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SOFT BUDGET CONSTRAINTS AND REGIONAL INDUSTRIAL POLICY: REINTERPRETING THE RISE AND FALL OF DE LOREAN

Graham Brownlow (Queen's University Belfast)

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Queen's University Belfast
185 Stranmillis Road
Belfast BT9 5EE
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Soft Budget Constraints and Regional Industrial Policy: Reinterpreting the Rise and Fall of De Lorean

Graham Brownlow*

The rise and fall of De Lorean Motor Cars Limited (DMCL) has been traditionally interpreted as the result either of John De Lorean's psychological flaws or as confirming the supposedly inherent weaknesses in activist industrial policy. However, when the episode is examined in more detail, neither of these interpretations is compelling. This paper's reinterpretation draws on a range of archival evidence, much of it previously unreleased. The concept of Soft Budget Constraints (SBCs), as pioneered by Kornai, is applied to this evidence. The roles of both government and market failure and the contents of the original contractual agreement are highlighted. The soft budgets promoted by the agreement were in turn traceable to the institutional environment under which industrial policy operated in Northern Ireland. This institutional environment had itself been distorted by the Troubles and the fears policymakers had that a cumulative causation situation existed. Kornai's framework helps us piece all the evidence together.

Keywords: Soft Budget Constraints, Institutions, Industrial Policy, Violence, Northern Ireland

JEL Classifications: N84, N94, O25

* Dr Graham Brownlow is Lecturer in Economics, Queen's University Management School, and Research Associate, Queen's University Centre for Economic History.

Address: Queen's University Management School, Riddel Hall, 185 Stranmillis Road, Belfast, Northern Ireland, BT9 5EE, United Kingdom. Email: graham.brownlow@qub.ac.uk. Telephone: +44 (0)28 9097 4589.

The much greater costs that are always involved in an enterprise based on new inventions, compared with later establishments that rise up on its ruins, *ex suis ossibus*. The extent of this is so great that the pioneering entrepreneurs generally go bankrupt, and it is only their successors who flourish … . Thus it is generally only the most worthless and wretched kind of money-capitalists that draw the greatest profit from all new developments of the universal labour of the human spirit and their social application by combined labour (Marx, 1981, p.199).

[W]hen people ask my advice about investing in Mr De Lorean's venture I tell them to put money into wine, women and song. They'll get the same return and have more fun (David Healy, Wall Street automobile analyst, quoted in Fallon and Srodes, 1984, p.198).

1. Introduction

Janos Kornai's Soft Budget Constraint (SBC) approach to institutional analysis provides the theoretical approach used in this paper to examine the rise and fall of De Lorean Motor Company Limited (DMCL) and its New York-based parent company De Lorean Motor Company (DMC). Kornai first formulated the SBC concept in his discussion of the economics of shortage under socialism (Kornai, 1979, 1980A, 1980B, 1986A; 1986B). Kornai observed distortions in the Hungarian economy of the 1970s, which at the time was a planned economy experimenting with economic reforms (Kornai, Maskin and Roland, 2003, p.1096). The SBC approach, with its emphasis on the institutional determinants of economic activity, provides a systemic framework that goes beyond the base for thinking provided by conventional microeconomics (Kornai, Maskin and Roland, 2003). A 'softening' of the budget constraint appears when the relationship between expenditure and earnings is relaxed and a decision-maker within a potential recipient firm expects financial assistance to make good the gap (Kornai, 1986A, p.4; Robinson and Torvik, 2009). The higher the probability this difference will be covered by external assistance, the softer the budget constraint will be; the greater the likelihood of inefficiency (Kornai, 1986A, p.5).

While Kornai provides the theory in this paper, Coase provides the methodological perspective. The dominant methodological perspective within the economics profession, following Friedman (1953), identifies prediction as the sole criterion for judging the merits of a theory (McCloskey, 1998; Backhouse, 2010). The Coasean alternative, by contrast, implies that economic theories are not like airline or bus timetables, which are of use only because of the accuracy of their predictions (Coase, 1994, pp.16-17). Coase argued instead that any useful economic theory should offer a new way of looking at things. A useful theory provides a way to interpret rather than predict. Such a theory provides a 'base for thinking' (Coase, 1994, pp.16-17; Wang, 2003, p.815). Coase's methodological position implies that conducting useful rather than 'blackboard' economics involves selecting amongst competing theories (different ways of organising thoughts) in order to interpret evidence and solve puzzles (Coase, 1992, 1994; Wang, 2003). This emphasis on the process of theory selection in conducting economics has been echoed by other authors interested in constructing analytic narratives (Bates et al, 1998; Rodrik, 2003).[1]

The SBC approach has evolved into a workhorse concept with a varied range of applications (Kornai, Maskin and Roland, 2003, p.1095; Storm and Neilson, 2012).[2] It is the SBC approach that will be used to organise our thoughts in reinterpreting the relationship between the structure and conduct of industrial policy, institutional environments and the meteoric rise and fall of John De Lorean and his eponymous car firm. The analysis also relates to the findings regarding both the SBC syndrome and Northern Irish political economy that earlier papers in this journal have provided (Kornai, 1980B; Lebowitz, 2000; Rowthorn, 1981; Michie and Sheehan, 1998). Other bases for thinking, such as regional economics may also be fruitful ways of looking at the case examined here (Moretti, 2012; McCann and Ortega-Argilés, 2013). Entrepreneurial approaches, associated with Baumol, have recently been applied to the case (Brownlow, 2014).

Applying Kornai's approach provides an alternative interpretation to the two main explanations that have been provided for the failure of DMCL/DMC. The two dominant interpretations for the firm's demise place the blame either at the feet of the failure of interventionist industrial policy or base their arguments on John De Lorean's personality flaws. These interpretations are incomplete at best. A recent issue of *The Economist* identified DMCL's rise and fall as providing the paradigmatic case of government failure in industrial policy (*The Economist*, 2013). This interpretation is also partial as it neglects the role of the underlying institutional environment in explaining the observed outcomes. By contrast, Kornai's SBC approach provides a theoretical framework that enables us to reinterpret the failure of DMCL/DMC by observing that the institutional environment, one shaped by political and social turmoil, contributed to a situation in which budget constraints were hardened only once De Lorean overplayed his hand.

