal" and would "cause material, irreparable harm to the domestic subway-car construction industry." He also argued that if Budd was able to match Bombardier's offer of 9.7 percent financing, Budd would then be about "\$33,000 per car below the Canadian bid." The telegram to Ravitch asked that Budd be awarded the contract of that Budd be allowed time "to petition the Export-Import Bank for equivalently subsidized credits." William N. Walker, a lawyer working for the MTA, argued that the Bombardier contract was not illegal (Farnsworth, 1982).

The Competitive Field

The conditions influencing Budd's competitive viability vis-à-vis Bombardier were based on factors internal to these firms and external to them in the form of industrial policies. Budd claimed that most—if not all—of Bombardier's advantages were triggered by industrial policy disadvantages. The MTA argued in contrast that these advantages were not the overriding factor.

In July 1982, Paul O. Sichert, Jr., the Vice President for Public Affairs of the Budd Company, wrote a letter to *The New York Times* providing comparative data related to cost, content delivery time for both companies. Sichert argued that Budd had "the advantage in price, delivery and content" (Sichert, 1982). Budd claimed that it had lost its contract because the Canadian Government had extended export credits to Bombardier. The Canadian Government

decided to lend “the M.T.A. \$563 million, or 85 percent of the total cost of the Bombardier cars, at 9.7 percent over 15 years” (Perlez, 1982a). The financing was made available through a buyer’s credit from the Export Development Corporation of Canada (EDC). Early into the negotiation, the MTA indicated “that a major factor in its award would be the availability of low-cost, long-term financing for the subway cars” (Sichert, 1982).¹³ Budd said that 80 percent of the work created by the contract would be based in the U.S., even though the firm was then owned by August Thyssen Hutte, the German steel giant. In contrast, Bombardier offered to do just 50 percent of the work in the U.S. (distributed in Tonawanda, New York—near Buffalo—and Barre, Vermont). Budd also had advantages as being somewhat vertically integrated (Farnsworth, 1982).¹⁴

A comparison of the two companies shows that Budd and Bombardier each had potential advantages (Table 5). The data offers differences based in part on whether Budd’s figures or those from other sources from the U.S. International Trade Commission and MTA are used. The data are potentially misleading in that, “the MTA estimated that it would save U.S. \$36 million in net present value and U.S. \$241 million in future payments by choosing Bombardier’s bid instead of Budd’s (U.S. International Trade Commission, 1982: A-9 to A-10 as cited in Kirschner, 1983: 294). In making its deliberations, the MTA must have been concerned with the weakening competitiveness of U.S. railcar manufacturers. A report by the Government Accounting Office argued in 1976 that in comparison was St. Louis Car’s R-44 and Pullman Standard’s R-46 subway cars, older models were actually sturdier and safer (Tolchin, 1976).¹⁵

In fact, Ravitch explained that recent failures in the manufacture of trucks or undercarriages purchased by the MTA led his agency to be “very concerned about reliability and performance.” While confirming Budd’s qualifications, the MTA was “concerned about placing the extraordinary amount of business in the hands of one company.” Ravitch highlighted a few problems with Budd’s potential ability to deliver:

...we are aware of the fact that the trade publication indicates that Budd has a backlog of 1,058 cars as of the year ending 1981, and was advised by my counterparts in Baltimore and Miami that Budd was quite late in delivering orders. And in a report to the GAO, Budd informed that their capacity was 425 cars per year (Ravitch, 1982a: 70).

Yet, Larry Salci, who became President of the Budd Transit group shortly after Ravitch’s testimony explained: The Miami-Baltimore procurement “should have been far more successful than it was” because the railcar was similar. The problem encountered was “we had two brand new properties who’d never been in the mass transit business before and the only difference between the cars was the color of the nose and the seat colors” (Salci, 2006).

¹³ Budd’s management gave different, if not more precise figures. The Buyer’s credit was worth “\$563.4 million, at an interest rate of 9.7 percent repayable over a 10.5-year period after the last car deliveries, with a final maturity in 1997” (Sichert, 1982).

