Industrial clustering in a peripheral region: Path dependence and creation in the Scottish Highlands

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This chapter analyses the sustained attempts at extending and establishing industrial clusters and schemes in the Scottish Highlands through a series of private and government-promoted economic development initiatives. These attempts encapsulated relational changes between the region and government, and contingency as key components of the choices made in seeking to stimulate economic growth. However, they were often overshadowed by prevailing narratives of the Highlands as a failing region, which remained dominant amongst policy makers, economists and wider publics. This chapter highlights the damaging effect that redolent, but ill-informed, rhetoric projecting the Highlands and Islands as lacking in industry and "peopleless place" (McCrone, 2005, p.358) had on the region. A notable feature of industrial developments in the region until the 1960s was that they were driven predominantly by local and private sector initiatives with minimal state intervention, with the exception of the North of Scotland Hydro Electric Board (NSHEB) launched in 1943 (itself informed by earlier commercial developments). We explore this through attempted industrial cluster development activities characterised by path creation and dependence.

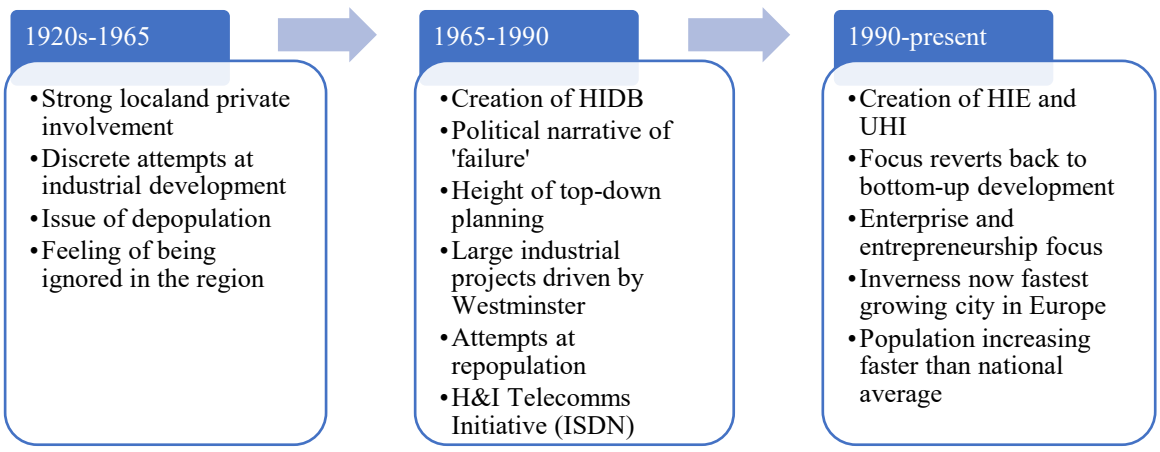
Introduction

Path dependence has been used to explain different patterns of regional economic development and evolution (Martin and Sunley, 2006). However, more recent work has suggested that the "lock-in" element of the path dependence explanation of regional economic development is "a restrictive and narrowly applicable account of regional and local industrial evolution, an account moreover that is tied to problematic underpinnings based on equilibrist thinking" (Martin, 2010, p.1). Consistent within this is the recognition that path dependence analyses often miss the importance of contingency – a subject that historians are acutely aware of the importance of (Perchard et al, 2017). The concept of path creation has therefore emerged as another way of understanding regional economic development which

considers the process of change, place, and the agency of actors that helps drive it as critical factors in explaining regional economic development (Boschma, 2007; MacKinnon et al., 2019). It is on this basis that we look at the example of the Highlands and the attempts at "de-locking" (Zeitlin, 2003) the area from its characterisation as "peopleless" and lacking in industry.

Consistent within the ideas of path dependence and path creation in regional studies is the recognition of the value that historical analysis can bring to understanding economic development of regions, as well as the importance of characterising change rather than continuity. In their 2010 critique of the "New Economic Geography", Garretson and Martin observed that the "actual history of economic landscapes", rather than a pre-determined "set of possible equilibrium economic landscapes", is vital to determining more representative models of economic development (pp137, 151). In arguing this, Garretson and Martin are stating the need for a better understanding of the roles of individuals and contingency in explaining how regional economic development occurs. This requires a more holistic and detailed analysis of the motivations, actions, and contextual factors influencing individuals in regions over time and how the interplay of these conditions affects our understanding of regional economic development. By exploring attempts at cluster development in the Scottish Highlands we consider notions of path creation and dependence and how they explain such attempts in the region.