Other commentators have attributed the failure to De Lorean's own personal psychological failings as the embodiment of the 'maverick mogul'.[3] A recent book on the rise and fall of DMCL, written by Nick Sutton, a former senior manager at the firm, repeats this psychological argument (Sutton, 2013). Sutton argues that De Lorean's own failings, which involved an ability to suffer 'slips and accidents of timing', derived from a personality that had an inflated desire for a glamorous lifestyle (Sutton, 2013, p.9). However, psychological speculation, while making for an entertaining read, does not in isolation provide a particularly complete explanation of the rise and fall of DMCL (Brownlow, 2014). A purely psychological approach, for example, does not put enough emphasis on how De Lorean, in his repeated attempts at extracting subsidies, made use of the political and economic sunk costs.

Any historically informed attempt to explain the rise and fall of DMCL must recognise that elements of both government and market failure, underpinned by institutional considerations. Kornai has argued that firm failures under conditions of soft budgets do not arise from 'faults of a particular manager, from bad planning or a bad style of work' (Kornai, 1986B, p.3). Kornai's analysis instead indicates that deeper systemic sources of failure need to be identified. Section 2 of the paper presents an introduction to the SBC syndrome. It also illustrates how discussion of industrial policy has returned to the economic literature. Section 3 outlines the institutional environment under which DMC/DMCL operated. The three sections of the paper that follow the conceptual overview discuss the chains of causality within Kornai's analysis as they relate to the case. Section 4 considers the motivations of the S-organizations and the behavioural effects of soft budgets are the focus of Section 5. Section 6 reinterprets the case based on the application of the SBC approach. The failure of DMCL and the relationship of this failure to political equilibrium and industrial policy forms the basis of the concluding section.

2. Industrial Policy and the SBC approach

Industrial policy in Kornai's SBC approach is equated with preferential financial support for particular firms or industries (Kornai, 1986, p.22: Rodrik, 2003, p.29). Kornai observed that industrial policy in a variety of forms (including grant-based subsidy) has 'softening' implications for an economy (Kornai, 1986A, p.21). He noted that in many countries financial subsidies were offered to declining industries and firms (Kornai, 1986A, p.22). Employment protection was the most common reason why recipients received external help (Kornai, 1986A, p.25). Industrial policy, in the Kornai formulation, fell out of favour in developed economies during the 1980s as more market-orientated economic strategies, as exemplified by the Washington consensus, were pursued (Bailey et al, 2006; Cimoli, Dosi and Stiglitz, 2009). However, the global imbalances that expanded in the early 2000s as well as long-standing economic development objectives were identified as some reasons to revive industrial policy (Bailey et al, 2006; Lin and Chang, 2009; Robinson, 2009; Bianchi and Labory, 2011; Cowling and Tomlinson, 2011). The emergence of the Great Recession, and its associated market failures, as well as the related need to 'rebalance' developed economies have reignited the debates on the appropriate institutional environment under which any revived industrial policy should occur (Cimoli, Dosi and Stiglitz, 2009; Bianchi and Labory, 2011). The role of political equilibria in determining the success or failure of industrial policy, as discussed by authors influenced by Kornai, is particularly relevant in reinterpreting the case of DMCL (Robinson, 2009; Robinson and Torvik, 2009).

As Kornai made clear, the SBC concept was not intended to apply to the history of a single firm in isolation (Kornai, 1986A, p.7). However, his analysis implies that system-wide distortions in the institutional environment could affect the fortunes of specific firms. In particular, he argued that a general softening or hardening of budget constraints across an economy could shape expectations that would in turn have perverse effects on firm behaviour (Kornai, 1980B; Kornai, 1986A). The more general demand for security and stability promotes a softening of the budget constraint, the more it will impede economic 'natural selection'. In consequence, softened budgets will undermine the 'destructive' aspect of Schumpeterian growth as the 'insured' recipient of external assistance will have less reason to protect their wealth, improve quality, reduce costs or innovate (Kornai, 1986A, pp.8-10 and 25-26; Maskin, 1996; Kornai, Maskin and Roland, 2003, p.1105).

Kornai concludes that while market-orientated economies tend to create innovative results, the outcome is a far from inevitable. He has argued that capitalism's tendency for entrepreneurship, innovation and dynamism is merely an inclination rather than a scientific law. His analysis indicates that other factors, such as the social, political and legal environment, are crucial in economic explanation (Kornai, 2010). Kornai observes that expectations explain why the SBC syndrome can imply a self-reinforcing rather than equilibrating process:

> The hardness or softness of the budget constraint reflects what the manager of the firm expects in the future. The more he expects that the existence and growth of the firm will depend *solely* on production costs and proceeds from sales, the more he will respect the budget constraint, and therefore the harder that constraint will be. And the less he expects this to be so, the less seriously he will take the constraint and the softer it will become (Kornai, 1986B, p.45, *authors italics*).

So once an entrepreneur expects to be rescued from trouble, the expectation will affect their behaviour in a way that makes intervention more likely (Kornai, Maskin and Roland, 2003, p.1104). There is thus an inherent moral hazard problem that will emerge from poor institutional design.

[Insert Figure 1 Here]

Figure 1 follows the attempt to summarize the chain of causality in a SBC syndrome. The S-organizations within the Kornai analysis are those patrons, donors or supporting organizations that cover the deficit in a given BC–organization. BC–organizations, are the clients or recipients (e.g. state-owned enterprises) of the subvention. Every incidence of an SBC phenomenon requires this (S and BC organization) pair of actors (Kornai, Maskin and Roland, 2003, p.1097). Block (1) depicts the political, social and economic environment; it outlines the environment that generates the motives behind the formation of the SBC syndrome. Block (2) represents the motivations of the S-organization that give rise to the SBC syndrome. Block (3) represents the economic outcomes associated with a SBC syndrome (Kornai, Maskin and Roland, 2003, p.1107). Kornai’s framework indicates that soft subsidies exist, and the SBC syndrome holds, when a subsidy is negotiable, subject to bargaining or lobbying. Such subsidies may be adjusted to past, present or future cost overruns; potential recipients have clear motivations to lobby to secure subsidies (Kornai, 1986A, p.5, 1986B, p.47). Kornai argues that such lobbying efforts by BC – organizations create inefficiencies that closely resemble those distortions associated with rent-seeking behaviour (Kornai, 1986A, p.7).

