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Foreign direct investment policy, multinationals, and subsidiary entrepreneurship success and failure in post-war Scotland

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ABSTRACT

Scotland was a premier destination for American direct investment from the 1940s to the 1970s. Multinationals were attracted by regional policy inducements that sought to develop modernised engineering sectors. This paper examines the evolution of four American-owned manufacturing subsidiaries between the 1940s and 1980s using correspondence between plant managers and policymakers. Reconciling existing Scottish subsidiary literature, success and failure are both documented. Subsidiary entrepreneurial behaviour was displayed in each case, but developmental outcomes were inhibited. Centralised American management exercised power over Scottish plants, including stripping subsidiaries of innovative products that were developed in Scotland. However, corporate product market competitiveness, a subsidiary's existing strength within a multinational's global region presence and business governance structures coalesced to condition success and failure. Policymakers must attempt to embed competitive advantages within localised linkages, but their ability to do so is strongly conditioned by the domestic industrial structure's capacity to respond favourably to these challenges.

KEYWORDS

Subsidiary; policymaking; inward investment; FDI; Scotland

Introduction

In February 1982, John Firn, the head of Industrial Projects at the Scottish Development Agency (SDA), stated in a note to other senior agency officials that 'Scotland and Strathclyde have survived because of the real contribution made by non-Scottish companies'.¹ Firn was obliged to recognise the extent to which the Scottish economy had become reliant on the activities of multinational subsidiaries since the Second World War, principally through inward investment from the United States. Foreign direct investment (FDI) was dominated by mechanical, electrical and instrument engineering. By 1972, American multinationals accounted, respectively, for 26.5 per cent, 39.5 per cent and 45.6 per cent of Scottish employment in these sectors (Scottish Council Research Institute, 1974). The growth of inward investment took place concurrently with a long rundown of employment in Scotland's 'staple' industries, coal, steel, shipbuilding, cotton and jute, from the mid-1950s (Finlay, 2004).

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Multinationals provided 'compensating employment growth' as jobs were shed in the sectors which had been at the forefront of Scotland's industrial development during the previous century (Tomlinson et al., 2022).

These changes were encouraged by a modernising coalition of academic economists, industrialists and policymakers. Their efforts centred on the Scottish Office's application of UK regional policy, which was employed to 'steer' investment towards areas judged most in need of new employment (Cameron, 1966). Inward investment was a route to the mass production consumer goods sectors that Scottish firms had been reluctant to embrace during the first half of the twentieth century. This failure was held to explain Scotland's comparatively poor economic performance since the 1920s. In the eyes of the modernisers, multinationals offered access to the technology, industrial organisation and marketing skills required for economic rejuvenation. They would help to secure exports and leave Scotland less dependent on selling capital goods to old imperial markets (Tomlinson & Gibbs, 2016).

However, critical economic assessments developed following the 'retreat' of American multinationals from Scotland during the late 1970s and 1980s. Capital flight and factory closures appeared to reveal minimal commitment to Scotland or long-term benefits. Hood and Young's (1982, p. 10) formative account, noted that inward investment was 'heavily concentrated in a small number of large plants employing several thousand people' focussed on assembly activities. They had fallen victim to rationalisation in the absence of higher value-added business functions and supply chain embeddedness. During the early 1990s, the Scottish economic historian, Christopher Harvie (1993, p. 10), polemically concluded that the 'paternalist sense of obligation' demonstrated by Scotland's now displaced 'old-fashioned tycoons', 'was unlikely to be replicated in the boardrooms in the City of London and Los Angeles'.

John Firn's perspective was formative to critical assessments of inward investment during the 1970s. He emphasised that multinationals had not transferred R&D or marketing activities to Scottish subsidiaries. Firn's (1975) view was summarised by his contention that Scottish industry was dominated by 'branch plant' factories where managerial agency was confined to routine manufacturing activities. He juxtaposed these functions with 'entrepreneurial' risk-taking and innovative decisions concerning investment and product development which were made externally. Firn's recognition of the centrality of inward investment to sustaining Scottish industry demonstrates its importance to understanding Scotland's post-war economic development. Scottish subsidiaries fit within a Western European pattern of post-war investment by American multinationals exploiting their firm-specific advantages in product design, industrial organisation and marketing whilst responding to political and economic pressures to locate production closer to markets (Dunning, 1980).

A fuller historical assessment of inward investment is required, which incorporates the perspective of Scottish plant management and contemporary policymakers. Both Firn and Hood and Young's criticisms rested on the absence of entrepreneurial agency and the exclusion of Scottish plant managers from higher value-added upstream and downstream business functions. Yet recent appraisals of Scottish subsidiaries in *Business History* have concluded more optimistically. Dimitratos et al's (2009) account of IBM's operation in Greenock presented a story of capability upgrading as the facility moved from a basic manufacturing remit to managing European operations. This article contributes to debates over policymaking and the success and failure of inward investment using four Scottish case studies of long-life subsidiaries: Hoover, Sunbeam, Burroughs and Honeywell. It relies on archived correspondence

between plant managers and Scottish Office civil servants which provide a novel perspective from within the Scottish subsidiaries of American multinationals. Policymakers were integral to bringing these multinationals to Scotland and saw them as central to achieving economic progress. The sources provide a subsidiary-level vantage across several decades, including details of conflicts between multinational headquarters and subsidiary management. Each multinational undertook greenfield investments within Lanarkshire, an industrial county to the east of Glasgow, and were engaged in either household appliance or electronics manufacturing. A rare candid perspective from within firms is visible from the archive records. Scottish subsidiary managers were embedded in long-term relations with the policymakers whose choices had brought their firms to Scotland, and each shared an interest in subsidiary development. Their competitors were not limited to other firms in the same sector but included rival sister subsidiaries.

The findings indicate that the branch plant thesis is valid in its view of power dynamics within multinationals but does not hold in understanding the behaviour and motivations of plant management. Limited innovation did take place within subsidiaries and their managers did engage in entrepreneurial activities. Scottish subsidiaries achieved functional upgrades but were constrained by both internal firm competition and external market conditions. This article answers the question, 'what factors conditioned success and failure in post-war Scottish manufacturing subsidiaries?' Four Scottish subsidiaries are assessed through three variants that shaped subsidiary development: product market position, corporate governance and subsidiary autonomy. Three key factors determined the one instance of success and three of failure: the multinational's strength in product markets; the subsidiary's relative internal strength within a national or global region context; firm governance structure, both in terms of the extent of centralisation and mechanisms for managing competition between subsidiaries. Following the existing literature, competition for investment and product mandates within firms are identified as central to achieving expansion or conditioning subsidiary failure (Burger et al., 2018). In the context of American multinationals during the second half of the twentieth century, these were highly enmeshed with corporate restructuring, specifically Europeanization (Schaufelbuehl, 2016). The findings also suggest that business historians will benefit from pursuing a subsidiary and national policymaker perspective when studying the evolution of multinationals. Global or global region restructuring should be understood as a competitive process which presented both threats and opportunities to subsidiaries whose capacity to engage in entrepreneurship and obtain functional upgrades is strongly determined by their historically evolved capabilities. Restructuring presented crucial pivot points within the four firms studied that shaped success and failure. Where subsidiaries succeeded in obtaining European or global roles, they were strengthened whereas losing out to rivals in these contests paved the way for ultimate closure.

Section one of this paper develops the theme of subsidiary entrepreneurship in dialogue with the international management literature on subsidiary evolution. It emphasises the value of long-term case studies to understanding the evolution of subsidiaries over time and through phases of restructuring. The second section contextualises the case studies within Scottish industrial development and policymaking. In the third section, the evolution of the subsidiaries is appraised. McDermott's (1989) subsidiary 'plant lifecycle' model is applied to assess the build-up of employment and capabilities and then incremental contraction before final divestment at Hoover, Burroughs and Sunbeam. Honeywell survived

through European restructuring. These evolutionary outcomes suggest the validity of focusing on subsidiary entrepreneurial agency and questions the deterministic assumptions of a lifecycle approach. The fourth section outlines impediments to subsidiary entrepreneurship, especially controls on resource expenditure and over the awarding of product mandates. Centralised control was a significant barrier to development at each subsidiary. Europeanization encouraged inter-subsidiary competition across national boundaries, but it was managed through varied corporate structures. A fifth section addresses how international competition structured subsidiary development and addresses what can be learned from Scottish policymaker approaches to securing spill-over benefits. In the conclusion, the findings are synthesised and linked to policy debates over inward investment.