We explore the economic and policy approaches to the Highlands and Islands historically, as well as treatment of the region by historians, using three specific periods in modern Highland history: 1900s-1965, 1965-1990, 1990-present, illustrated below with rationale and key developments:



Methodologically, this is explored in three vignette historical analyses of industrial cluster development specifically around the Lochaber area of the West Highlands, the establishment and activities of the Highlands and Islands Development Board (HIDB), culminating with an analysis of the HIDB's replacement Highlands and Islands Enterprise (HIE). In exploring these different attempts at cluster creation, we underpin our analysis with the argument that historical work is critical to understanding clusters (Popp and Wilson, 2007), and how institutional actors can help create new paths in clusters (Simmie, 2012) and regions (MacKinnon et al., 2019) through purposive action designed towards facilitating change. During the course of this, we examine the roles of differing and varying levels of governance and principal agents within that process (in both private and public roles), as well as changing context, comparisons, and contingencies. In so doing we demonstrate changes to the nature of the interactions between local authorities, business and political actors, and Scottish national and UK level governance over time, the responsibility and impact of changes in governance, and how we might better understand the development of industrial clusters in a peripheral area of the UK.

The Highlands and Islands: a peripheral "peopleless place"

For much of the twentieth century, the Scottish Highlands and Islands were characterized as a problematic area for industrial and economic development. Understood as peripheral and sparsely populated, the area suffered from historic problems of depopulation, subsistence industry, and perceived poor industrial and economic development potential. Within the literature and academic outputs, the region was often analysed as a marginalised land that time forgot, or as a place with no distinctions but problems to be solved centrally. In an influential intervention, the leading sociologist of Scottish national identity, David McCrone, remarked: 'If treating Scotland as a whole as "peripheral" and "underdeveloped" is somewhat problematic, it is the Highlands of Scotland which have attracted the description most often' (McCrone 1992, pg. 49-50). The prevalent view, to which McCrone referred, has been sustained by economists, human geographers, and policymakers alike.

Much of this was posited around the apparent historical dependence of the region on agriculture and related industries – mostly structured around fishing and crofting (the system of small-holder farming associated with the Scottish Highlands), framing the area as 'backward' against the backdrop of rapid industrialization and urbanization in the rest of

Scotland. American geographer Ralph Stockman Tarr's observations of the Highlands when visiting in 1907 are indicative of such attitudes; subsequently referring to it as an, 'unproductive region', lacking in the 'basis for development of a high degree of enterprise' (pp.743-4). Equally dismissive, and even more damaging, were those of economist W R Scott in his report for the Board of Agriculture for Scotland in 1914:

> With reference to the prospects of industries in the Highlands, it is necessary to speak with a certain amount of circumspection, more especially when one remembers how events have hitherto falsified optimistic forecasts and have confirmed those of a pessimistic nature… it is necessary to discount largely from hopeful anticipations of industrial progress in the Highlands (Scott, 1914, p.143; Baldwin Brown 1915).

This is a view that has persisted (Mackay and Buxton 1965; Newlands 2005), despite early recognition that the region contained many sub-regional economies and was characterized by mixed activities (Day 1918; HIDB 1966). Crucial to this has been the historic place of crofting and fishing, not as principal clusters of employment, but as subsistence activities, undertaken on a seasonal or part-time basis (Devine 1979). As a result of these conditions, the region for much of the twentieth century was characterised by an ongoing political narrative of being a problematic area needing to be 'solved' either by private initiative of its inhabitants, or by the hand of the state.

The stereotypical distinction between the peripheral (and rural) Highlands and Islands, on the one hand, and the crowded cities of lowland Scotland has served visibly to inure in the approach to both the research agenda and policymaking and planning on the area what psychologists would refer to as 'bounded rationality' – the limiting of knowledge, and investigation, because of fixed parameters (Simon, 1991). Such interpretations have had the effect of creating a degree of 'path dependence' in the region in terms of the effects on both policymaking and perceptions of it as a depressed area with little consideration of longstanding industrial and economic development. Unsurprisingly such detractions also discouraged inward investment (Perchard and MacKenzie, 2013).