3. The Relevant Political, Social and Economic Environment

In this section, the underlying social, political and legal environments are discussed. John De Lorean's location decision did not occur in an institutional vacuum. De Lorean wanted to secure the best possible combination of generous subsidies and weakest oversight. This kind of opportunistic outlook reached its apogee in the GPD Services Incorporated (GPD) scandal.[4] The industrial policy framework, particularly as envisaged by the 'Economic and Industrial Strategy for Northern Ireland' (henceforth the Quigley report) published in 1976, provided such a combination (Quigley, 1976). It has previously been acknowledged that Northern Ireland offered a bundle of more generous subsidies and less oversight than alternative locations.[5] This combination, with the associated soft budget constraints, was the by-product of the industrial policy response to political violence.

The political economy of 'the Troubles', the term given to nearly three decades of civil unrest, has been much researched and debated (Rowthorn, 1981; Michie and Sheehan, 1998; Birnie and Hitchens, 1999; Portland Trust, 2007). After partition in 1920, the six north-eastern counties were given a self-governing (or devolved) province within the UK called Northern Ireland (Rowthorn, 1981, p.2). The Protestant majority community dominated political life within the devolved parliament until 1972, when the parliament was suspended and direct rule from Britain came into force (Rowthorn, 1981, p.3). Geographical separation, segmentation and discrimination characterised many areas of social and economic life and these factors combined to act against the interests of a Catholic nationalist minority (Rowthorn, 1981, p.3). By 1971 it was estimated that Catholic male unemployment (at 17.7%) was nearly three times the Protestant equivalent figure (Portland Trust, 2007, p.7). Economic disparity between the two religious communities was a principal aggravating factor in igniting civil unrest (Portland Trust, 2007, p.7).[6]

Economic stagnation predated the emergence of the Troubles: four reports written on behalf of the devolved government were released between 1957 and 1965. Each of these official reports observed that the region had the lowest income per head and highest unemployment rate of any UK region (Isles and Cuthbert, 1957; Hall, 1962; Matthew, 1963; Wilson, 1965). Industrial problems certainly exacerbated tensions once the Troubles began. Within both official reports and the academic literature it has long been acknowledged that poor economic performance, with the consequent scarcity of jobs and public sector housing, deepened sectarian divisions (Matthew, Wilson and Parkinson, 1970, p.3; Government of Northern Ireland, 1970; Portland Trust, 2007, p.7).

From 1964 onwards a development programme was initiated by the devolved government to reverse economic stagnation. However, by 1970 its economic advisors were openly concerned that a cumulative causation process had emerged: they suggested that 'Northern Ireland may be caught in a vicious circle of political instability and industrial decline' (Matthew, Wilson and Parkinson, 1970, p.3). The policy response to the potential implications of a cumulative causation scenario was the creation of the Northern Ireland Development Programme, 1970-75 (1970). This programme attempted to create a strategy involving a more generous industrial support package being offered than in Britain (Matthew, Wilson and Parkinson, 1970, p.43-50). The industrial policy package offered after the Troubles began, particularly after the abolition of devolution (because of the introduction of

Direct Rule) in 1972, became progressively more generous and discretionary.[7] Maximum assistance was to be offered where a project offered ‘worthwhile employment in an area where unemployment is high – the unemployment “blackspots”’ (Quigley, 1976, p.32). In Kornai’s terminology, the political situation exacerbated the softening of budget constraints in an already fragile economy.

After the introduction of internment without trial in August 1971, and the intensification of the conflict, the 1970-75 Development Programme became increasingly overtaken by events. Industrial investment dried up in response to political uncertainty. This higher level of violence led to the commission of a report on the implication of violence for the Development Programme. To a large extent this report presented a ‘Treasury view’, as the Treasury encouraged the Stormont government to appoint Sir Alec Cairncross to chair in the writing of such a report. Treasury officials were concerned privately that the devolved government was committed to extending industrial tax concessions as a response to violence.[8] The Cairncross report approached the cumulative causation issue using an informal regional Keynesian model; it focused mainly on how violence reduced investment. Cairncross identified civil unrest, with its resulting damage to investor confidence, as the cause of reductions in regional investment, employment and income levels. Cairncross diagnosed that private sector investment needed support if economic and political stability was to be restored. This diagnosis led to the creation of Northern Ireland Finance Corporation (NIFC) to support investment as ‘a lender or subscriber of the last resort’. Endowed with a £50 million fund, the NIFC was to provide loans and guarantees. It was intended that the NIFC would provide funds to what officials regarded as sound businesses (primarily manufacturing enterprises) threatened with closure or contraction due to the Troubles (Brownlow, 2014).

Between 1972 and 1976, civil servants in Belfast, in the absence of a political institution, became more responsible for the direction of regional economic strategy. As we will see in the later archival evidence, Belfast-based officials were far keener on interventionism than the Treasury officials in Whitehall. The NIFC was replaced with the Northern Ireland Development Agency (NIDA) in May 1976 and a new Northern Ireland Economic Council (NIEC) was created to advise the Secretary of State. The interventionist economic diagnosis of the Cairncross report was developed in the Quigley report (Quigley, 1976). This report was entirely the work of Belfast-based civil servants without outside advisors. The Quigley report advocated the pursuit of a regional industrial policy led by civil servants involving ‘a heavily subsidised Northern Ireland economy, with the State playing a much greater role, both direct and supportive’ (p.17). Supply-side restructuring based on planning was another feature of the report (p.25).