¹⁴ “In addition to offering services as a prime contractor for frail passenger cars, Budd assembles rail passenger cars and manufactures two major rail passenger car components, the shell and the truck” (Kirschner, 1983: 291).

¹⁵ The GAO found “the new cars failed about twice as often as cars 35 to 40 years old” (Tolchin, 1976).

Table 5: Bombardier and Budd Proposals to the MTA for 825 Subway Cars in 1982

Comparison point	Bombardier	Budd	Difference	Advantage
Base price for 825 cars, price per car*	\$803,485	\$770,768	\$32,717	Budd
Other pricing figures: final price per car	\$798,770**	\$770,768 or \$799,885***	\$28,002 or \$1,115	Unclear
Base price for car, total price for all cars	\$662,900,000* or \$658,985,250** or \$663,000,000****	\$635,900,000 or \$636,000,000*****	\$27,000,000 or \$23,085,250 or \$27,000,000*****	Budd
Claimed U.S. content (including U.S. domestic car building industry)*	40% to 45% or 50%	80%	35% to 40%	Budd
New York State content	16% of the car price (with a promise to attempt to increase New York content to 20% of the car price).	12% of the car price, (19% by using New York Air Brake Company components).	1% to 4%	Unclear
Estimated years of employment in New York State generated by the contract	2,384 years	2,340 years	44 years	Bombardier
Proposed delivery date for the first 10 subway cars*	July 1984	January 1984	Six months	Budd
Proposed date for completion of all deliveries (825 cars)*	May 1987	October 1986	Five months	Bombardier
Maintenance Costs and Inventory Control	Bombardier's license agreement with Kawasaki Heavy Industries gave the company the ability to produce cars compatible with the first phase of the order.	Budd would apparently make new cars.	The MTA believed that Bombardier's standardization in design would reduce their maintenance costs and inventory control problems.	Bombardier

Note: *-Based on Budd Company public statements; **-Based on "Summary of Negotiations and Proposed Agreement Between the MTA and Bombardier, Inc., 825 Subway Cars 1, New York, New York, MTA (as cited in Kirschner, 1983: 292); ***-"The MTA...believed that certain contractual provisions for final payment and the requirement to use certain New York State components would raise Budd's price to U.S. \$799,885" (see Kirschner, 1983: 292). ****-Budd figures from (Doane, 1982: 84).

Sources: Doane, 1982: 84; Farnsworth, 1982; Kirschner, 1983: 292-293; Ravitch, 1982a; Ravitch, 1982b; and Sichert, 1982.

In its first MTA contract, Bombardier bought its design from Kawasaki (Goldman, 1982a). This gave it a competitive advantage over Budd's proposal because the cars would "be identical to those already in production," leading to "lower maintenance costs and standardized inventory in the future" (Ravitch, 1982b). This strategic alliance turned out to be a key advantage for Bombardier. As Larry Salci explained: "The deal that New York cut was [that] they knew that Kawasaki had all the technology, Bombardier did not. Bombardier did a backdoor license with Kawasaki." Therefore, "Kawasaki built the first forty car shells in Japan and then transferred the car shell technology to Bombardier's La Pocatière plant" (Salci, 2006). Budd's ability to win the contract was limited by other factors. First, the company, based in Michigan although controlled by German interests, found that it could not get the U.S. Government to promote its offer with a competitive financing deal even after it promoted to assemble the cars in New York (Goldman, 1982a).

Later, Donald T. Regan, the Treasury Secretary in the Reagan Administration, said that the Reagan administration would not authorize financing by the government to support Budd's sale as an American manufacturer of subway cars to the MTA. One reason was the superiority of Bombardier to Budd in other areas like pricing, delivery schedules, and quality of designs (Perlez, 1983). Budd was unable to get its parent corporation Thyssen to provide credit in support of its bid and unlike the Canadians who could finance 85 percent of the contract at a rate of 9.7 percent, Budd only offered to finance about 18 percent of the contract, based on components made in Portugal and Brazil (Ravitch, 1982b). Yet, Budd's use of foreign suppliers in Brazil to help secure cheaper financing, ended up lowering both U.S. and New York State content of their bid (Doane, 1982: 85).