Subsidiary entrepreneurship

Subsidiary entrepreneurship approaches have developed in tandem with the changing structure of multinationals. Analyses of multinationals during the 1960s assumed subsidiaries principally posed 'management challenges' (Kostova et al., 2016, p. 177) for firms with a domineering headquarters. Subsidiaries are now viewed as contributors to the 'complexities associated with managing multinational corporations' internal and external environment' (Ibid). These changes match alterations in reporting structures and power within multinationals. Stylistically, this can be summarised as the transition from Chandler's (1962) view of the American corporation towards Bartlett and Ghoshal (1989) perspective, which understands the multinational as a mutually reliant decentralised integrated network. Chandler's conception of the 1960s industrial corporation was in effect an extended national firm and assumed that subsidiaries were directed from the United States. Rationalisation and restructuring on a global basis in the next two decades only underlined external control over national subsidiaries (Jones, 2006). Recent research on the distribution and allocation of R&D has supported this argument. Cost pressures and market integration encourage a 'recentralisation' of R&D, curbing the subsidiary autonomy (Liu, 2019, p. 20). Embeddedness in national markets has become a 'coordination difficulty' where it was previously seen as essential for achieving product customisation and sales (Liu, 2019, p. 20).

Chandler's approach overlapped with Vernon's (1966) product lifecycle, which explained the dissemination of high-tech production from the United States to other advanced economies as demand grew. Vernon assumed R&D was completed in America and that products were only manufactured in Western Europe after standardisation. Product cycles shaped lifecycle approaches towards subsidiary development. McDermott (1989) theorised a 'plant lifecycle effect' in his assessment of the development and then divestment of American-owned subsidiaries in Britain. Initial investments in greenfield sites were accompanied by plant enlargement and subsequent upgrades in products and business functions. However, place-based competition undermined the location-specific advantages from low unit labour costs or regional assistance which had often attracted investment. Cowie's (2001, pp. 1–2) account of the 'disquieting trends' that were present in RCA's geographical pattern of direct investment during the twentieth century corroborates McDermott's conclusion. Rather than a sudden change of strategy, the gradual movement of production to Mexico followed a pattern of production across regions of the United States. Investment was attracted by cheap labour, but as plants accumulated functional upgrades over time, they unionised and lower value assembly functions were relocated to more competitive places.

McDermott and Cowie's assessments of lifecycle within household appliance and electronics subsidiaries provide a useful model for business historians of the twentieth century. Their studies demonstrate that the forces which determine locational advantages are constantly shifting. McDermott's conclusions anticipated the outsourcing of production functions outside firm boundaries through global value chains in the twenty-first century (Gereffi, 2014). These developments coloured the Scottish experience of electronics inward investment. Almost half of Scottish electronics employment was lost between 2000 and 2005, as production was reoriented towards Central and Eastern Europe and firms divested their basic manufacturing capacity to concentrate on core competences (MacKinnon, 2012). West-Central Scotland lost thirty per cent of high-tech employment and up to a fifth of employment in knowledge-intensive services, matching a broader pattern within the UK's 'old industrial regions' (Birch et al., 2010). Scholarly analysis has often focussed on policy-making and international corporate decision-making, including spectacular failures such as short-lived but heavily subsidised investments by LG in Wales, Hyundai and Chungwha in Scotland and Daewoo in Northern Ireland (Gooberman, 2020).

This paper assesses patterns of long-term subsidiary development that resemble those identified by McDermott (1989) and Cowie (2001), but with an emphasis on plant management's entrepreneurial agency. Cantwell et al. (2015, pp. 1982–1983) have suggested that a fuller account of inward investment needs to contend with 'the active agency of firms', centring on 'the autonomy of subsidiaries'. Core management features in this account of inward investment, but emphasis is placed on subsidiary management perspectives and the policymakers with whom they corresponded. It reveals conflicts of interest within the structure of multinationals. A longer time-period, spanning over four decades, and the inclusion of a survivor as well as three failures, allows for a fuller appreciation of the factors which facilitated and retarded entrepreneurial activity as well as greater attention to the role of policymakers in attracting and supporting subsidiaries. Clark and Ramachandran (2019, pp. 38–39) have defined subsidiary entrepreneurship as 'corporate entrepreneurship that occurs in foreign units of the corporation rather than in the headquarters of a large corporation'. Subsidiaries are 'active participants in developing their own resources and capabilities in order to survive and grow' (Clark and Ramachandran, 2019, pp. 38–39), combining the advantages provided by their parent company and their local surrounding to satisfy unmet local and global market needs. They compete internally to become 'strategic leaders' (Rugman & Verbeke, 2003, p. 128) occupying central places in international market strategies and developing R&D capacity.

Scotland figures significantly in subsidiary entrepreneurship literature. Earlier research focussed on electronics subsidiaries engaged within 'competitive arenas' in both external product markets and internally for resources within multinationals (Birkinshaw et al., 2005, p. 228). Subsidiary evolution necessitates engaging in risk-taking 'entrepreneurial' activities and seeking opportunities for expansion in new markets and product areas. Birkinshaw et al. (2005) examined Motorola, who were present in East Kilbride, South Lanarkshire, as microchip manufacturers from 1969 until 2009. The subsidiary competed internally for the right to manufacture future generations of technologically advanced chips. This included gaining a £500 million (this and all proceeding sums quoted as real value in 2020 pound sterling) in production capabilities in 1994 and R&D activities which continued after the manufacturing plant closed.²

The outstanding example of subsidiary development in Scotland has been IBM in Greenock. Dimitratos et al. (2009) emphasise that the plant management was able to 'assume' roles,

developing capabilities through connections with local suppliers, regional development agencies and universities to gain product mandates. IBM Greenock opened in 1951, as a 'branch plant', producing tabulating machines for the British market. It obtained product upgrades, including personal computer production, extensions to the subsidiary's market remit and responsibility for more processes such as testing and R&D over the next five decades. As IBM divested from manufacturing, the Greenock operation reoriented by developing capabilities in supply chain and customer management, technical support and software development. Greenock retained an employment of 2,000 during the late 2000s, down from 2,500 at its manufacturing peak, whereas Motorola's employment fell from a similar peak to only 150 after manufacturing closed, reflecting its more restricted capability development.

These conclusions build on Turok's (1993, pp. 402–403) earlier study of inward investment electronics plants, which distinguished between 'dependent' and 'developmental' outcomes for regional economic development. In the former: 'local clusters are weak nodes within a wider network of powerful multinationals. The direct global connections expose local economies to volatile world markets making them vulnerable to forces of international competition' (Turok, 1993, pp. 402–403). Turok concluded that Scottish subsidiaries were generally characterised by such a relationship. This was a product of the 'branch-plant character of many foreign firms' (Turok, 1993, pp. 402–403) that lacked design or procurement mandates. Turok (1993, p. 402) juxtaposed dependency to 'developmental' outcomes which centre on embeddedness within a regional economy that secures the subsidiaries' status and provide spill-over effects. A developmental subsidiary establishes 'networks of sophisticated, interdependent linkages, which support the expansion of local firms and generate self-sustaining growth of a cluster as a whole' (Turok, 1993, pp. 402–403). Clustering was associated with both capability upgrading and subsidiary autonomy. IBM Greenock had such characteristics. Alongside capability upgrading, the subsidiary operated a 'permanent employment' policy which enabled management to develop a more sustained engagement with local suppliers. IBM's autonomy allowed it to become 'by far the biggest customer of local suppliers' of the thirteen largest electronics subsidiaries in Scotland (Turok, 1993, pp. 412–413).

Knox and McKinlay (2011, p. 266) have perhaps somewhat hyperbolically claimed that 'the history of foreign direct investment [in Scotland] remains unwritten', and that this stands as 'a major lacuna in our understanding of Scottish economic development since 1945'. A literature has evolved since the 1970s, largely from business management, but more recently entering the field of history. This article diversifies the range of sectors by incorporating household appliances and two of IBM's much smaller competitors who faced different challenges to the domineering bemouth of the computer industry. It switches focus towards evaluating subsidiary development from a policy objective perspective. Following Turok's (1993) categorisation, this article examines the extent to which outcomes can be understood to have been developmental or dependent. Developmental outcomes are understood through the lens of the subsidiary entrepreneurship literature in terms of achieving functional upgrades to downstream or upstream activities and exercising autonomy over product development. Subsidiaries are assessed in terms of capability creation and the achievement of product mandates and investment as well as control over the direction of resources and marketing. Dependent outcomes are defined by subservience to core management decision-making through centralised control over resources and strategising, precluding functional upgrades and entrepreneurial activities.

Context and sources

Burroughs, Honeywell, Hoover and Sunbeam invested in Lanarkshire after being attracted by regional policy incentives and Scottish Industrial Estates Corporation (SIEC) assistance with factory construction. Hoover's plant was located at Cambuslang in South Lanarkshire, on Glasgow's south-eastern periphery. Honeywell opened their new factory in 1955 at the SIEC's industrial estate in Newhouse in North Lanarkshire, to the east of Glasgow. Sunbeam and Burroughs both located their plants in New Towns established at East Kilbride in South Lanarkshire and Cumbernauld in North Lanarkshire. Each subsidiary had origins in a policy regime founded on the 'widespread belief' (Randall, 1985, p. 245) that major alterations to Scotland's industrial base would best be achieved by inward investment. Between 1953 and 1978 employment in established manufacturing concerns declined by 193,000, but over 150,000 jobs were created by incoming firms, over a third of which was accounted for by FDI. These developments were the outcome of a sustained effort by policymakers.