The report had implications for the hardness of budget constraints as it was explicit in advocating more generous subsidies as a response to political risk. It suggested that the ‘margin of advantage in incentives’ relative to those offered in Britain’s Assisted Areas, and those offered by the Irish Republic’s Industrial Development Authority (IDA), needed to be widened if investment was to be attracted (p.32). An incentive margin (or risk premium) was required if the disincentive to invest caused by political uncertainty was to be offset (p.32). It concluded that it was inevitable that the State should itself assume the role of entrepreneur; it advocated that NIDA should play this role (p.63). The report also advocated extending government ownership in manufacturing factories. The formation of Strathearn Audio Ltd in West Belfast in 1973 was identified as a pioneering example (p.36).[9] The report specifically identified ‘social as well as economic objectives’ as crucial in shifting the economy in the direction of greater planning (p.36). By way of illustration, the authors claimed that state-directed entrepreneurship would take greater risks in location decisions relative to the private sector. Furthermore, the Quigley report argued that 'blue chip' inward investment projects backed by financial support would directly create jobs and indirectly attract a secondary wave of employment based on imitating pioneering inward investors (p.18, Sutton, 2013, pp.6-7). Notably, this 'flying swan' argument, that a successful DMCL project would attract further inward investment projects, was invoked by Quigley when he encouraged Roy Mason, the Secretary of State for Northern Ireland, to secure Whitehall support.[10]

4. Motivation of the S-Organization in the De Lorean Case

This paper utilises much previously unreleased material. An important feature of the archival evidence is the fact that there was division within the S-organizations responsible for funding DMCL. Officials in Belfast were far more optimistic about the prospects for interventionist industrial policy than those in Whitehall. In contrast, officials at HM Treasury were particularly unhappy with the increasingly interventionist policy drift. Underlying the Treasury's misgivings was one of forecasting and control within the Northern Ireland Office (NIO) as well a fear that DMCL would become perpetually reliant on subsidy.[11] The interventionist arguments embodied in the Quigley report with its message that political risk necessitated greater planning, more generous subsidies and greater discretion for civil servants provided a manifesto for officials in Belfast who were the enthusiastic backers of attracting DMCL. Roy Mason helped transform Stormont enthusiasm into Whitehall cash; by no means was he, or indeed any other politician, the intellectual or administrative driving force for attracting DMCL. Senior officials in Belfast gave Mason the impetus. For instance, John Freeman, Deputy Chairman of the NIDA, invoked the Quigley analysis to encourage Mason to support the project.[12]

As outlined in a letter to Joel Barnett, Labour's Chief Secretary to the Treasury, Mason claimed that, by creating jobs in the nationalist unemployment black spot of West

Belfast, the project had political, economic and security benefits that would more than offset the substantial public expenditure. Barnett, expressing Treasury scepticism in the increasingly interventionist (and expensive) direction of regional economic strategy, countered with the worrying precedent of Strathearn Audio's commercial failure.[13] It was the interventionist outlook in Belfast, with the associated softening of budgets, which won out initially. It took 46 days, from initial introductions to formal contracts, to persuade the British government to provide the funds needed to locate DMCL in Dunmurry. In contrast, De Lorean had negotiated for 18 months with the authorities in Puerto Rico. On June 21 1978 between the Department of Commerce, NIDA and the De Lorean Motor Company an agreement was established. De Lorean had between 1974 and 1978 had raised barely $5 million for his venture; in the span of a month and a half, courtesy of the British taxpayer, the coffers had swelled twenty-fold (Levin, 1983, p.159). The wisdom of that decision was questioned, and the holding of press cuttings by officials in Belfast, as well as the contents of McKinsey's consultancy reports, demonstrates that they were well aware of industry scepticism.[14]

De Lorean would tell the media the financial incentives were not compelling in his decision to locate in Dunmurry. Yet the subsidy package was approximately three times as much as the IDA offered and twice that offered by Puerto Rican authorities (Fallon and Srodes, 1984, p.128). That was more than enough compulsion (or additional rent) for De Lorean. There were at least three flaws within the institutional design of the original agreement that contributed to the inability to commit DMCL to efficient outcomes. A first, fault line was that the Department of Commerce agreed to an additional monies provision (4(j)). It was agreed under this provision 4(j) that it would provide additional assistance to the original £53 million package if the expenditure projected proved insufficient because of factors beyond the company's control.[15] A second flaw was that the master agreement focused on employment creation rather than on promoting efficient outcomes. De Lorean was given until the end of the fifth year to employ 2000 people (Sutton, 2013, p.131).[16] The agreement stated that:

> Any breach by the company of its employment obligations under the agreement may and shall entitle the Department [of Commerce] to require the company to repay all or such part of the financial assistance made available by the Department as the Department may determine.[17]

A third flaw, related to the political risk element of regional industrial policy, and reflecting an issue of corporate governance problem, was the asymmetry between risk and reward. De Lorean was able to secure initial funding without investing anything himself. In contrast, Fomento, the Puerto Rican investment agency, would not have provided any subsidy until De Lorean had invested $25 million himself (Fallon and Srodes, 1984, p.146). By the time DMCL closed, 73.5% of ordinary share voting rights had been paid for with a mere £546,000 of private sector investment and the taxpayer got the remaining voting rights with a £17,757,000 investment.[18] This flaw would prove to be self-reinforcing: in August 1980, De Lorean was able to argue successfully that under the original agreement all physical assets remained government property until the project reached the market. Hence, De Lorean suggested that the firm had no physical assets to use as collateral for any loan and it would have to secure further government finance! This line of argument, which was within the terms of agreement, was enough to secure DMCL a further £14 million loan.[19] It is notable that even this was not enough softening of the budget constraint for De Lorean, as he promptly tried to renegotiate this loan into a grant (Fallon and Srodes, 1984, p.380).

Sutton's recent account dates the tipping of the scales of credibility between De Lorean and 'British civil servants' to July 1980 (Sutton, 2013, p.95). Sutton suggests that after July 1980 the venture was viewed as 'parasitic' (p.95). There appears to be some truth in this assessment, yet the Treasury had never been a fan; officials in Belfast and politicians on both sides of the Irish Sea were arguably slower to change their mind on the need to cut their losses. A Department of Commerce memo indicates that by June 1980 there was already discussion between civil servants in Belfast and London about whether closure should be considered.[20] The Treasury as early as July 1980 had concluded that problems at DMCL were linked to the NIO's failure to adequately forecast and control.[21] So within Whitehall, there was little optimism for the project, but it was accepted that closure would run into a range of sunk costs.