Budd's ability to portray itself as a local producer was limited. While Bombardier, the Canadian firm, "committed itself to purchase components worth \$104 million in New York State." In contrast, Budd's offer included only \$79 million to be spent in the state." If Budd had won the contract for 825 cars, the "assembly would have taken place at a not-yet-equipped facility using a work force that has not yet been hired or trained," a fact which Ravitch described as being "highly imprudent" for "an order of this size." Ravitch also noted that Budd already had an order for 1,100 cars not yet delivered, including 316 for the MTA system (Ravitch, 1982b). In fact, about two weeks after Ravitch made these arguments, Budd announced that its order for commuter cars for Long Island, Westchester and Connecticut riders would be about a year behind schedule (Goldman, 1982b).

Regimes, State and Industrial Policy Action

The foundation for Budd's competitive situation took place in part during the Carter Administration (January 20, 1977 – January 20, 1981) during major events in this case took place during the Reagan Administration (January 20, 1981—January 20, 1989). Starting with the Carter Administration there were two basic problems. The first basic problem was that protectionist measures were identified as being insufficient for protecting railcar manufacturers. F. Joseph Maginn, the Manager of Sales for the Budd Company, explained to the Director of General Accounting Office during the Carter Administration that Buy America provisions were of limited utility in actually anchoring U.S. production. According to Maginn, American inputs into railcar systems was "not assured" because of the way that UMTA had defined

subcomponents. Maginn wrote on February 13, 1979: “Since the source of the subcomponents is immaterial in making up a component, it is conceivable that most of a car could be foreign manufactured as subcomponents.” When these subcomponents were “placed in the final assembly of various components (which [had a U.S. content of] only 51%), the manufacturer could comply with a Buy America when these components were assembled in the United States.” Maginn argued that the system of using the dollar value of inputs would not protect a sufficient number of U.S. jobs (Maginn, 1979: 79-80).

About four months later, Senator John Heinz of Pennsylvania announced plans for legislation to increase funds for Amtrak, the national rail carrier, to purchase new rail cars. John Heinz was a liberal Republican from Budd’s home state of Pennsylvania. During his career, Heinz charged that the Carter Administration was “unwilling to propose any effective means to ease the gas crisis.” Heinz complained about Department of Transportation plans to cut Amtrak rail commuter lines running from Philadelphia to Harrisburg and New York, even though Amtrak ridership had increased by almost 20 percent. Heinz sought legislation to spend an addition \$100 million in 1980 and 1981 for Amtrak to purchase additional equipment. His office identified Budd as “one of the few American plants capable of making Amtrak passenger cars” (“Heinz Blasts Carter...,” 1979). By April 25, 1980, Senator Heinz toured Budd’s Red Lion plant after the company was underbid by Japanese firms. Heinz introduced legislation to create barriers for U.S. transit agencies to buy foreign cars (Baer, 2015).

The Carter and Reagan Administrations oversaw similar military and related budget priorities which put mass transit agencies like the MTA under severe pressure (Tables 6 and 7). Mass transit service did not dramatically expand compared to military spending. During the Carter Administration, the U.S government supported military budget priorities that hurt New York State and hence the financial capabilities of MTA. These priorities were overseen by decisions made at various political levels. Senator Daniel Moynihan explained in 1977 that if New York state got the proportionate amount of federal expenditures which California did, then New York State would have received an additional \$32.3 billion. This surplus, Moynihan explained, “could retire all debt owed by state and local government in New York in fifteen months.” Seymour Melman, a professor of industrial engineering at Columbia University, linked such long standing military spending and budget allocations away from New York State to a deteriorating mass transit system in New York City. After the late 1960s, “maintenance and replacement [of subways] began to be neglected. After “more than a decade of withheld maintenance and sparse new investment,” conditions rapidly changed. By July of 1981, 8,400 trains in New York City’s subway system were either pulled out of service or failed to get into service (Melman, 1983: 232).