The Scottish Office-commissioned *Clyde Valley Regional Plan* of 1946 outlined the modernising industrial strategy. Infrastructure development would connect new industrial estates which would house light industries characterised by 'footlooseness' (Abercrombie & Matthew, 1949, p. 94). The American economist, R.L. Meier, produced a report for the Board of Trade in 1950 which hopefully pointed to regional policy initiatives which were introducing 'new industries' in 'light manufacturing' sectors that would create a resilient structure.³ A more radical modernising agenda was pursued following a Scottish Committee (Development and Industry) (SCDI) inquiry chaired by Sir John Toothill (1961, pp. 37–38) who was the chairman of Ferranti, an English electronics firm that relocated to Edinburgh during the Second World War. Toothill's report was published during 1961. It advocated releasing labour to 'the newer industries' from contracting traditional sectors. Future prosperity would be secured by the development of a 'modern mass-production engineering-based consumers' durables industry'. Toothill prescribed a reorientation of capital goods sectors towards computer production to facilitate a shift from imperial markets towards Europe. The UK government established the Padmore committee to formulate a policy response to Toothill report. It considered papers from outside experts, including a submission by Sarah C. Orr from the University of Glasgow's Department of Political Economy that discussed SIEC estates. Orr underlined that 'a welcome emphasis on those industries in which Scotland tends to be deficient, particularly medium and light engineering', and that it was 'immigrant firms which tend to introduce new industries and new methods of production'. She concluded that 'growth on a large enough scale to solve Scotland's problem must rely heavily on immigrant industry if present growth trends persist'.⁴ Ten years later, the SCDI observed that American multinationals were making 'a most important contribution to Scotland's economic revival' through the introduction of new products and processes and providing exports that trebled in value from around £1.6 billion to approaching £5 billion between 1964 and 1972 (Scottish Council Research Institute, 1974) (Table 1).⁵

The next section traces the development of the four subsidiaries from their establishment during the 1940s and 1950s until the peak of subsidiary employment during the early 1970s, which was followed by contraction and divestment. Each case fits into the pattern of a gradual build up and then a peak and subsequent retrenchment. However, crucial distinctions between products and sectors, technological changes and corporate governance

Table 1. Subsidiary characteristics.

Firm	Sector	Structure	Duration	Primary markets
Burroughs	Computers and office machinery.	UK subsidiary. Multi-plant operation in Scotland.	1958-1986	European.
Honeywell	Computers and office machinery.	UK then European subsidiary.	1955-present	European.
Hoover	Mechanical household appliances.	UK subsidiary. Inter-plant competition.	1946-2005	UK then increasingly European and international from 1980s.
Sunbeam	Household appliances, kitchen and bathroom.	UK subsidiary competing with other European subsidiaries.	1955-1983	European and global.

determined the pace and extent of these developments. The case studies are developed through files of Scottish Office correspondence. As this section demonstrates, policymakers were crucial to bringing inward investment to Lanarkshire. Each case provides a long-term vantage on subsidiary development using examples from the electronics and consumer durables sectors.

Recent articles in this journal have implored business historians to more readily critique their sources and assess the value of archival research (Perchard et al., 2017). All the files held by the National Record of Scotland (NRS) relating to each firm were consulted. Additional files were viewed from John Firm's collection held by the Scottish Business Archives at the University of Glasgow. Cumulatively, these records included correspondence between plant management and policymakers across the duration of the subsidiaries that were studied. They reveal the evolving perspective of Scottish policymakers over time, especially the development of more critical assessments during the 1970s and 1980s as concerns over the viability of subsidiaries and their entrepreneurial capacity grew. The focus on correspondence between subsidiary managers and policymakers is a distinctive contribution to business history and understanding subsidiary agency that builds on recent Scottish research. Perchard and MacKenzie's (2021) study of the British Aluminium Company's smelter in Invergordon relies on correspondence between civil servants and senior managers. Phillips et al.'s (2019) study of Chrysler's car factory at Linwood in Renfrewshire also uses notes of discussions between plant-level managers and government officials but these limited observations supplement correspondence and minutes of meetings with trade unions and more senior managers.

The vantage provided by the sources used in this article is unusual because they privilege subsidiary level perspectives. Plant managers and Scottish civil servants had a shared interest in functional upgrades and in sustaining subsidiaries' internal competitiveness within multinational corporate structures. Regional policymaking had brought each plant to Lanarkshire and these mutual goals embedded a candid relationship between officials and managers. Subsidiaries did perhaps have an interest in overstating investment and employment prospects to civil servants to encourage the belief that policy and subsidies were succeeding. However, they were constrained in doing so by pressures to limit spending from headquarters. There

are several examples of critical comments from Scottish management about their superiors in the two sections that follow, indicating that relationships with policymakers were strong enough to sustain honest rather than prettified assessments. One limitation of these sources is that they provide less clarity on the views of headquarters or competitor subsidiaries. These are filtered through the perspective of managers and the civil servants who were committed to Scottish subsidiaries. Future research using the archive records of headquarters as well as those of subsidiaries and policymakers may be able to develop scholarship on the complex relationship between the three parties that inward investment entails. Another significant omission from the records was information about the extent of supplier relationships. Embeddedness has been important to assessments of inward investment in Scotland and spill-overs were present in policymaker deliberations, but less detail was present on the extent of each subsidiary's engagement with domestic firms.

There was more material related to Burroughs and Honeywell than Hoover and Sunbeam. The former two electronics firms were engaged in high-tech forms of production. As is discussed in more detail below, electronics became a key priority for Scottish policymaking. A distinct pattern of subsidiary development was identified in each case and is explained by dynamics and different firm governance structures. Hoover's investment at Cambuslang was undertaken by an established UK subsidiary and the firm competed with other factories within the UK, including Perivale in London and Merthyr Tydfil in South Wales. By contrast, Newhouse was Honeywell's first foreign production facility, giving the subsidiary a relatively privileged position within the firm's structure. Burroughs' investment at Cumbernauld was one of several plants in Scotland, whilst Sunbeam's factory in East Kilbride competed with other European plants for product mandates and market allocations.

Plant lifecycles

Each plant broadly fits into a lifecycle pattern of initial growth and expansion followed by eventual retrenchment as location-specific assets were undermined by place-based competition. [Table 2](#) presents a stylised version of the subsidiaries' development. Plant management and Scottish Office officials both had a shared interest in subsidiary development and liaised with one another regarding expansion, exports, employment levels and state support.

Hoover demonstrate an incremental build-up of employment and production. In South Lanarkshire, the SIEC worked to the requirements of Hoover who rejected opening additional capacity at the Newhouse industrial estate in favour of enlarging their site at Cambuslang. The urgency behind this expansion and following the logic of agglomeration in Cambuslang rather than the dispersal of activities to other sites, was rationalised in terms of competition with other plants in Britain. Correspondence between the Scottish Office headquarters at St Andrews House in Edinburgh and the Board of Trade's office in Glasgow noted that Hoover's Merthyr Tydfil plant had already grown and that both plants could foreseeably produce electric motors for vacuum cleaners and washing machines. As a result, 'production at Cambuslang must therefore keep pace with the expansion in Wales.'⁶ By 1974, 5,000 workers were employed in South Lanarkshire and Hoover looked to set up new facilities nearby.⁷ This was achieved through production for export, which accounted for around half of the plant's output during the early 1970s.⁸

Table 2. Subsidiary development.

Name	Arc of growth	Expansion	Rundown
Burroughs	Product and function upgrades including the development of more advance manufacturing and R&D capacity. Designing and manufacturing of microcomputers.	Employment growth between 1958 and the early 1970s. Development of a white-collar managerial and R&D workforce.	Employment lost through transition to capital-intensive production during 1970s. Closure following loss of product mandates during 1980s.
Honeywell	Achieved a central place in Honeywell's UK and then European manufacturing operation. Incremental investments in high-tech production techniques has maintained this status.	Plant and employment expansion through investment in new products and plant enlargement from late 1950s to early 1970s. European exports and investment in context of inter-plant competition.	Since late 1970s the plant has drastically reduced the size of its workforce and continued to experience intermittent fluctuations due to market pressures.
Hoover	Development of an increasingly sophisticated product line from motors to a range of mechanical appliances.	Expanding workforce and eventual growth of a multi-plant Lanarkshire operation from the mid-1940s to early 1970s.	Plant closures, loss of product mandates and concentration on fewer products between the late 1970s and mid-2000s.
Sunbeam	Design and manufacture of a range of household appliances.	Factory extension and employment expansion. Achieving exports and international product mandates.	Loss of product mandates in inter-subsidiary competition from late 1960s. Closure following a disastrous corporate merger in mid-1980s.