A Department of Industry memo, dated July 29th 1980, observed that apart from legal problems, it was only the uncertain political and security situation and the possible negative publicity (particularly in the United States) associated with closure that provided good arguments to keep pouring money into the project.[22] Conservative Ministers initially followed this sunk cost analysis. In a minute from Humphrey Atkins to Sir Keith Joseph, Secretary of State for Industry, the balance between security, political and economic objectives was discussed in stark terms:

> ...if the [UK] government does not provide the extra funds, the project will immediately collapse. Our credibility with the minority population will be severely undermined: unemployment in Northern Ireland at 14.7% is double the rate in Great Britain and is even higher in depressed Catholic areas like West Belfast. The decision [not to offer additional subsidies] would be contrasted with our treatment of Harland and Wolff; we would be accused of ignoring the worsening unemployment situation…[23]

As late as December 1981, James Prior, Atkins' successor, was still arguing with the Department of Industry along the same lines.[24] It is notable that sunk cost considerations persisted after the election of the Thatcher government in 1979. As will be demonstrated in the remaining sections, the motivations of the S-organizations and the eventual hardening of the budget constraint are more traceable to shifts in commitment and bargaining strength (such as those between Belfast and Whitehall as well as between the civil service and DMCL) than to ideological change.

5. Behavioural Effects of the SBC syndrome in the De Lorean Case

The SBC syndrome is particularly useful in discussing the rise and fall of DMCL as it goes much of the way to explaining why the firm's cost base swelled as it started to hire more workers and produce more cars. These increased costs contrasted with it becoming ever clearer that the firm's underlying cash flow position and the demand for its product were far weaker than DMCL's initial projections had indicated. The project aimed at producing up to 30,000 cars a year (NIAO, 2004, p.7). However, only 6,500 cars were ever shipped from Belfast and of those produced only 1,655 cars ever got delivered to dealerships. The remaining cars found their way into inventories (Fallon and Srodes, 1984, p.378). Even those cars that reached dealers failed to secure buyers at the price envisaged by DMCL. By late 1981 discounts were already being offered on unsold gull-wing sports cars (Fallon and Srodes, 1984, p.385). The three major behavioural effects or symptoms of BC-organizations identified by Kornai, Maskin and Roland (2003, pp.1105-1106) are as follows:

a) A reduced emphasis on profit maximisation and/or cost control combined with an excessive reliance on rent-seeking relative to profit-seeking;

b) The reduction in the price sensitivity of BC-organizations arises as relative prices become less important on both the input and output sides if the gap between revenue and expenditure is no longer critical to the survival of a BC-organization;

c) An excessive demand for inputs may lead to serious shortages as S-organizations rather than BC-organizations foot the bill. The investor in a risky venture anticipating outside support may invest excessively. Excessive economic expansion, however measured, may be the result.

There is evidence that all three symptoms were apparent in the case of DMCL. The evidence is particularly clear for a) and c). John De Lorean made recurrent appeals for cash. After the initial package of 1978 he negotiated a further £14 million in August 1980, a government bank loan guarantee worth £10 million in February 1981 and riot damage compensation of £7 million in May 1981.[25]

Financial control was very poor. Likewise, there is plenty of evidence of engineering problems contributing to component, wages and overheads estimated at being between two and three times higher than they should have been for the sales volume (Fallon and Srodes, 1984, pp.358, 368-70).[26] It has been claimed that by the time the firm closed in 1982 its cash shortfall was $50 million (Fallon and Srodes, 1984, p.378). Extravagant expenditures and salaries have been noted by journalists. Perhaps the most infamous example of extravagant expenditure was the remodeling of a guesthouse on the factory premises. A reputed £20,000 was spent on gold-plated taps for the bathroom and between 1979 and 1980 the travel, entertainment and promotion budget increased from $540,000 to $1.1 million (Levin, 1983, p.177; Fallon and Srodes, 1984, p.366). The company art collection after liquidation was eventually bought back by John De Lorean at a fraction of the original (taxpayer funded) cost (Fallon and Srodes, 1984, p.366). In a final characteristic of extravagance in 1982, when the firm was under receivership, De Lorean summoned his board back from Belfast to New York. The seven directors flew in Concorde at a total cost of £15,000 (Fallon and Srodes, 1984, p. 385).[27]

The composition of costs were also symptomatic of a business that was relying on rent-seeking, litigation and opportunism rather than managing its affairs efficiently. De Lorean was cited in 52 patents at the US Patent Office (GM was the owner of 31 of these patents) when he created his ill-fated car firm (Levin, 1983, p.129). De Lorean's undoubted engineering and entrepreneurial abilities were therefore not an issue by the time he formed

DMC (Brownlow, 2014). Yet even at the time of peak sales for the DMC-12, expenditure on legal fees exceeded the advertising budget (Fallon and Srodes, 1984, p.304). De Lorean used threat of legal action repeatedly in his bargaining with the UK government (Fallon and Srodes, 1984, p.272). In contrast, his repeated attempts at securing funding for the Transbus project, a clear breach of the initial agreement, did not lead the DOC or NIDA to sue (Fallon and Srodes, 1984, pp.270-72). The possible negative commercial repercussions of such legal action for both the project and Northern Irish inward investment prospects more generally provides the most plausible explanation for this apparent bargaining weakness by NIDA.

[Insert Table 1]

Table 1 illustrates that the combination of lax cost control, poor productivity and general reliance on subsidy led to an underperformance in output terms throughout 1981. In contrast, while DMCL found it impossible to profitably produce output, it found relatively easy to demand more labour inputs.

[Insert Table 2]

Table 2 is based on previously unreleased archival evidence. It illustrates that DMCL only came close to the promised job creation in the third quarter of 1981 and exceeded the forecast by the first quarter in 1982. It has been claimed that as early as 1980, De Lorean knew there was no need for the projected workforce levels employed at DMCL (Fallon and Srodes, 1984, p.244). Sutton's recent account confirms the observation that the firm started to outperform its hiring targets despite their being no sound commercial ‘justification or need’ for such hiring (Sutton, 2013, p.131). In other words, the firm only started to meet and beat its hiring targets at precisely the time its commercial prospects were getting progressively weaker. This apparently puzzling finding is explicable in terms of the structure of the original agreement and the way it promoted soft budgets. The ‘justification or need’ for hiring was, in the manner discussed by authors influenced by Kornai, a consequence of expectations surrounding the political-economic sunk costs (Dewatripont and Maskin, 1995; Robinson and Torvik, 2009). In New York, De Lorean would boast openly that he had the public bodies in Northern Ireland ‘over a barrel’ (Fallon and Srodes, 1984, p.367).[28] De Lorean was calculating that the more people he hired, the more generous his subsidy package would be and the more politically difficult it would be for the authorities to effectively commit to close the factory. Closure, on top of the direct employment losses, would have additional negative reputational implications for Northern Ireland as an investment location.