**Table 6: Key Indicators for the Heavy Rail Industry:
Data on Local Passenger Transportation Agencies**

Year	Heavy Rail Passenger Vehicles owned	Vehicle-miles operated (in millions)	Passengers carried (in millions)	Percent change in passengers Carried
1970	49,700	407	1,881	
1975	50,811	423	1,673	-11.06%
1980	59,411	385	2,108	+26.00%
1981	60,393	420	2,094	-.66%
1982	62,114	429	2,115	1.00%

Source: Table 1031 in U.S. Bureau of the Census, 1989: 603 and author's calculations.

Table 7: U.S. Government Budget Priorities

Year	Federal Outlays for Defense 1972 Dollars (millions)	Federal Outlays for Defense Current Dollars (millions) (A)	Outlays for Mass Transit (millions) (B)	(A)/(B)
1975	260,200	324,200	929	.29%
1980	316,700	576,700	3,307	.57%
1981	327,500	657,200	3,917	.60%
1982	338,700	728,400	3,930	.54%

Tables 551 and 1044 in U.S. Bureau of the Census, 1983: 343 and 606 and Table 1041 in U.S. Bureau of the Census, 1982: 606 and author's calculations.

The budgetary priorities of the U.S. government put the MTA under financial pressure to use special tax benefits like the so-called “safe-harbor leasing” which gave the transit agency greater benefits than Federal appropriations which otherwise limited the company. In testimony before the U.S. Congress, Ravitch described “the budgetary problems that the U.S. Government faces,” limited “the quantity of money available” to his agency, the amount of Federal support “diminishing.” In addition, the U.S. Government failed to provide “long-term contracts,” with U.S. laws making “no provision whatsoever to enable public transportation agencies to enter into” such contract. Rather, the MTA was “subject to the annual appropriation process: which was “more expensive and uncertain” than the mechanisms the agency had used to secure financing. Ravitch noted “the policies of the President” (Reagan) and the U.S. Congress which had steadily reduced “public assistance for mass transportation.” Given the realities of the U.S. financing system, the MTA even discussed with Budd the possibility of getting their German parent to help them with their financing needs (Ravitch, 1982a: 74, 76).

Budd’s trade conflict with Bombardier took place during the Reagan Administration. In 1982, the OECD Steel Committee’s U.S. representative explained Ronald Reagan’s industrial policy philosophy as follows:

It is simpler than some of the policies you have adopted. It requires no major public expenditure, no planning, and no direction by government. Key decisions are left to those closest to the market—the firms themselves. But our policy which relies on the free play of market forces to ensure that structural change and adaption take place regularly, is a true industrial policy (Quoted in Stein, 1998: 273).

Reagan’s industrial policy measures relied on tax, monetary, trade and antitrust policies which “channeled resources into real estate, finance, defense, and high technology.” These policies propped up the nontrading sectors and hobbled the manufacturing ones. While comforting Cold War allies, these policies “produced the highest trade deficits in U.S. history.” Reagan’s policies favored corporate interests over labor and trade unions, breaking the “social contract” linking these interests. One economic historian concluded that “during the Reagan years, the New Deal’s marriage between efficiency and working-class progress was severed in fact and in theory.” During the central year of interest in this case, 1982, “79 percent of the new jobless were blue-collar workers.” (Stein, 1998: 273-274, 282). From 1979 to 1982, auto industry (SIC 371) employment decreased by 29.4 percent, from 990,400 to 699,300. Budd’s key partners, Ford and Chrysler, “were hardest hit during this downturn.” UAW membership declined significantly after 1979 (Katz, 1997: 197-198).¹⁶

Reagan’s election partially helped the term “industrial policy” fall “out of fashion.” Yet, he had an industrial policy which included shrinking basic industry, including the steel and auto industries which Budd depended upon. Reagan advanced this goal by rising the value of the dollar based on his huge budget deficits. The value of the dollar began climbing to “unprecedented levels as the budget deficit ballooned” in the years after 1981. Reagan favored high technology industries, spending billions of dollars on new weapons systems with “most dependent on advanced technologies” (Reich, 1985).