Initially, Hoover expanded their Cambuslang facility in order to upgrade production from fractional horsepower motors to manufacturing Floor Polisher vacuum cleaners.⁹ By the late 1960s, the plant was still producing washing machine parts as well as fan heaters, cylinder heater, kettles, irons and hairdryers.¹⁰ However, this marked the peak of the firm's Lanarkshire operations. During 1979, the workforce at Cambuslang declined to 2,902, whilst the operations established nearby in Motherwell and Hamilton were shut down.¹¹ Inter-plant competition had a marked impact on the development of the Cambuslang subsidiary. Its survival was threatened during restructuring that followed a long profitability crisis during the late 1970s and early 1980s. The development of increasingly advanced production techniques at Cambuslang helped to save the factory when Hoover – following intervention from the company's head office United States – decided to close the Perivale plant in London and maintain production in Lanarkshire (McDermott, 1989). However, the perceptions of the threat posed by Merthyr Tydfil in 1950 were realised in the 1970s as washing-machine component production was rationalised and concentrated there. Cambuslang's rundown of employment in the lead up to closure during the mid-2000s came alongside the creation of additional jobs at the Welsh plant.¹² Hoover was distinguished from the other case studies by its strong dependency on Britain. In the mid-1960s, the UK accounted for over half the firm's total sales. By the 1990s, Cambuslang was also engaged in competition on a European basis both internally and externally. The plant succeeded in beating

French competition to become Hoover's sole vacuum producing facility in Europe, underlining the importance of continental production mandates to subsidiary success and failure.¹³

Honeywell displayed the favourable indicators which policymakers sought from subsidiaries. It achieved employment expansion, upgrades in technologically advanced production processes and products as well as major export potential. This was based on the first-mover advantages enjoyed by Newhouse within Honeywell's international presence and the plant's influence within the firm's British operation. As early as 1962, Honeywell's American Managing Director, C.W. Spangle, claimed that the company's Scottish subsidiary had 'always operated as though the Common Market were a reality', underlining the importance of European exports to the Newhouse plant.¹⁴ Despite Britain's entry to the EEC being delayed by over a decade to 1973, the subsidiary was still able to achieve a major upgrade from electronic data processing to computer production. This investment came with plans to raise the proportion of components manufactured locally, increasing the share of local value-added within high-technology products.¹⁵ In 1971, Scottish Office officials noted the presence on Honeywell's British Board of a Mr Offord, who they described as 'a Scottish product'. Civil servants indicated that the Newhouse plant enjoyed his patronage in the firm's hierarchy. Joining the Common Market created opportunities for the plant at Newhouse, which was responsible for ninety per cent of Honeywell's UK manufacturing output. Newhouse was also well-placed to benefit from a new collaboration with General Electric in Brussels.¹⁶

Due to its survival and achievement of product upgrades, Honeywell is perhaps the most likely candidate for 'developmental' status among the plants studied. Newhouse won major product mandates, such as the production of 'giant' 6000 Series computers in 1972, which went on to obtain 100 orders valued at a billion pounds.¹⁷ In 1974, the Lanarkshire plant was recognised as 'the European manufacturing centre for the bigger computers' produced by the firm. It made leading products including the new 60 Series computer, as well as magnetic tape drives and printers.¹⁸ These incremental additions bolstered the plant's status when it came to winning investments that secured the factory's future in competition with other subsidiaries. Honeywell's commitment was also visible through significant investment in the Newhouse plant during 1979 which included an upgrade to the die-casting foundry as part of a European rationalisation programme. Whilst it did not create additional jobs, these developments secured future employment for eighty workers and expanded capacity to supply other European subsidiaries with components.¹⁹ Additional investment also saw a High Technology Unit open at Newhouse in late 1979 which would produce two new printed circuit boards and constituted 'the most up to date electronics production unit in Europe'.²⁰ These developments achieved key goals by making Newhouse central to Honeywell's European production and securing important high-tech and high value components production in-house in Scotland. They were secured through a successful track record and the Newhouse subsidiary status in the firm's operation, which was personified by Offord's standing.

Burroughs paralleled Honeywell in terms of its product markets and arc of development being overlaid by labour-saving production technologies. The Cumbernauld plant also produced office machinery but was one of several operations within Scotland. Burroughs began production at Cumbernauld in 1958, after opening a plant in the Vale of Leven in 1950 and before establishing another in Fife during 1959.²¹ These investments indicate the importance of regional policy grants to Burroughs. Each of these factories was established

in an area eligible for funding from the UK government. The Lanarkshire subsidiary developed in the context of cooperation and competitive pressures between the Burroughs factories in Scotland. However, there was a greater fear that this complex of plants faced a larger threat from south of the Anglo-Scottish border. Burroughs established a plant at Cramlington New Town in the North-East of England.²² As electro-mechanical production gave way to electronic machinery, employment fell sharply. Burroughs' Managing Director bluntly informed Scottish Office officials that it was 'impossible to arrange for an orderly run-down of product lines.'²³

Competition between plants also provided opportunities for the Cumbernauld factory to engage in product development. The plant pioneered production capabilities in adding machines, computer terminals and microcomputers, which assisted its survival during the 1970s. Although experiencing severe layoffs, employment at Cumbernauld also became more R&D-intensive as the subsidiary achieved functional upgrades. The B80 mini-computer, which was 'designed and engineered' in Cumbernauld, was presented as 'one of the main products of the future' by the plant's general manager in 1978.²⁴ These achievements came after the disruption caused by the switch from electro-mechanical to electronic production, indicating that whilst this transition came at the cost of jobs it also created important opportunities. Profits rose from £29 to £58 million between 1976 and 1978, as the factory was bolstered by orders from British and foreign banks. By 1978, 600 of the plant's workforce, one third, were employed in R&D.²⁵ In Burger et al's (2018, p. 109) terms, this represented a significant expansion in the 'scope' of employee distribution from the factory's origins in product assembly, and a new 'breadth' of activities towards higher value-added functions. As is discussed below, future success in functional upgrading was dashed at Cumbernauld and the plant fell victim to company management decision making, much to the chagrin of plant managers who regarded their operation as a success. The plant's development displayed a contradiction between the relative autonomy that the factory was afforded in developing capabilities and the power over resources and products mandates retained by top tier management in the United States.

Sunbeam remained US-oriented and rose to become the dominant firm in domestic appliances, displacing Hoover as it reached annual sales in excess of £2 billion by the late 1970s.²⁶ The East Kilbride plant was part of the firm's expansion, but reliance on international, and particularly European, markets also came at a heavy cost to the Scottish subsidiary. In 1960, Mr Bylund, the plant manager, reported to a Board of Trade official that he was concerned that half of total production was exported. Products including electric irons were sold all over the world, including the United States and within the EEC. The latter provided a strategic orientation for the factory within the firm but was also the basis for internal competition.²⁷ Bylund thought selling sixty per cent of production in the UK would provide greater security by incentivising Sunbeam to invest in its British production and that the firm should prioritise penetrating the domestic market. Events over the next ten years validated his concern, especially following the UK's failure to join the Common Market during the 1960s. The plant recovered from the mid-1960s overproduction of domestic appliances by introducing new products and expanding its workforce, which had reached 800 by 1967. In 1966, Sunbeam commenced a factory extension to produce the Shavemaster and an electric carving knife.²⁸

By 1971, however, the workforce had contracted to 350. Local management was 'openly critical of the Sunbeam organisation' which 'invited direct competition between its own

plants sometimes on an unfair basis'. They were especially condemnatory of the decision to hand over all Common Market production to the Italian subsidiary, which was also awarded a product mandate for a food mixer said to be near identical to the model previously designed and produced in East Kilbride. The plant was left dependent on a limited and dated set of products and cut off from a key export market, which was seen as evidence of American management's plans to wind-up the SIEC factory when the lease expired in 1977.²⁹ Despite these setbacks, the East Kilbride plant appeared to win this struggle by becoming 'the sole manufacturing base for Sunbeam products in Europe' in 1981.³⁰ These developments demonstrate the importance of Europeanization to subsidiary development in Scottish appliance manufacturing during these decades. Sunbeam tolerated competition between plants on a basis that permitted functional upgrades and R&D but also left plants vulnerable to the sudden and unpredictable rewarding of product mandates. The East Kilbride factory closed just two years later in the context of a sharp profit squeeze and international corporate restructuring. Closure followed Sunbeam's disastrous merger with Allegheny, who began a fire sale of assets, an outcome that confirmed the ultimately highly dependent nature of the subsidiary (Rosenberg, 2008).³¹

Sunbeam exhibited similar trends to those visible at Burroughs, Hoover and Honeywell. Competition between plants for investment and product mandates determined subsidiary success and failure. Each case study demonstrates some dimensions of a subsidiary lifecycle through a period of growth before employment peaked and other plants grew at their expense. Plant building by the SIEC was important in attracting investment. The European Common Market encouraged both entrepreneurial opportunities and threats as multinationals rationalised continental production during the 1970s and 1980s. Newhouse's status within Honeywell's evolving European presence enabled it to survive. Significantly, Burroughs and Sunbeam both enjoyed functional upgrades through developing R&D capacity and undertaking product development which generated significant export revenues. These achievements question the designation of Scottish subsidiaries as branch plants confined to volume production activities. Honeywell obtained upgrades to its manufacturing processes as it benefitted from Europeanization. Internal competition was governed according to different logics, with Hoover largely competing with other plants in the UK, which was also the case with Burroughs, but Sunbeam principally faced competition from subsidiaries elsewhere in Europe. Where Scottish subsidiaries were able to secure nodes in European production processes, they were made more secure and received upgrades, which was a shared policymaker and management objective.