Despite these characterisations of the region, there was significant industrial development promoted initially by private capital, then latterly by the state, before a shift back to bottom-up development. Consistent within these periods were attempts at addressing the peripherality of the area through industrial clustering. Significant strides have been made in

the region since the 1990s in industrial and economic terms, seeing repopulation, industrial diversification, and infrastructural development happening at increasing rates. At the heart of this recovery, as Devine (2005), Hunter (2005) and Perchard and MacKenzie (2013) note is the imperative for a historical reappraisal unencumbered by stereotypical characterisations of the area. Significantly, this is also imperative to "de-locking" (Zeitlin, 2003) the region from any residual impressions of it as 'depressed' and economically peripheral. By focusing on the various attempts at regenerating the region across different local territories and time periods, we show that there has long been entrepreneurial capital in the Highlands and Islands which has helped it sustain and eventually thrive. Cluster development is a part of this story, but one which has typically been successfully promoted by private sector attempts rather than the visible hand of the state.

This starts with a reappraisal of the early modern period. In a rare departure in the historiography Devine (2005) emphasised that from 1750 to 1841 key sectors within the Highland economy (and market penetration both of raw materials and finished products)– notably kelp, linen, wool, slate, and whisky – were inextricably linked to the Scottish and British economy. Another feature of the 18th century industrial developments was an economy also based on the region's energy resources – such as iron smelting from charcoal, and then in whisky production – was to be reflected in the late 19th and 20th centuries, first with the use of water power for aluminium smelting (and subsequently also through the NSHEB, other industries), followed by oil and gas, and finally wind and wave power in the region in the 21st. Such connections remained throughout the nineteenth and twentieth centuries, but were subject to the strains of depopulation and the loss of talent and capital in the region.

It is no surprise that this stigmatization of a region had the damning effect of limiting the diffusion of knowledge, capital accumulation, and structural change required for the region to catch up. This was doubly-damaging for a region that had shed much 'social capability', through the loss of some of the most economically active, entrepreneurially-minded and educationally aspirant brackets of its society to the urbanized areas to the south, and Empire colonies outside the UK (Abramovitz, 1986). This was pointedly illustrated by the observations of Sir Alexander Cairncross who served on the Royal Commission on the crofting counties (the Taylor Commission) from 1951-55. Ruminating on the Taylor Commission's predicament over forty years later, Cairncross observed: 'It was not apparent

what we could usefully recommend. Our chairman was obviously anxious to report in favour of the Highlands as a supplement to the limited possibilities offered by crofting' (Cairncross 1998, p.161). This was, however, faced with a major obstacle: 'if it took a steady flow of millionaires to run factories in the Highlands, we might as well forget about industrial development' (Ibid.). The Highlands was then viewed as a difficult, if not intractable problem for regional policymakers in both Edinburgh and London which in turn conditioned approaches to the area.

It is here that we will now focus on the driving force behind attempts at industrial cluster development in the Lochaber area of the West Highlands (and an exemplar of the multiple levels of governance and key actors involved) in the first half of the 20th century. While much is understandably made of the advent of the North of Scotland Hydro Electric Board (NSHEB) by Secretary of State Tom Johnston in 1943 (Payne, 1988) – which did realise profound economic and social gains for the region – the standard bearer in these industrial developments and expansion of urban development were a mixture of private investors (the British Aluminium Company Ltd (BACo) and a supporting cast of more far-sighted landowners, regional politicians, and Highland development promoters (Cameron of Lochiel, Lord Lovat, Mackintosh of Mackintosh, Sir Alexander MacEwen, and Dr Lachlan Grant). BACo's upstream smelter developments, as the ensuing focus illustrates, made a significant contribution to the west Highlands and the region more broadly. BACo's success encouraged the British Oxygen Company (BOC) to attempt to establish a calcium carbide and ferro-alloy plant in the West Highlands in the 1930s. British Aluminium's hydro-electric schemes and smelters also directly influenced the findings of the Cooper Committee into hydro-electric leading to the foundation of the NSHEB (Perchard, 2012, 2013).