While Ronald Reagan “never articulated a coherent and comprehensive industrial policy” (at least aimed at civilian manufacturers), his administration did try to limit Japanese

¹⁶ “UAW membership declined 37% from 1979 to 1990 (from 1,510,000 to 950,000)” (Katz, 1997: 198).

imports using softer measures. For example, shortly after taking office, Texas Senator Lloyd Bentsen introduced legislation that would have limited Japanese imports to 1.6 million cars a year. While Reagan's administration wanted to support the U.S. auto industry, "administration supply-siders opposed limiting legislation on philosophical grounds." As a result, the administration informally requested that the Japanese restrain auto sales to the U.S. William E. Brock, the trade representative, went to Japan to work out a deal which resulted in a limit of 1.68 million Japanese autos shipped to the United States in 1981 (Bingham, 1998: 67, 151).

The Reagan approach to industrial policy can be contrasted with policies embraced by other political leaders in this general time frame. On the Democratic side, Representative John J. LaFalce, a congressperson from the Buffalo-Lackawanna area, proposed an industrial bank in 1983 to address such deep-seated problems (Stein, 1998: 283). On the Republican side, Senator Heinz successfully championed trade laws that not only encouraged U.S. exports, but also protected U.S. products like steel from foreign imports (Ayres, 1991).

In 1982 and 1983, *Railcars From Canada* was a federal decision related to whether or not a countervailing duty would be imposed on Bombardier regarding its "allegedly subsidized import of components" in the MTA's order for 825 subway cars. In 1982, there was a "preliminary determination" which found that "domestic industry had been materially injured by reason of allegedly subsidized imports." In 1983, a final determination was made "finding that subsidies had been provided for imported merchandise." The possibility of imposing a duty was tied to Title VII of the Tariff Act of 1930 which required "that countervailing duties be imposed on merchandise imported into the United States when a foreign subsidy is provided and an industry in the United States is materially injured by reason thereof." The countervailing duty was set to an amount of the net subsidy and was designed to limit a foreign producer's unfair competitive advantage tied to their government's export subsidies. The Act's potential beneficiaries included U.S. workers and industries. Despite the potential for a countervailing duty of over \$91 million, the proceeding related to this claim was terminated. If the proceeding went forward, "the subway riders and taxpayers of New York would have paid this duty" (Kirschner, 1983: 287-289).

The relative advantages of Bombardier's local state partially contributed its advantages over Budd. Whereas Canadian subway manufacturers gained follow on contracts which facilitated their extensive growth (Feldman, 2010), the Budd controversy with MTA shows how the local state's procurement was used as a potential wedge against such extension of growth. The Chairman of the MTA's finance committee said that if Budd decided to take the Bombardier deal to court, he would then consider canceling part of an earlier Budd contract with the MTA for \$400 million (for the Long Island Rail Road and New Haven, Harlem and Hudson Lines). Berger told *The New York Times*, "if they go to court I've got the right to reopen and cancel the earlier contract" (Farnsworth, 1982). When Budd eventually filed a petition with the Commerce Department as part of an effort to penalize the MTA for purchasing Bombardier cars, this helped alienate the company from the Authority and one board member, Stephen Berger, argued that in future negotiations "we shouldn't even let them in the door" (Goldman, 1982b). Budd's case would have forced the MTA to raise transit fares or reduce its capital improvement plan (Perlez, 1983a).