Barriers to subsidiary development

Scottish policymakers expressed disquiet about the competitiveness of inward investors in world markets and over subsidiaries' internal position from a relatively early stage. A Scottish Economic Planning Board (SEPB) official, A.W. Teel, noted that between 1962 and 1967 engineering redundancy rates more than doubled, from below to above average for the Scottish workforce. The biggest concentration was in the 'other machinery' category, which largely consisted of electronics and electrical engineering. Between 1962 and 1966, Scottish employment in electronics increased by over fifty per cent, approaching four times the overall British rate, but Scotland's share of industrial R&D fell relatively and absolutely. Teel pessimistically concluded that 'at least to some extent the trends result from structural

factors such as the large number of branch factories in Scotland in these growth sectors of industry controlled from headquarters elsewhere'. Large new factories provided intermittent employment but were not developing either the stability or capabilities for Scotland to effectively develop new mass production sectors. Teel felt this was particularly 'disturbing because of the great emphasis we have attached to the long term change in the Scottish industrial structure, resulting from the increase in modern science-based engineering and electrical industries'.³² Instability was transmitted from world markets to Scottish subsidiaries. Both Honeywell and Burroughs struggled to compete with IBM in the mainframe market, which increased the pressures felt by their Scottish subsidiaries and lessened their capacity to engage in the entrepreneurial activities visible at IBM's plant in Greenock. Their vulnerability concerned members of the Scottish Economic Planning Department (SEPD), which succeeded the SEPB in 1975, and was responsible for areas of economic policy devolved to the Scottish Office. They noted that Burroughs held less than four per cent of the world computer market and was 'dwarfed by the giant IBM', who held a majority.³³ The same was also true of Honeywell which held around five per cent in 1970, when IBM's share was seventy per cent (Hood & Young, 1982).

Burroughs' Cumbernauld plant lacked autonomy in both labour relations and product mandates. These coalesced to undermine subsidiary development during the early 1980s. Ian Small, the union convenor for administrative employees, stated his opposition to senior management's treatment of the factory: 'the plant has been sold down the river. Products in demand have been artificially killed off by a management based on the other side of the Atlantic'.³⁴ Eugene Merlino, a Burroughs Vice President, demonstrated a combative attitude towards the Cumbernauld workforce during 1980 when he met SEPD officials on a visit to the United States and complained about rising British wage rates. Further investment in Cumbernauld was dependent on a 'considerable improvement in industrial relations', meaning, in effect, less recalcitrance from the workforce. In this spirit he called for the British government to 'legislate for the enforcement of contracts in the event of strike action'.³⁵ Edward Henderson, the general manager at Cumbernauld, had a very different attitude when he met SEPD staff in 1982. They reported that senior management in Detroit had raised concerns over absenteeism and productivity at the plant. Henderson emphasised the disruption caused by headquarters' decision to insist that redundant workers must see out their three months in lieu, which went against standard procedure. Before the redundancies, performances had been 'first rate', at least level with or surpassing US plants. Cumbernauld had also been characterised by low strike propensity in recent years as the factory recovered from the instability of the early 1970s to turn healthy profits.³⁶

The centrality of low wages to FDI was also inferred by a 1974 investigation into Burroughs by the Department for Industry which confirmed Britain was seen in a favourable light due to having unit labour costs at only three quarters of American rates. This made Scotland an 'attractive manufacturing base' with potential to develop semiconductor production. The same report noted the low value of production relative to turnover, indicating a heavy reliance on externally produced components.³⁷ Scotland's electronics sector struggled to meet the technical requirements of workforce demands later in the decade. It lagged behind American productivity rates but also had a better industrial relations record. Despite this, Merlino was far from isolated in his view of Scottish workers. An SDA official glibly noted the 'uninformed preconception of [Scottish] labour militancy on the part of US companies'.³⁸

The presence of similar priorities is clear from other cases. Correspondence between Board of Trade employees in 1960 related to Sunbeam stated that 'costs in Scotland compared favourably with those of any other Sunbeam manufacturing unit'.³⁹ Sunbeam East Kilbride had a world market remit but was mostly directed towards British and other European sales. Like Burroughs, it shared the vulnerability to external control emphasised by the 'branch plant syndrome' analysis, which was confirmed in its closure during a period of intense corporate restructuring discussed above. Closure at Hoover's Cambuslang plant in 2006 followed the firm being taken over by the Italian company, Candy. An older pattern of internal subsidiary competition with UK and European factories gave way to a new emphasis on core competences and a strategy of East Asian investment. The Cambuslang plant's traditional strengths in production and enduring support from Scottish policymakers were no longer cost competitive.⁴⁰

These Lanarkshire experiences demonstrate the limits that corporate structures can impose on subsidiary development. During the late 1970s, the SEPD concluded that Burroughs was 'rigidly centralised', with its Detroit headquarters dictating product development and investment. The plant remained dependent on the US for specialised microchip production with British operations confined to simple varieties. Clear limits were placed on the autonomy of the subsidiary's R&D.⁴¹ Despite Cumbernauld's record of success in product innovation and support from Burroughs' British headquarters, the subsidiary did not win rights to develop and produce a plasma display panel in 1979. J.F. Hardwick, of Burroughs' British senior management, who had been liaising with the SEPD over the project, wrote to the department expressing disappointment. He commented that 'it would have given me great pleasure to see such a facility provided in Scotland', but Detroit was unwilling to proceed.⁴²

The Cumbernauld plant ultimately closed during 1986, after production of the A5 main-frame computer, which had been developed on site, was moved to the United States, and Scottish production was concentrated in Livingston.⁴³ This confirms Scottish subsidiaries' vulnerability to centralised decision-making and weakness in establishing autonomy even where they had secured functional upgrades. The West Lothian factory closed soon after, during European restructuring in the early 1990s. Unlike Cumbernauld, the Livingston plant was restricted to producing products designed and also manufactured elsewhere.⁴⁴ These trends matched the SDA's concerns about the rise of international competition in the 1980s.⁴⁵ Booz Allen Hamilton (1979) wrote a consultancy report for the SDA about the future of the Scottish electronics sector. It highlighted declining product lifecycles alongside increasing R&D costs and complexity as factors encouraging production rationalisation and the turn towards continental and global production strategies. In 1982, Scottish civil servants assessed Burroughs as an example of a Scottish subsidiary that had succeeded in obtaining global product mandates, but risks were emphasised to plants which relied on imported microchips. These developments confirmed that 'big is beautiful' was the dominant perspective at Burroughs. Cumbernauld was closed in the context of 'worldwide rationalisation' and concentration.⁴⁶ The earlier space that had been provided for product development on a smaller scale disappeared during the early 1980s and headquarter halted attempts to obtain greater resources.

Honeywell's High Technology Unit investment in 1979 was a positive example of a Scottish subsidiary achieving functional upgrades through rationalisation, but the experience was also revealing in its limitations. Tensions within Honeywell's corporate structure

meant that reported project costs had to be minimised in order to retain support from US shareholders. This presentation came at the price of less public financial support, which was calculated as a proportion of total spending. The project did not entail significant R&D development either.⁴⁷ Honeywell's tight integration with the company's international supply chain also minimised spill-over benefits and reduced local embeddedness. It was not among the major subcontractors to Scottish electronics firms, unlike IBM, whose Scottish management enjoyed greater autonomy.⁴⁸ Newhouse's vulnerability to economic shocks and its continued role in providing additional production capacity that can be readily cut back was confirmed in 2009 when 80 of a workforce of around 1,000 were made redundant due to the impact of recession. Honeywell's Corporate Communications Manager for Europe, Middle East and Africa, Zekie Dennehy, rationalised this decision by emphasising Newhouse's status as a plant where employment regularly fluctuated with demand cycles: 'This is normal ongoing business practice to ensure we optimise our manufacturing operations and keep costs down in line with expected demands'.⁴⁹

These findings support Firm's (1975, pp. 164–166) conclusion that the 'branch plant' status of subsidiaries diminished 'the power of Scotland to shape or even strongly influence her own economic future'. Dependent outcomes resulted from the location of 'central office functions' (Firm, 1975, p. 164) relating to product development, production levels and procurement within distant headquarters. Market fluctuations were 'transmitted' (Ibid) to subsidiaries in the form of employment instability. In the cases of Burroughs and Sunbeam it is significant that product development and R&D took place in the plants. These developments demonstrate capability advancement beyond the confines of a branch plant. However, there were limitations, including an ongoing dependency on the capabilities of other subsidiaries and an inability to win or maintain product mandates. Those experiences resemble the wielding of centralised power over subsidiaries more closely than the mutual dependencies of an integrated network. Where subsidiaries produced innovations, they could be striped of the benefits. The loss of products mandates at Hoover, Sunbeam and Burroughs undermines the extent to which they can be understood as achieving 'developmental' outcomes. Entrepreneurship and capability development were undermined by headquarters decisions which limited autonomy. Market pressures and the tendency of core management to deny plant managers the capacity to pursue entrepreneurial activities prevented the sustained realisation of subsidiaries' potential to obtain functional upgrades.