6. Reinterpreting the failure of De Lorean in the light of SBC

The role of expectations in a nurturing SBC syndromes was explained in section 2. In this section this insight will be used to reinterpret the failure of DMCL. In the context of the first decade of the Troubles it is straightforward to see how the original agreement shaped expectations in ways that exacerbated problems at DMCL. Once the agreement was made, there were sunk costs that reinforced problems; it is considerations of such factors, rather than a free market or psychological interpretation, which provides a more complete interpretation. Kornai, Maskin and Roland contend that SBCs may arise because of an institutional fault-line: S-organizations are unable to commit themselves to not extend further credit to BC-organizations after providing the initial finance for a project (Kornai, Maskin and Roland, 2003, pp.1107). As they observe:

> The S-organization would like to induce the BC-organization to work hard to avoid making a loss. So it declares that it will refrain from making bailouts. Once a loss occurs, however, it fails to abide by this declaration (Kornai, Maskin and Roland, 2003, pp.1107).

The relative ability of an S-organization to tie its hands and commit itself to not undertake a bailout will affect the behaviour of the BC-organization (Kornai, Maskin and Roland, 2003, pp.1108). So 'hardening' the budget constraint means being able to credibly commit to not constantly refinance the BC-organization. Kornai, Maskin and Roland note that the crux of the SBC syndrome is thus the lack of dynamic commitment which could arise with paternalism but also with other motivations on the part of the S-organization (Kornai, Maskin and Roland, 2003, pp.1111).

This pre-commitment issue affected both Labour and Conservative government's relationship with DMCL. It was difficult given the institutional environment that existed during the period for the pre-commitment needed for successful industrial policy (as measured in purely economic terms) to be created. Commitment issues were endemic in a situation where subsidises had important political-symbolic as well as economic implications. The fault lines within the original master agreement and the related unwillingness to litigate against DMCL were connected to the failure to commit De Lorean and the sunk costs that emerged after the agreement was signed. De Lorean's opportunism only stopped when he overplayed his hand. De Lorean was increasingly prone to claim that the political situation explained his firm's poor performance (Fallon and Srodes 1984, p.390; Brownlow, 2014). Such claims started to get wide traction in the United States.

Policymakers started to worry that DMCL, rather than attracting a secondary wave of further investors, as Quigley had predicted, would actually deter investment. An undated, and previously unpublished, document from 1982 provided civil servants with briefing points to be used to refute De Lorean's claims in the media. The document also highlight the attractiveness of the subsidy packages on offer.29 Perhaps it was this switch in DMCL's reputational impact that encouraged civil servants and politicians to overcome their fear of the sunk cost repercussions of closure. However, by early 1982 it was increasingly clear that rather than enhancing the credibility of Northern Ireland as an investment location, it was actually damaging the image. Moreover, recurrent appeals for cash damaged public finances as well as the reputation of the policymakers involved in other negotiations.

The final straw, in terms of hardening the budget constraints, came in January 1982. Prior had argued with Cabinet colleagues as recently as December 1981 for continued financial support for DMCL (Fallon and Srodes, 1984, p.381). However, the information on company performance he had received within a month of that optimistic outlook changed Prior's mind. De Lorean for his part was, understandably given that it was tilted in his favour, still refusing to renegotiate the master agreement and he threatened closure (Fallon and Srodes, 1984, pp.381-82). It was at this point that Prior refused further financial support and De Lorean was forced to accept Prior's proposal to appoint Sir Kenneth Cork to investigate if a reorganized firm was salvageable. Cork finished his report illustrating that there was a loss and that the outflow of money from DMCL to DMC was being paid for with taxpayer's cash. Cork proposed a new financial deal based upon De Lorean producing an investor to put up the working capital as well as $5 million of his own cash into DMC. Time and cash however ran out for De Lorean: DMCL was placed in receivership in February 1982 (NIAO, 2004, p.7). Production ceased in May 1982 and the factory closed in October 1982. In November 1982, DMCL was legally wound up. In December 1983, DMC went into liquidation with the American courts appointing a 'Trustee' (NIAO, 2004, p.7).

7. Conclusions

The rise and fall of DMCL has more general implications for governmental agencies concerned with designing institutions and policies aimed at promoting inward investment. The reinterpretation provided in this paper is one in line with the general findings in recent research in the area of industrial policy as well as illustrating the usefulness of the SBC approach. Recent work highlights the need in industrial policy to correctly judge the balance between 'carrot' and 'stick' in promoting successful interventions as well as the role of political equilibria in determining the success or failure of industrial policy (Rodrik, 2003; Robinson, 2009; Robinson and Torvik, 2009). The failure to pursue a policy that would lead to a viable business rested to a large extent on the institutional environment that emerged in response to civil unrest. Kornai has argued that the inefficiency costs associated with soft budgets may be justified if the benefits – in terms of the insurance against uncertainties – exceed these costs (Kornai, 1986A, p.25). Hence, Kornai's argument implies that a successful industrial policy could have been judged successful, despite softening budget constraints, if it had contributed to greater stability. The archival evidence produced in this paper demonstrates that the institutional environment reduced the likelihood of an efficient outcome and predictably enough the firm did nothing to create sustained political and economic stability.

The more general failure of Northern Irish industry to close its productivity gap with Britain during the Troubles has been presented by mainstream economists as evidence of a failed industrial policy (Fielding, 2003). The limits of this interpretation provides an example of the more general limits of neoclassical 'economistic' approaches as a 'base for thinking' (Coase, 1992) By not recognising the intersections between political, legal and economic institutions, a narrowly economistic interpretation is incomplete at best (Chang, 2002, 2011). As recent historical studies of the Troubles have shown, and the evidence produced in this paper confirms, policymakers had to strike a balance between economic and ‘non-economic’ outcomes (Aveyard, 2012; Brownlow, 2012). The non-economic outcomes included security, legal and political considerations. The success or failure of industrial policy should arguably be judged relative to this wider range of measures.