In addition to its appeals to the Commerce Department, Budd turned to the courts, the Treasury Department, and the United States International Trade Commission (ITC) to gain state support in its contract bid. Despite this, the MTA awarded the contract to Bombardier while

Budd strongly opposed it, claiming that it was illegal. Budd took legal action against the MTA in an effort to wrest the contract away from its Canadian competitor. Budd turned to the Export-Import Bank to help match EDC's financing offer. The Secretary of the Treasury could authorize such financing if "noncompetitive" financing was judged to be a "determining factor" in a contract agreement (Kirschner, 1983: 295). The Export-Import bank emerged as a kind of industrial policy support system. It makes loans to foreign companies buying U.S.-made goods. Airbus made a major sale to the Eastern Airlines company based on heavy subsidies. This contributed to the U.S. Congress enacting legislation to permit U.S. companies to gain "equivalent financing from the bank to protect them in bidding on a domestic contract" (Farsworth, 1982). Budd filed a legal complaint in the United States District Court for the Southern District of New York that would block final approval of MTA's contract with Bombardier until the Treasury Secretary decided whether to authorize matching financing from the bank (Kirschner, 1983: 295).

Budd's action against foreign subsidies was supported by several trade unions, led by the Industrial Union Department of the A.F.L.-C.I.O. (I.U.D.), and Michigan Senator Donald Riegle. The IUD argued in its complaint that "the Bombardier contract would cause union members employed at Budd and subsidiary industries to lose 13,000 hours of employment. Brian Turner, then an I.U.D. official, argued that the union sought laws to prevent "foreign governments picking off American industries with export finance credits" (Perlez, 1983b). At one point, Senator Donald Riegle introduced legislation designed to cut off mass transit aid from the Federal government to New York City if it went forward with the purchase of subway cars from Bombardier. Riegle's legislation sought to prevent Urban Mass Transportation Act funding from being used to buy equipment that was subsidized in a way that violated international trade agreements (UPI, 1982).

Outcomes

Some of the key events in this case are outlined in Table 8. Eventually, the Secretary of the Treasury concluded that Bombardier's EDC's financing was not competitive, but it was not "likely to be the determining factor" influencing the MTA's decision. Thus, the Secretary refused to authorize bank financing and Budd's legal case was dismissed. While waiting for a decision, Budd enlisted the help of several labor unions in filing a "countervailing duty petition" with the Department of Commerce and the ITC. This petition claimed that EDC's financial support for Bombardier, and grants from Canadian federal and provincial governments, constituted what is known as a "countervailable subsidy" under Title VII of the Tariff Act of 1930.¹⁷ The Department of Commerce and the ITC both ruled in Budd's favor. The Commerce Department "determined that the export credit financing and federal and provincial regional grants constituted subsidies and imposed a countervailing duty of U.S. \$91 million." Yet, "Budd and the unions withdrew their petition and the ITC terminated the proceeding," before the ITC's final determination. This meant that the MTA did not have to pay any countervailing duties (Kirschner, 1983: 295-297).

¹⁷ This Act "requires that countervailing duties be imposed on merchandise imported into the United States when a foreign subsidy is provided and an industry in the United States is materially injured by reason thereof." The term "countervailing duties" has been defined as special duties levied to offset any subsidy or bounty supporting the export, manufacture or production of any merchandise related to the General Agreement on Tariffs and Trade. (Kirschner, 1983: 287-288).