"The salvation of this district and far beyond": Aluminium production and expansion in the West Highlands

British Aluminium established their first aluminium reduction works and hydro-electric scheme at Foyers on the banks of Loch Ness in 1896. Like their historical predecessors in the iron smelting industry in the 17th and 18th century, who had been attracted by the region's supply of charcoal, British Aluminium had been attracted to the Highlands by the region's energy resources; in this case hydro-electricity. BACo followed this with an even more

ambitious hydro scheme and smelter at Kinlochleven, building an entire industrial village around the plant, between 1903 and 1909. Their development of ancillary infrastructure, in the form of housing, utilities, and transport infrastructure, points both to a lack of crucial infrastructure investment as an enduring and intractable problem for the region, and the Company's far-reaching impact beyond this cluster. By 1920 the Company employed between 250 and 300 in the west Highland area, paying out £170,000 in wages (around £6.88m at current prices). Little wonder then that when giving evidence to Parliament on British Aluminium Company Ltd's third aluminium smelter and hydro-electric power near Fort William, the former Provost of the Highland town, Colin Young, declared: "I am a whole hearted supporter of this scheme for in it I see the salvation of this district and far beyond" (quoted in Perchard, 2012, p.11).

Amongst the other direct benefits accruing from the construction of the large Lochaber smelter and hydro-electric works (constructed between 1924 and 1929) BACo's development included the construction of a new industrial settlement at Inverlochy adjacent to Fort William. By 1937, when construction of the Inverlochy housing started, BACo were the largest single employer in Argyll-shire and one of the largest across the whole of the Highlands. In addition, the Company contributed one-fifth and one-twentieth of the business rates to Inverness-shire and Argyll respectively (Perchard, 2012). From the outset BACo also extended transport infrastructure. This took place against an effective policy vacuum at a national and Scottish level in relation to the region. Not only was the provision of such jobs in an area struggling to encourage such investment invaluable, so was their investment in urban housing and infrastructure for an area on the periphery that was persistently affected by a shortage of both.

The politics of these developments were bound up in a variety of vested interests and some more noble intentions. For British Aluminium, such infrastructure developments enticed employees, were a necessity in a region with a shortage of housing, and demonstrated to supportive elites their commitment to the area (with the *quid pro quo* that they politically support the Company's legislative measures necessary for expansion of their schemes). In addition, in the industrial settlements of Kinlochleven and Inverlochy, in which the urban layout and social life was socially stratified and overseen by the improvement societies led by Company officers, it was a tool of control (especially after strikes in 1910 and 1936) and inculcated loyalty; in Kinlochleven and in Inverlochy, through the close relationships

between Company officers and local landowners (as well as the service of key Company officials in local Conservative associations and as county councillors), British Aluminium exercised almost complete administrative and social control until 1945. By the mid-twentieth century, aside from its large estates, the Company also owned a significant proportion of property in the town of Fort William, including the forty-bedroom Grand Hotel. Between the mid 1920s and 1940s, BACo spent no less than £71, 202 acquiring property in and around Fort William (most of that in the especially lean interwar years). In addition, until the Electricity Act of 1947, they supplied all of the town's electricity, as well as that in Kinlochleven (Perchard 2007a, 2012).

Yet the Company directors were also committed to regional development. Opening BACo's Greenock carbon factory (to supply their reduction works at Foyers on the shore of Loch Ness) in 1897, the Company's scientific adviser Lord Kelvin ventured that he hoped this was the "beginning of something that would yet transform the whole social economy of countries like the Highlands, where water abounded" (Quoted in Perchard, 2012, p.191). Kelvin's sentiments were echoed by the Company's then General Manager (and his former student), and subsequently Managing Director, William Murray Morrison. Writing to British Aluminium's medical officer, and Highland development campaigner, Dr Lachlan Grant in January 1935, William Murray Morrison declared: "It is a most pleasing recollection in my career that I have also been able to do some practical and lasting good to my beloved Highlands." (Quoted in Perchard, 2013, p.55)

Whilst Morrison's intentions in writing in such terms to Grant as a prominent land campaigner were partly transactional, as a Highlander he was genuinely concerned at the rapid depopulation of the region (especially of the most economically active age brackets). Between 1861 and 1911 17% of the population of the Highlands and Islands emigrated, with a further 13.8 per cent between 1921 and 1930 (Harper, 1998; Brock, 1999). In contrast, between 1891 and 1901, the parishes of Abertarff and Boleskine (including Foyers), which had seen their populations shrink by one-fifth in the decades preceding BACO's purchase of the land and the opening of the factory, saw a 30% rise. In the thirty years afterwards, the population rose by a further 6% (Perchard, 2012).