The particular relevance of applying the Kornai model to the case is that allows for the different motivations of the actors and it also provides an explanation of the switch from DMCL being viewed as a ‘flying swan’, which would attract further investment, into a deterrent to economic development. De Lorean in 1978 had the motive, means and opportunity to exploit the existence of soft budgets for his own ends. By 1982 it was not his motivation that had changed, it was the means and opportunity that had altered: John De Lorean overplayed his hand. Kornai’s analysis provides a base for thinking that helps us better understand why this situation occurred. Furthermore, the failure of DMCL does not provide a simple vindication of the alleged impossibility of ‘picking winners’; nor was the failure due entirely to De Lorean’s personality defects as a maverick mogul.

Endnotes

1 Furthermore, by focusing narrowly on economistic measures of efficiency, without considering how the operation of businesses interacted with social and political institutions, the neoclassical 'base for thinking' fails to provide a relevant institutional analysis (Chang, 2002, 2011, 2014).

2 The literature on the SBC syndrome is wide ranging. For example, for a discussion of its relevance to studying a range of hypotheses for archival research (with a particular focus on applicability to the Soviet Union) see **(**Gregory and Harrison, 2005, pp.743-44). For a more general survey of topics covered (and a more particular focus on the economics of professional sports see Storm and Neilson, 2012, pp.186-89).

3 The variety of psychological flaws attributed to De Lorean include 'delusion', a 'narcissistic personality' driven by an 'exaggerated sense of entitlement' combined with 'a sense of reality...distorted beyond reason' (Levin, 1983, p.260; Fallon and Srodes, 1984, pp.435-437).

4 The legal paperwork that followed the scandal helped shine a light on the more general failings of DMCL. The GPD services episode could form the basis of a paper in its own right. At its simplest, R&D work for the car was supposed to be performed by Lotus Cars Limited, under an agreement with GPD Services Incorporated (GPD) a Swiss-based company. Agreement was for GPD to get US $17.65 million (or £8.83 million); however, DMCL paid Lotus/GPD an additional $23 million (£11.5 million) on a 'cost plus' basis for additional work. However, investigation showed that none of the initial sums (US $17.65 million) ever found its way to Lotus. This fraud as well as the more general losses of public funds led to two decades worth of litigation. The arrest for cocaine possession (which was ultimately thrown out) has likewise been extensively covered elsewhere (Levin, 1983; Fallon and Srodes, 1984). The legal manoeuvres that led the UK government to sue for compensation can be read about in (NIAO, 2004).

5 Good surveys on the development of industrial policy can be found see (Harris, 1991; Harrison, 1990). Recent historical work has additionally highlighted that the institutional environment affecting the structure and conduct of industrial policy was particularly conducive to lobbying between 1945 and the early 1960s; that such lobbying stimulated rent-seeking that contributed to economic underperformance (Crafts, 1995; Brownlow, 2007).

6 Some authors stress the role of ethno-national antagonism in sustaining the conflict, while others argue that sociological and historical context, such as socio-economic disparity, played a more vital role. For more details of recent surveys on the topic see (McGrattan, 2010; Brownlow, 2012, pp.726-30).

7 Grants were made available to cover plant, machinery, buildings and employments if applicants could persuade the Department of Commerce that, by restructuring, job losses could be prevented (Harris, 1991, p.80). It has been suggested that evidence concerning restructuring was very laxly enforced; it has been shown that the proportion of job promotion expenditure based on employment grants rose between 1970-72 and 1977-81 (Harris, 1991, pp.80-1). For example, the Industrial Development (NI) Act 1971 added the maintenance of employment as a new category under which firms could secure grants and loans (Harris, 1991, p.80). The standard capital grant – with a non-taxable value of 30% on plant, machinery and buildings - was introduced in 1972. The comparable Regional Development Grant in Great Britain was 20% (Harris, 1991, p. 94). In addition, discretion existed so that even more generous grants could be negotiated with the Northern Ireland Department of Commerce.

8 For HM Treasury's attitude to economic responses to the Troubles see the contents of the memos and documents covering the period 1969 to 1971 in the file entitled 'Review of Economic and Social Development in Northern Ireland', NA T341/176.

9 However, see the critical tone of the letter from Joel Barnett to Roy Mason, 17th July 1978 in PRONI CENT1/10/18 'De Lorean 1978-1980.

10 Within less than a month of the agreement Roy Mason wrote to Joel Barnett. In the letter Mason, was very upbeat in his assessment of the economic and political consequences of investing in DMCL. Mason's analysis borrowed heavily from Quigley. Letter from Roy Mason to Joel Barnett, 11th July 1978 in PRONI CENT1/10/18 'De Lorean 1978-1980'.

11 For example, at a meeting held between Treasury and Northern Irish civil servants held in December 1981, Treasury officials are still recorded as wanting assurance, on behalf of ministers, that 'there was no risk of the company [DMCL] becoming a permanent pensioner'. 'Meeting December 9th 1981, De Lorean Government Guarantees, minute dated December 22nd 1981 in NA FV22/125 'De Lorean Motor Co Northern Ireland Car Assembly Project'**.**

12 Letter from John Freeman to Roy Mason, 19th July 1978 in NA FV22/125 'De Lorean Motor Co Northern Ireland Car Assembly Project'.

13 See contents of the file PRONI CENT1/10/18 'De Lorean 1978-1980.

14 McKinsey were retained by the Department of Commerce to monitor events at DMCL. See the clippings covering the period 1978-1984 taken from file entitled 'De Lorean Motor Company Press Cuttings' PRONI DED/21/6/1.

15 'Background Note: De Lorean Motor Company' in NA FV22/125 'De Lorean Motor Co Northern Ireland Car Assembly Project' and Minute from Department of Commerce sent to 'The Secretary' De Lorean Motor Cars Ltd, April 12th 1979 in PRONI CENT1/10/18 'De Lorean 1978-1980'.

16 See the contents of the agreement dated June 21st 1978 in PRONI CENT1/10/18 'De Lorean 1978-1980'.

17 See the contents of the agreement dated June 21st 1978 in PRONI CENT1/10/18 'De Lorean 1978-1980'.

18 'De Lorean: Situation Report, paper by K.P. Bloomfield, January 8th 1982 and 'De Lorean Motor Company', Background Note Capital structure, undated in PRONI DED/21/6/1 'De Lorean Motor Company'.