Spill-overs and competition

Subsidiary development was inhibited by international competition whilst the spill-over effects secured from inward investment were relatively limited. Comments from Burroughs during the 1970s demonstrate how an ambitious plant management that was committed to developing the firm's presence in Scotland faced difficulties in embedding their subsidiary within the surrounding economy. They reported a 'lack of suitable suppliers' and an 'absence of good quality labour', leaving them dependent on imported components and unable to upgrade production processes. Furthermore, the absence of a continental airlink to Glasgow and customs facilities retarded the growth of exports.⁵⁰ The Cumbernauld plant also had to source important components including discs from elsewhere in the firm.⁵¹ These factors may have shaped the eventual awarding of product mandates to rival subsidiaries. Burroughs was typical of the broader Scottish picture. In 1979, the SDA estimated only twelve per cent

of electronics components were sourced in Scotland and only a third of subcontract work was completed in Scotland.⁵² The SDA concluded that Burroughs and Honeywell viewed their Lanarkshire factories as low-cost 'feeder plants designed to assemble products in high volume' without significant R&D or marketing functions.⁵³ Aside from IBM, there were other contrasting cases of inward investment in Scotland such as National Cash Register's (NCR) operation in Dundee which had 'full product autonomy' and acted as a 'world centre' for ATMs. By 1986, the year that Burroughs closed its Cumbernauld plant, manufacturing labour had fallen to under half of the total workforce after thirty years of production.⁵⁴ NCR's continued presence in Dundee is testament, like IBM, to the success of subsidiaries which achieved functional upgrades in the context of a decentralised multinational with a world-leading market share (Tomlinson et al., 2022).

Scottish policymakers were aware of challenges to realising spill-overs from inward investment. In 1980, the SDA sought to extend technical education in colleges and universities and to include training providers in its negotiations with potential investors.⁵⁵ They also emphasised the 'need for action to curb foreign imports', and develop domestic capacity to manufacture printed circuit boards, which Honeywell demonstrated could be achieved.⁵⁶ Earlier action on these lines, combining workforce technical training with more assistance to domestic firms in linking up with supply chains may have improved Scottish spill-overs and the long-term viability of subsidiaries. Recent research has suggested workforce training initiatives are one reason that German electronics subsidiaries have proved more enduring than their Scottish counterparts (McKeeman, 2020). These policies assisted the development of new capabilities which sustained functional upgrades and competitive advantages that were more difficult for competitors to imitate. A criticism that emerges from the approach to Scottish research and training policy, including significant investment in academic research around Edinburgh, is that it was comparatively distant from the requirements of the wider Scottish electronics sector. In addition, it lacked the capacity to scale up or support potential suppliers to large plants.⁵⁷

International competition, as opposed to threats from within the UK, were ultimately dominant in the lives of the case study subsidiaries. Scottish policymakers were broadly successful in supporting plants competing with rivals in the UK. Burroughs' closure of their Cumbernauld plant is best seen within a phased retreat from Scotland in the context of recentralisation, rising development costs and shorter product lifespans than as a solitary closure. Ireland's Industrial Development Agency came to represent a pertinent threat to Scottish subsidiaries. An SDA report from 1978 referred to their Irish counterpart's 'sophisticated and tenacious effort' to achieve electronics investment in a context where they possessed considerably greater policy autonomy.⁵⁸ After Ireland beat Scotland to a major investment by Amdahl in 1980, John Firn concluded that 'losing this case is symptomatic of our problems' before going on to underline the importance of retrospective approval to Irish successes and Scottish failures.⁵⁹ Earlier the same year, the SDA's Chief Executive, Lewis Robertson, had stated that Ireland was 'being pulled out of what is essentially a peasant economy'.⁶⁰ His comments can be read as both patronising but also an anticipation of the competition Scottish subsidiaries faced from newly industrialising countries in the following decades. Alongside the more focussed criticisms of policy in this section, a more generalised one is that, especially as electro-mechanical engineering gave way to electronics, Scotland's substantial industrial tradition offered few advantages. The approach to inward investment Toothill championed included abandoning considerable domestic

engineering capacity and the SDA was left attempting to rebuild connections later, as international competition grew for the lower value-added roles that predominated in Scottish subsidiaries. It was not that Scottish plant managers were unwilling to pursue developmental approaches, but their positioning both within their parent firms and Scotland's industrial structure did not favour them.

Conclusion

This article's findings contribute to debates on the development of Scottish subsidiaries by focussing on the perspectives of policymakers and their interaction with subsidiary managers. From this vantage, a qualified support for the earlier branch plant syndrome perspective is presented. The case studies demonstrate a concentration in low value-added assembly activities. However, policymakers were aware of these dangers and in at least some cases plant management did engage in innovative and entrepreneurial activities, as is exemplified by product development at Burroughs and Sunbeam. The centralisation of multinationals and the undertaking of continental and then global restructuring both created opportunities for and threats to Scottish subsidiaries. Although they faced competition within Britain, generally Scottish policymakers were adept at supporting subsidiaries in contests against factories in other parts of the UK. International competition was more difficult, especially where this involved competing against plants that enjoyed privileged access to markets, such as when Sunbeam lost its product mandates to an Italian subsidiary before the UK had joined the EEC. Later job losses and failure to attract subsequent investment followed two trends. The first was competition based on the incentives and on lower wages offered by competitors such as Ireland from the late 1970s and, later, emerging market economies. A second was European and then global rationalisation. Episodes of rationalisation presented opportunities, especially at Honeywell. The Newhouse plant was able to secure several phases of investment and become a key node in European production. By comparison, Burroughs lost out as space for comparatively autonomous R&D disappeared. Policymakers will benefit from anticipating these rounds of reorganisation or at least understanding where a subsidiary is situated within international production and attempting to entrench it within identified niches.

Three important factors have been identified that condition success and failure in subsidiary entrepreneurship. Firstly, a multinational's strength in product markets is essential to developing the scope for functional upgrading. IBM's domination of the world computer market created the slack that allowed its Greenock operation to achieve capability upgrades. By comparison, Burroughs and Honeywell were constrained by their firm's much weaker position. Both subsidiaries resultantly experienced employment instability and product market weakness that prevented the plants becoming more strongly embedded within Lanarkshire. Secondly, a subsidiary's relative internal strength within a national or global region context is important in determining future investment during rationalisation. Honeywell Newhouse's status as a marquis investment allowed it to benefit from Europeanization strategies. Hoover and Burroughs competed with other plants in a UK and then European setting, whilst Sunbeam largely faced competition from sister European plants. Success and failure in competition for product mandates were essential to determining plant survival or closure. Thirdly, firm governance structure had a major effect on whether subsidiaries could successfully exercise entrepreneurial agency. The extent of centralisation

and mechanisms for managing competition between subsidiaries were key factors. Both Sunbeam and Hoover experienced major corporate restructuring following takeovers, which significantly diminished their ability to compete internally. Cost control imperatives influenced investment in capacity at Honeywell and Burroughs, limiting the level of state assistance that the plants could obtain. These trends were most clearly marked at Burroughs. The Cumbernauld factory was closed after it lost product mandates for a computer designed at the plant and it was also prohibited from undertaking cutting-edge R&D. Sunbeam similarly lost the benefits of local R&D as part of the corporation's Common Market policy which reassigned product mandates to the Italian subsidiary. There is a strong coalescence between these factors. Where a subsidiary enjoys autonomy and is integral to the development and production of competitive products it has the resources to adapt effectively. In a Scottish context, the evolution of IBM and NCR demonstrate that, as does Honeywell.

Policymakers must be alert to these dynamics when attracting investment. Spill-overs are far from guaranteed and their extent is also strongly dependent on the domestic industrial structure as well as upon the capabilities developed within a subsidiary. It is notable that the extent of embeddedness developed at IBM surpassed Burroughs and Honeywell. IBM's engagement of local suppliers is indicative of subsidiary successes and autonomy. However, Burroughs' development was hampered by struggles to obtain suitably qualified labour and components which was part of a larger trend. Early policy attention to workforce training and to developing a supply sector is crucial to obtaining benefits from inward investment. Those considerations should shape discussion on the decision to prioritise particular sectors over others, with an emphasis on how they match up with existing capabilities. Subsidiaries can only be as enduring as the local and national environment in which they develop allows them to be.