Table 8: Key Events in the Budd conflict Bombardier and MTA

Time Period	Key Event
1981	The MTA solicits bids for production of 1,150 subway cars.
March 1982	The MTA awards a contract for 325 cars Nissho-Iwai American corporation, representatives of Kawasaki Heavy Industries, the first phase of a larger bidding cycle.
May 18, 1982	MTA announced that it will award subway contract to Bombardier; Budd requests financing through section 1912 of the Export-Import Bank Act Amendments of 1978.
June 3, 1982	Budd files a petition with the Department of Commerce and ITC.
June 8, 1982	Budd files legal action in the United States District Court for the Southern District of New York to block Bombardier contract.
June 24, 1982	Budd files a supplement to its original Commerce Department and ITC petition, instituting a countervailing duty investigation.
December 13, 1982	The MTA is identified as potentially facing up to \$137 million in duties on its new Bombardier cars, even if it cancels the Canadian loan which helped it buy its cars.
February 5, 1983	The Commerce Department ruled that Canada illegally subsidized the sale of 825 subway cars to the MTA with its \$91.2 million in export credit financing.
February 10, 1983	The Budd Company dropped its six-month effort to penalize the MTA for purchasing 825 subway cars from Bombardier.
February 11, 1983	After a coalition of unions dropped its efforts to penalize the MTA, the MTA promised that it would not purchase any addition foreign-made subway cars during the next three years.

Source: Goldman, 1983a; Goldman, 1983b; Kirschner, 1983: 290-91, 295-296; Perlez, 1982b; and Perlez, 1983c.

The Commerce Department ruled that MTA's \$662 million contract with Bombardier "included an illegal Canadian subsidy of \$91.2 million, and recommended a fine of that amount" (Levine and Rhoden, 1983). Even though the Commerce Department agreed that the Canadian subsidiary represented an illegal form of competition, both Budd and the A.F.L.-C.I.O dropped their complaints against the MTA. Budd believed that it would be difficult to prove to the International Trade Commission that the Bombardier contract had injured the company. One government source suggested that the company would be satisfied once the Commerce Department quantified countervailing duties so that a precedent would be set that dissuaded future such subsidies. In fact, Budd dropped its six-month effort to penalize the MTA, two weeks after the Commerce Department ruling. A day after Budd dropped its petition before the Commission, the IUD also dropped its complaint. A deal was arranged whereby the authority promised not to purchase addition foreign-made rail cars over the following three years. Nevertheless, Howard D. Samuel, the president of the IUD, said the Canadian contract would cost 11,000 jobs for American workers (Goldman, 1983a; Goldman, 1983b; Levine and Rhoden, 1983; Perlez, 1983a).

While *The New York Times* provides a rather detailed accounting of what transpired, much more can be learned from Larry Salci. He explains: "Budd filed a countervailing duty claim and won. The ITC ruled in Budd's favor." The penalty of \$92 million was assessed "against the importer of record, not the exporter," i.e. New York City had to pay. Richard Ravitch then contacted Salci about working out some kind of arrangement. Budd dropped its suit against the MTA for two reasons. First, Salci convinced the Thyssen Board of Directors that they lacked the capacity to make the subway cars under the schedule that they bid. (Their president, prior to Salci had failed to inform the board of this problem). While Budd could assemble the vehicles in Hornell, they lacked the capacity to make the car shells which was the critical bottleneck and New York knew it. Second, Salci told the board that he "could get New York to renegotiate the M3 contract, which was about a year late," and get Budd "a new delivery schedule." Budd would benefit by not having to pay the "liquidated damages" if it failed to make its deliveries. This was the deal Salci struck with Ravitch, taking six months to negotiate. New York then took out some advertisement saying, it would "not solicit and accept illegal foreign financing in the future for the railcar business which it was" (Salci, 2006).

7. Conclusions

As a general consideration we can start by looking at the ideas of Oliver E. Williamson and Paul Krugman. The former highlighted the potential advantages of the Gindy acquisition through its support form economies associated with the conglomerate form. The applicability of these ideas to Budd depends on the extent to which you consider Budd a true multi-divisional firm and conglomerate. Given the somewhat significant role of the rail division and other such divisions, one could see Budd as a conglomerate even if auto sales and production dwarfed rail production. After all, Williamson himself saw conglomerate advantages in the acquisition. Nevertheless, despite the short-term benefits of the acquisition to Gindy (and perhaps even

Budd), in the long-run the Gindy acquisition was not competitively successful. The resource advantages of its competitor easily remind us that if the U.S. government had supported Budd and Gindy, then this would have raised objections from Budd's competitors. Nevertheless, we see clearly how proactive or weak anti-trust measures and policies to encourage conglomerates were hardly sufficient for industrial success, i.e. they did not make Gindy a financial asset in the revenue base that would help Budd's rail division. On the other hand, if healthy competition is considered good for any industrial sector, the failure of overall policies to help modernize laggard firms must be considered an economic and social opportunity cost.