Similarly, their relationship with leading Highland landowners was characterised by both a reciprocal transactional nature and one founded on real concerns over economic survival and governance. Morrison was at pains to impress upon the Chieftain of the Clan Cameron,

Cameron of Lochiel, the degree of personal commitment he had to the developments, declaring in a letter to Lochiel during the passage of the Lochaber Water Power Bill in May 1921 (quoted in Perchard, 2013, p.54): "I have the enormous personal reward of knowing that the foundation has been laid for a lasting and far-reaching benefit to the Highlands of Scotland." Both Lochiel and Lord Lovat submitted evidence in support of the Lochaber Water Power Bill, and acted as public advocates on other occasions. The value of Lochiel's support was evident from his campaign as Convenor of Inverness-shire County Council after the Local Government (Scotland) Act of 1929 to draw attention to what he perceived to be the disproportionate burden of subsidy on mainland, "landward," non-agricultural ratepayers.

Though Lochiel was primarily motivated by his desire to support economic diversification for the region – recognizing the potential obstacle that these changes in rates might present to enterprises prospecting the area – this also served British Aluminium's interests. Lochiel was infuriated by what he saw as the further abrogation of responsibility by central government, as epitomised by changes under the 1929 Local Government Act and the perceived shift in burden from central government to landward Highland ratepayers; in correspondence with the Provost of Inverness, and prominent Highland development campaigner, Sir Alexander MacEwen, he observed:

> By putting the Islands in with the Mainland the Government made a very astute move, as all applications for Grants have to go through the County Council, and as the County Council are expected to make a contribution of the Mainland Non-Agricultural Ratepayers, the Treasury are perfectly safe in assuming they will have very few calls made upon them. (quoted in Perchard, 2013, p.54)

This resentment compounded the distrust that Highland opinion harboured for their counterparts in lowland Scotland; as Lochiel declared in a letter to the Provost of Inverness and Highland development campaigner Sir Alexander MacEwen: "I heartily distrust Glasgow and the Lowlands far more than I do London" (Ibid). British Aluminium recognized that the frustrations of Lochiel and others with government in Edinburgh and London could be harnessed for the Company's advantage, while those Highland landowners concerned about their own continued influence and development in the region (as well as campaigners like Lachlan Grant) saw advantages in developing the region (Perchard, 2012, 2013).

Metal production had seemed to be promising for the Highlands in the first three decades of the 20th century. However, almost as soon as the Lochaber smelter was completed in 1929, it became apparent that the water-power resources of the region were insufficient to support expansion of further productive capacity in industries like aluminium that relied on cheap and plentiful electricity. Indeed, British Aluminium subsequently looked to Norway and Canada with their far more expansive water-power resources. Nevertheless, it remained a highly significant employer and investor in the region, as well as being a potent example of industrial Highland development (Perchard, 2012).

British Aluminium's Highland developments illustrate the effective attempts at industrial development in a sub-regional cluster motivated both by the firm's initial competitive advantage, the mobilisation of regional and national political alliances, as well as a genuine commitment to a common weal, in the face of an insouciance and dismissiveness to the region demonstrated by many economists and policy makers. Their developments had far reaching consequences both for the direct area and more broadly in the region, and encouraged path creation with industries and utilities that supported development and retained and attracted employees to the area.

The experience of Highland industrial development after 1945 was a chequered one. The legacies of a 'bounded rationality' in economic and public policy thinking and prevailing public opinion strong influenced perceptions and considerations of the Highlands and Islands as a failing region, and one that would be best considering the outflow of its people than inward investment for industry. This not only had an overriding influence on the direction of policy towards the region but also on discouraging inward investment, as lowland Scottish entrepreneur John M. Rollo, and serial investor in the region and supporter of Highland development, observed in 1956:

> To the average industrialist the thought of a factory in a remote part of the Highlands raises nightmares of remote control, dreadful transport and the much repeated but despicable slander of the "lazy Highlander" as well as the pre-determined certainty that such a venture could result only in loss' (quoted in Macdonald, 2009, p.180).