Notes

1. University of Glasgow Archives, John Firth's University of Glasgow research projects, Scottish Development Agency, Firth Crichton Roberts Ltd (hereafter ACCN 3700) 8/5/3 John Firth, SDA, Edinburgh 'Confidential note to the Chief Executive and Chairman [of the SDA] 'How the west was lost article', 22 February 1982; John R Firth 'John R Firth CV', *Scottish Government* <<http://www.scotland.gov.uk/Resource/Doc/921/0048410.pdf>> [accessed 3 April 2020].
2. Gordon Thomson 'The End of a Dream: It was the Heart of Silicon Glen, Employing 2500 workers: Now the Motorola Factory is a Heap of Rubble', *Evening Times*, 25 April 2009 <<http://www.eveningtimes.co.uk/news/the-end-of-a-dream-it-was-the-heart-of-silicon-glen-employing-2500-workers-now-the.17390384>> [accessed 16 April 2020]. Historical investment value, £250 million in 1994.
3. National Records of Scotland (hereafter NRS)/Scottish Economic Policy (hereafter SEP)4/585/8A R.L. Meier, University of Chicago, 'Industrial Planning in Scotland: The Role of New Technology in The Economic Development of a Region', 9 June 1950.
4. NRS/SEP 4/1827/21 Sarah C. Orr, Paper 45 (1962).
5. Historical export values, £75 million in 1964 and £367.1 million in 1972.
6. NRS/SEP/4/13 Secretary of State for Scotland, Hector McNeil, to Lord Bisland, 27 July 1950; NRS/SEP/4/13/22 letter from D.D. Mills, Board of Trade and Ministry of Supply to J.B. Fleming Dept of Health for Scotland, Edinburgh (1950).
7. NRS/SEP/4/1629 'Non-Stop Hoover will Lead', *Phase*, May 1974, p. 2.
8. NRS/SEP 4/13 press cuttings folder, '100 new jobs at Cambuslang', *The Financial Reporter*, 28 January 1970.

9. NRS/SEP/4/13/15 Extract from the minutes of the 110th meet of the Distribution of Industry Panel for Scotland held 15 September 1950.
10. NRS/SEP 4/13 press cuttings folder, 'Hoover to expand at Cambuslang', *Glasgow Herald*, 18 September 1969.
11. NRS/SEP4/3706/1 A comparative Study of Corporate strategies of Manufacturing MNEs operating in high levels of regional assistance in UK and Eire (1980) annex E and annex F.
12. 'Hoover to Close Scots Plant', *BBC News*, 8 October 2003 <<http://news.bbc.co.uk/1/hi/scotland/3173484.stm>> [accessed 20 April 2020].
13. 'The Hoover Company', *Reference for Business* <<https://www.referenceforbusiness.com/history2/93/The-Hoover-Company.html>> [accessed 26 October 2020].
14. NRS/SEP/4/1629, press cutting folder, 'Common Market's effect on Factory's Expansion', *Glasgow Herald*, 29 May 1962.
15. NRS/SEP/4/1629 press cutting folder, 'New Jobs Book for Scotland', *Scotsman*, 21 November 1962.
16. SEP 4/1629, J.H. McGuinness, 'Honeywell', note for Mr Fraser and Mr Hendry, 4 March 1971.
17. NRS/SEP/4/1629 J.H. McGuinness, note for Mr Fraser and Mr Hendry, 'Honeywell', Scottish Development Department, 4 March 1971; SEP/4/1629 press cuttings folder 'Honeywell Giants in Scotland', *Glasgow Herald*, 19 April 1972. Order was £75 million in 1972 value.
18. NRS/SEP 4/1629 Department of Employment, Honeywell Ltd: Outline of Scottish Operation and Manpower Details (1974).
19. NRS/SEP/4/4075/5 Application for Assistance under the Non-Ferrous Foundry Scheme Honeywell Limited, SEPD, 24 April 1979.
20. Ibid.
21. NRS/SEP/4/3791/26/3 Background note for the meeting between the Minister for Industry and Mr R.W. Macdonald, President of the Burroughs Corporation to take place on 24 July 1972.
22. NRS/SEP/4/3791/27/4, Briefing on regional aspects for the Minister of Industry's meeting with the US and UK Management of Burroughs Machine Limited on 26 January 1972.
23. NRS/SEP/4/3791/28/5 Note for Minister for Industrial Development, 5 May 1972.
24. NRS/SEP/4/3791/22 A.G. McKenzie, SEPD Industrial Development Division, Note for the File: Burroughs UK Limited, 30 June 1978.
25. NRS/SEP/4/3791/23 J.S. Robertson, Note for File: Burroughs UK Ltd, 6 June 1978. Historical profit values, £4 million in 1976 and £10 million in 1978.
26. 'Sunbeam-Ostler Co' *Reference for Business* <<https://www.referenceforbusiness.com/history2/20/Sunbeam-Oster-Co-Inc.html>> [accessed 26 October 2020]. Historical value of over \$1 billion in 1981.
27. NRS/SEP/4/567/18 C.J.A. Whitehouse to Mr Macbeth, Board of Trade, 'Sunbeam Electric Limited', 12 December 1960.
28. NRS/SEP/4/568/1 E.M. Smith, Board of Trade, Sunbeam Electric Limited, 12 May 1966.
29. NRS/SEP/4/568/38 Miss D O'Callaghan, File Note: Sunbeam Electric Limited, East Kilbride, 20 May 1971.
30. HC Deb 17 February 1981 vol.999 cc.169 *Hansard* <<https://api.parliament.uk/historic-hansard/commons/1981/feb/17/talbot-linwood>> [accessed 4 May 2020].
31. 'Sunbeam to close Scottish Factory', *Guardian*, 5 April 1983, p. 3.
32. NRS/SEP/4/2337 A.W. Teel to Mr Grant, SEPB, Edinburgh, 'Redundancies and Unemployment Change', 6 September 1967.
33. NRS/SEP4/3791 SEPD Industrial Development Division, Burroughs Machines Limited Scotland, 18 December 1975.
34. NRS/SEP/4/5667/12 'How the Burroughs Programme just Failed to Add Up' *Scotsman*, 7 August 1981.
35. NRS/SEP4/3791/29 Miss D O'Callaghan, SEPD, Ministerial Visit to the USA Sep/Oct 1980, 4 November 1980.
36. NRS/SEP/4/3791/45 Burroughs: Cumbernauld (1982); NRS/SEP 4/5667 E.M. Henderson, General Manager, Burroughs, Cumbernauld to G. McCrone Secretary and Chief Economic Advisor SEPD, Edinburgh, 22 December 1981.

37. NRS/SEP/4/3791/10A Department of Industry for Scotland, Burroughs Machines Limited, 1 April 1974.
38. NRS SEP/4/3706 SDA Strategic Planning Unit, SDA Strategy for the Development of the Electronics Industry in Scotland: A Synopsis of the phase 1 report prepared by Booz Allen Hamilton, December 1978.
39. NRS/SEP/4/567/18 C.J.A. Whitehouse to Mr Macbeth, Board of Trade, 'Sunbeam Electric Limited', 12 December 1960.
40. Douglas Dickie, 'End of an Era', *Daily Record*, 27 August 2008 <<https://www.dailyrecord.co.uk/news/local-news/end-era-demolition-work-2630044>> [accessed 20 April 2020].
41. NRS/SEP/4/3791/22 A.G. McKenzie, SEPD Industrial Development Division, Note for the File: Burroughs UK Limited, 30 June 1978.
42. NRS/SEP/4/3791/31 Letter from J.F. Hardwick to Miss ME Shanks SEPD, Edinburgh, 5 February 1981.
43. NRS/SEP/4/4070/30+1 Written Answer Hansard; NRS/SEP/4/4070/14 *Glasgow Herald*, 8 January 1986.
44. CBR Staff Writer, 'Unisys Shuts Livingston', *Computer Business Review*, 7 October 1991.
45. ACCN 3700/8/5/3 John Firn, note to Ken Smith, 'Electronics Company Problems', 26 May 1981.
46. NRS/SEP/3791/64 Burroughs Machines Limited: Scottish Operations, 1 October 1982.
47. NRS/SEP/4/4075/11 G. Skelton, SEPD, File Note: Honeywell Limited, Newhouse Meeting at Newhouse, 10 January 1979, 15 January 1979; SEP 4/4075/26 J. Thomson, SEPD, File Note: Honeywell Process and Control Newhouse, Motherwell, 26 May 1979.
48. ACCN 3700/8/5/3 SDA Planning and Projects Directorate 'The Scottish Electronics Subcontractors and Components Suppliers Industry' (1981).
49. Andrew McGilvary, '80 More Jobs go as Honeywell is Hit by the Credit Crunch', *Hamilton Advertiser*, 15 January 2009 <<http://www.hamiltonadvertiser.co.uk/news/local-news/hamilton-news/2009/01/15/80-jobs-to-go-as-honeywell-is-hit-by-credit-crunch-51525-22694825/>> [accessed 20 April 2020].
50. NRS/SEP/4/3791/16 Burroughs Machines Ltd Scotland, 18 December 1975.
51. NRS/SEP/4/3791/22 A.G. McKenzie, Note for the File: Burroughs UK Ltd, 30 June 1978; SEP/4/3791/23 J.S. Robertson, Note for file: Burroughs UK Ltd, 6 July 1978.
52. ACCN 3700/8/5/3 SDA Planning and Projects Directorate, The Scottish Electronics Subcontractors and Components Suppliers Industry (1981).
53. Ibid.
54. ACCN 3700/7/15 3700/7/15, *Labour Performance of US Plants in Scotland* (Edinburgh: Firn Chrichton Roberts Ltd, 1986).
55. ACCN 3700/10/2 John Smith to Ken Smith, 24 June 1980.
56. ACCN 3700/10/2 Note to SDA Chief Executive, Edward Cunningham, 18 June 1980.
57. NRS/SEP/4/1118 The Electronics Industry in Scotland: Current Issues and Future Prospects, 25 August 1978.
58. NRS SEP/4/3706 SDA Strategic Planning Unit, SDA Strategy for the Development of the Electronics Industry in Scotland: A Synopsis of the phase 1 report prepared by Booz Allen Hamilton, December 1978.
59. ACCN 3700/10/2 J.R. Firn to Jim Gorrie, subject: Amdhal's Move to Eire (1980).
60. James Watson, 'The 'Red Clyde' Image Haunts Scotland', *Evening Times*, 10 March 1980, p. 1.