Turning next to the ideas of Paul Krugman we need to consider whether or not the Canadian financial system provided an unfair system of support to Bombardier over Budd. To the extent that Budd's industrial competence or capacities were lacking, we must consider that it was not industrial policy disadvantages alone which undermined Budd's competitive viability vis-à-vis Bombardier. Nevertheless, it is rather clear that the lack of a civilian industrial policy to help Budd and the mass transit industry hurt Budd and its capacity to develop passenger trains. Budd was not just disadvantaged in the area of finance. It also lacked support for modernizing its design and production capacities. While the Department of Defense developed policies to insure the viability of defense firms and the defense industrial base, the various national transit agencies of the United States had no such mission to support the transportation manufacturing base and transportation manufacturers. Rather, sometimes by helping foster defense R&D at defense-serving firms there were potential spillovers into transportation technology (Feldman, 1998; Feldman, 2009).

In considering these two cases as a whole, it is clear that Budd managers rationally turned to diversification, acquisitions and conglomerate development in order to secure needed access to the procurement banks of various and diverse industries. These industries had different support systems from the nation state, i.e. each division had greater or less support from a stronger or weaker industrial policy regime, with these regimes having some elements of convergence and divergence over time. In any case, my overall conclusion is that neither liberal anti-trust policy or the U.S. government protectionist regime in place at the time of the competition with Bombardier proved sufficient for helping Budd's long-term survival as a manufacturer of rail cars. On the one hand, one could argue that the capacities or resource base of the firm created pressures in both the trailer and rail passenger markets. On the other hand, one could just as easily argue that stronger and more comprehensive industrial policies would have helped Budd in both cases. To a certain extent, Budd did not marshal its resources sufficiently well, hence capacities and competence are at times hard to disentangle. In Table 9 I summarize some of the key findings of this study.

Table 9: Summary Findings

Key variables	Gindy Acquisition	Bombardier Trade Case
Managerial competence and managerial integration	Weak competence in acquired firm, innovation seemed limited to copying, although Budd helps modernize the company. Company lacks delivery capacities compared to major competitor.	Under-capacity to process sales volume, problems in earlier orders. Company lacks financial capacities compared to its major competitor. Collaboration/networking disadvantages by not cooperating with Kawasaki first.
Multi-Divisional Firm	Potential short-term benefits from acquisition (link to Chicago school liberalism of Nixon and Ford administrations)	Deep pockets of the auto industry insufficient to help Budd overcome problems of the rail industry and Budd management.
Industrial policy regime: time	Nixon and Ford administrations, limited anti-trust regime. Facilitates the short-term benefits of the acquisition but does not help Budd overcome long-term disadvantages.	Reagan and Carter administration: free trade and weak protectionist regime with strong support for military budgets. This regime under-prioritized financial support for the passenger rail car industry, putting pressure on MTA to seek foreign suppliers and the patronage coming from their governments.
Industrial policy regime: space	NA	Disadvantages in finance compared to Japan and Canada; local state favors foreign firm not Budd.
Industrial policy regime: formal versus informal policies	Reliance on legal measures: weak anti-trust regime (industrial policy based on formal legal manipulation).	Industrial policy limited to weak protectionist legislation.
Industrial policy regime: comprehensive versus haphazard/weak policies	There was no major direct R&D support to help Budd's trailer division (but Budd directly competed with other U.S. companies).	Disadvantaged by free trade model, weak financial supports.

Note: NA means Not Applicable.

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