19 See 'The Secretary of States Meeting with Mr John De Lorean and Mr Cafiero -9.15am on 5 August 1980 at Hillsborough Castle', minute by R.A. Harrington, August 6th, 1980, in PRONI CENT1/10/18 'De Lorean 1978-1980'.

20 'De Lorean –Additional Funding', 27 June 1980, Department of Commerce memo, in PRONI CENT1/10/18 'De Lorean 1978-1980'.

21 'Northern Ireland: Claim on Contingency Reserve', memo by J.H. Chapman, Department of Industry, July 30th 1980, in NA FV22/125 'De Lorean Motor Co Northern Ireland Car Assembly Project'**.**

22 'De Lorean', memo by J.E. Cammell, Department of Industry, July 29th 1980 in NA FV22/125 'De Lorean Motor Co Northern Ireland Car Assembly Project'.

23 'De Lorean Sports Car Project', letter from Humphrey Atkins to Sir Keith Joseph, July 25th 1980 in NA FV22/125 'De Lorean Motor Co Northern Ireland Car Assembly Project'.

24 Undated draft memorandum by James Prior entitled 'Draft Memorandum by the Secretary of State for Northern Ireland' in NA FV22/125 'De Lorean Motor Co Northern Ireland Car Assembly Project'.

25 'De Lorean', memo dated January 1982, in PRONI DED/21/6/1'De Lorean Motor Company'. The riot damage followed the death of Bobby Sands, who had been on hunger strike.

26 Issues of poor quality arose from conflicts over design (Fallon and Srodes, 1984, p.230).

27 For examples of extravagance in spending and wage bill the analysis by Fallon and Srodes is excellent see (Fallon and Srodes, 1984, pp.360-67).

28 It has been suggested that De Lorean deliberately timed calling for cash when the car was in production as he assumed the government would be more vulnerable and that in the words of Fallon and Srodes 'No one would dare to pull the plug at that point' (Fallon and Srodes, 1984, p.230).

29 'US Investment in Northern Ireland: Draft Guidance for Posts', undated memo in PRONI DED/ 21/6/1 'D Lorean Motor Company'.

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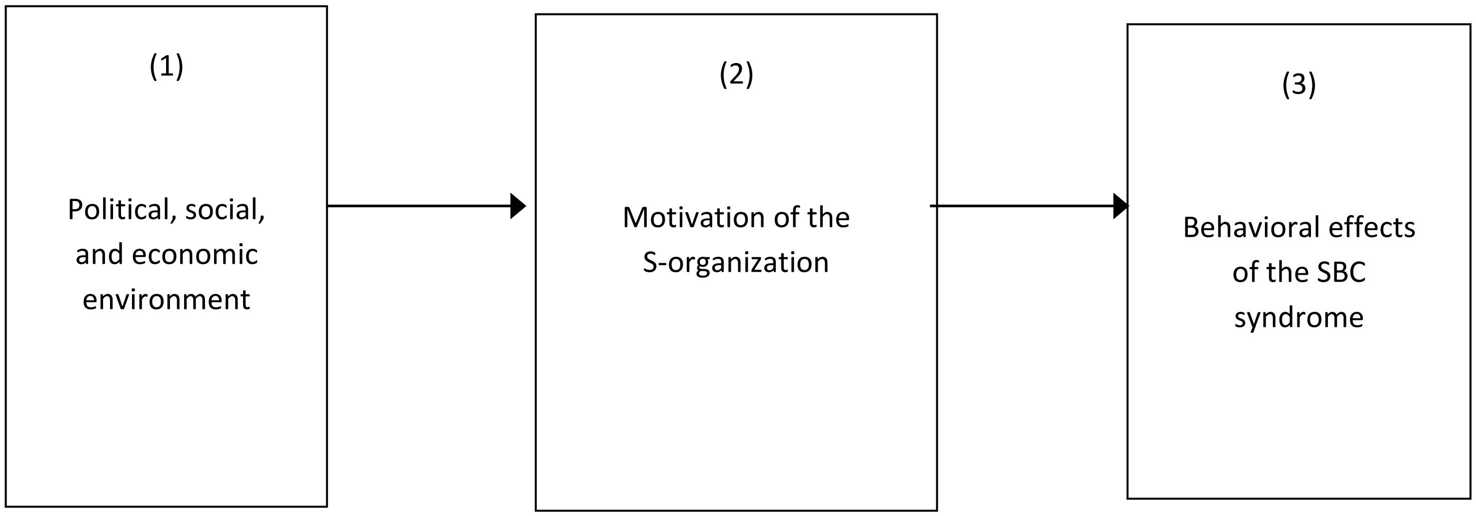
Figure 1. SBC Syndrome: The chain of causality according to Kornai, Maskin and Roland



Source: Kornai, Maskin and Roland (2003), p. 1107.

Table 1. Monthly Production Performance

	February	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**
Plan	188	818	1,663	2,858	4,543	5,423	7,103	8,463	10,223	11,903
Actual	**-**	64	483	839	1,309	1,744	2,642	3,619	4,901	6,191

Source: Data taken from Annex to Minute of Meeting HM Treasury December 9th 1981 dated December 22nd 1981 in file entitled 'De Lorean Motor Co. Northern Ireland Car Assembly Project' NA FV 22/125

Table 2. Projected and Actual Hiring Schedule for DMCL, 1979-1982

Year	Quarter	Projected number of workers hired	Actual numbers of workers employed in Dunmurry
1979	1	90	-
1979	2	120	-
1979	3	180	-
1979	4	283	-
1980	1	505	-
1980	2	780	-
1980	3	1,214	265 (including 23 on short-term contracts and 16 hourly paid)
1980	4	1,404	430 approx
1981	1	1,497	865
1981	2	1,734	-
1981	3	1,810	1600 approx
1981	4	1,810	-
1982	1	-	2500 approx
1982	2	-	1500 approx 200 by May 1982

Notes: Projected employment figures (1979-81) taken from PRONI DMS/2/129 entitled 'IR Intelligence De Lorean Motor Cars Ltd'. The fourth quarter 1980 and first quarter actual employee numbers 1981 taken from Fallon and Srodes (1984), p.284. Third quarter data 1981 taken from Fallon and Srodes (1984), p.303. First and second quarter data for 1982 taken from Fallon and Srodes (1984), p.413-4 and p.431