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References

- Abercrombie, P., & Matthew, R. (1949). *The Clyde Valley regional plan 1946*. HMSO.
- Bartlett, C., & Ghoshal, S. (1989). *Managing across borders: The transnational solution*. Harvard University Press.
- Birch, K., MacKinnon, D., & Cumbers, A. (2010). Old industrial regions in Europe: A comparative assessment of economic performance. *Regional Studies*, 44(1), 35–53. <https://doi.org/10.1080/00343400802195147>
- Birkinshaw, J., Hood, N., & Young, S. (2005). Subsidiary entrepreneurship, internal and external competitive forces, and subsidiary performance. *International Business Review*, 14(2), 227–248. <https://doi.org/10.1016/j.ibusrev.2004.04.010>
- Booz Allen Hamilton. (1979). *The electronics industry in Scotland: A proposed strategy prepared for the SDA*.
- Burger, A., Jindra, B., Marek, P., & Rojec, M. (2018). Functional upgrading and value capture of multinational subsidiaries. *Journal of International Management*, 24(2), 108–122. <https://doi.org/10.1016/j.intman.2017.09.004>
- Cameron, G. C. (1966). *Industrial movement and the regional problem*. Oliver and Boyd.
- Cantwell, J., Dunning, J. H., & Lundan, S. M. (2015). An evolutionary approach to understanding international business activity: The co-evolutionary of MNEs and the institutional environment. In J. Cantwell (Ed.), *The eclectic paradigm: A framework for synthesizing and comparing theories of international business from different disciplines* (pp.192–223). Palgrave Macmillan.
- Chandler, A. (1962). *Strategy and structure: Chapters in the history of the industrial enterprise*. Harvard University Press.
- Clark, K., & Ramachandran, I. (2019). Subsidiary entrepreneurship and entrepreneurial opportunity: An institutional perspective. *Journal of International Management*, 25(1), 37–50. <https://doi.org/10.1016/j.intman.2018.06.001>
- Cowie, J. (2001). *Capital moves: RCA's seventy-year quest for cheap labour*. Cornell University Press.
- Dimitratos, P., Liouka, I., Ross, D., & Young, S. (2009). The multinational enterprise and subsidiary evolution: Scotland since 1945. *Business History*, 51(3), 401–425. <https://doi.org/10.1080/00076790902844013>
- Dimitratos, P., Plakoyiannaki, E., Thanos, I., & Förbom, Y. K. (2014). The overlooked distinction of multinational enterprise subsidiary learning: Its managerial and entrepreneurial learning modes. *International Business Review*, 23(1), 102–114. <https://doi.org/10.1016/j.ibusrev.2013.08.003>
- Dunning, J. H. (1980). Towards an eclectic theory of international production: Some empirical tests. *Journal of International Business Studies*, 11(1), 9–31. <https://doi.org/10.1057/palgrave.jibs.8490593>
- Finlay, R. J. (2004). *Modern Scotland: 1914-2000*. Profile.
- Firn, J. (1975). External control and regional policy. In G. Brown (Ed.), *The red paper on Scotland* (pp.153–169). Edinburgh University Student Publication Board.
- Gereffi, G. (2014). Global value chains in a post-Washington consensus world. *Review of International Political Economy*, 21(1), 9–37. <https://doi.org/10.1080/09692290.2012.756414>

- Gooberman, L. (2020). Business failure in an age of globalisation: Interpreting the rise and fall of the LG project in Wales 1995–2006. *Business History*, 62(2), 240–260. <https://doi.org/10.1080/00076791.2018.1426748>
- Harvie, C. (1993). *No gods and precious few heroes: Twentieth-century Scotland*. Edinburgh University Press.
- Hood, N., & Young, S. (1982). *Multinationals in retreat: The Scottish experience*. Edinburgh University Press.
- Jones, G. (2006). The end of nationality? Global firms and borderless worlds. *Zeitschrift für Unternehmensgeschichte*, 51(2), 149–165. <https://doi.org/10.1515/zug-2006-0203>
- Knox, A., & McKinlay, A. (2011). The union makes us strong? Work and trade unionism in timex, 1948–1983. In J. Tomlinson & C. Whatley (Eds.), *Jute no more: Transforming Dundee* (pp. 266–290). Dundee University Press.
- Kostova, T., Marano, V., & Tallman, S. (2016). Headquarters-subsidiary relationships in MNCs: Fifty years of evolving research. *Journal of World Business*, 51(1), 176–184. <https://doi.org/10.1016/j.jwb.2015.09.003>
- Liu, Y. (2019). The processes of new product development recentralization towards a transnational emphasis in multinational corporations. *Journal of International Management*, 25(1), 19–36. <https://doi.org/10.1016/j.intman.2018.05.003>
- MacKinnon, D. (2012). Beyond strategic coupling: Reassessing the firm-region nexus in global production networks. *Journal of Economic Geography*, 12(1), 227–245. <https://doi.org/10.1093/jeg/lbr009>
- McDermott, M. C. (1989). *Multinationals: Foreign divestment and disclosure*. McGraw-Hill.
- McKeeman, J. (2020). *Regional economic policy for foreign direct investment: Lessons from motorola's investment in Scotland between 1969–2001* [MSc dissertation]. University of Glasgow.
- Perchard, A., & MacKenzie, N. G. (2021). Aligning to disadvantage: How corporate political activity and strategic homophily create path dependence in the firm. *Human Relations*, 74(7), 978–1006. <https://doi.org/10.1177/0018726720908923>
- Perchard, A., MacKenzie, N. G., Decker, S., & Favero, G. (2017). Clio in the business school: Historical approaches in strategy, international business and entrepreneurship. *Business History*, 59(6), 904–927. <https://doi.org/10.1080/00076791.2017.1280025>
- Phillips, J., Wright, V., & Tomlinson, J. (2019). Deindustrialization, the Linwood car plant and Scotland's political divergence from England in the 1960s and 1970s. *Twentieth Century British History*, 30(3), 399–423. <https://doi.org/10.1093/tcbh/hwz005>
- Randall, J. N. (1985). New towns and new industries. In R. Saville (Ed.), *The economic development of modern Scotland, 1950–1980* (pp. 245–269). John Donald.
- Rosenberg, H. (2008). *The vulture investors*. Wiley.
- Rugman, A. M., & Verbeke, A. (2003). Extending the theory of the multinational enterprise: Internalization and strategic management perspectives. *Journal of International Business Studies*, 34(2), 125–137. <https://doi.org/10.1057/palgrave.jibs.8400012>
- Schaufelbuehl, J. M. (2016). The transatlantic business community faced with US direct investment in Western Europe, 1958–1968. *Business History*, 58(6), 880–902. <https://doi.org/10.1080/00076791.2015.1128895>
- Scottish Council Research Institute. (1974). *US investment in Scotland*.
- Tomlinson, E., & Gibbs, E. (2016). Planning the new industrial nation: Scotland 1931 to 1979. *Contemporary British History*, 30(4), 584–606. <https://doi.org/10.1080/13619462.2016.1209009>
- Tomlinson, J., Phillips, J., & Wright, V. (2022). De-industrialization: A case study of Dundee, 1951–2001, and its broad implications. *Business History*, 64(1), 28–54. <https://doi.org/10.1080/00076791.2019.1676235>
- Toothill, J. N. (1961). *Inquiry into the Scottish economy 1960–1961: Report of a committee appointed by the Scottish Council (Development and Industry) under the chairmanship of J.N. Toothill*. SCDI.
- Turok, I. (1993). Inward investment and local linkages: How deeply embedded is 'Silicon Glen'? *Regional Studies*, 27(5), 401–417. <https://doi.org/10.1080/00343409312331347655>
- Vernon, R. (1966). International investment and international trade in the product cycle. *The Quarterly Journal of Economics*, 80(2), 190–207. <https://doi.org/10.2307/1880689>