However, despite the greater emphasis on state initiatives in this period, private sector investment remained vital.

The distinctions between the dismissiveness of policy makers and economists, as well as commentators, where Highland and Islands development were concerned and the reality were perhaps no better illustrated than the Scotch whisky industry. The characterization of the whisky industry from the much read *About Britain* guides, that accompanied the Festival of Britain in 1951, exemplifies this type of dismissiveness (couched in folksy charm) about Highland industry:

> The distilleries are to be found, surprisingly large buildings, tucked into unexpected glen nooks, generally the site of ancient pot-stills. There is loving regard for these district products and their idiosyncrasies. And, for all that whisky production is a small-employing and largely seasonal occupation, it has a name around the globe. (Festival of Britain, 1951, p.30).

As the Guide acknowledged, Scotch had been contributing around £10m worth in vital dollar exchange in the lean post-war years. Between 1953 and 1977, exports of whisky from the UK (mostly Scotch whisky with a tiny amount of Northern Irish whiskey) rose from £37.8m to £512.6m, with over half of this to the United States. By 1963, Scotch whisky accounted for 28 percent of total UK exports by value (BoT, October 1963; The Distilling Sector Working Group (DSWG), 1978). That 'small-employing' and 'district' industry employed around 3000 in distilling on Speyside alone and a further 6000 in blending and bottling (many of the latter being women) elsewhere in the country. Like aluminium production, whisky had considerable spillover effects in the local and regional economy as well. It was however largely untouched by the hand of the state, save for regulation, tax collection, and a strong steer towards exporting. In terms of direct support, the state largely left well alone.

Top-down State Planning and Industrial Clusters in the Highlands and Islands

Characterization of Highland industrial clusters and development in the post-1945 period are heavily associated with some of the large top-down state-sponsored projects, many of which were at best partially successful. These included: the development of the fast breeder reactor at Dounreay (1959 – 1994); the Wiggins Teape Pulp and Paper Mill at Corpach (1964 – 1981); and perhaps most infamously that 'grandest of all the industrial cathedrals of the north' British Aluminium's Invergordon smelter (1971 – 1981) (Young, in Hetherington, 1990, p.106). The latter, in particular, became a watchword for failure. In all three cases,

from initiation, through execution, to their demise, they were more indicative however of the failings and hubris of modernist planning as a whole. In this respect they shared more in common with similarly problematic developments in lowland Scotland, such as a couple of notable large single projects from the National Coal Board (Rothes Colliery and Glenochil Mine), the British Motor Corporation truck plant (Bathgate), steel works (Ravenscraig) and the Linwood plant (Paisley), than of state initiatives in the region more broadly. However, the reputational, as well as economic and social, damage they did was disproportionate (Peden, 2005; Perchard, 2007b, 2012). These failings were largely the fault of top down policy initiatives that bore the imprint of Whitehall departments (the Board of Trade and Treasury predominantly) but the failures were often also associated with the largest single policy initiative in the mid-1960s, which signalled the greatest shift in policy thinking on the regional development of the Highlands and Islands since the 1897 Crofting Acts; the formation of the Highlands and Islands Development Board (Cameron, 1996).

In June 1966, University of Aberdeen geographer Professor Andrew O'Dell commented on the task facing the newly formed Highlands and Islands Development Board:

> After generations of enquiry by Commissions and Committees it would appear as if the north may change with the creation of the Highlands and Islands Development Board, not simply by pouring vast new sums into the region, but by ensuring that there is a rational attempt at land use and development which can provide a regenerating influence. With present-day political factors and with so much inherited from the past, there cannot be a perfect solution even theoretically (O'Dell 1966, pg. 9)

However the view of a region devoid of opportunity persisted, not least because economists requently restated the work of their predecessors, invariably based exclusively on secondary literature. Donald Mackay and Neil Buxton's reiteration of orthodox opinion on the best policy to be adopted to the region the same year as the passing of the Highlands and Islands Development (Scotland) Act 1965 is indicative: 'what evidence there is available suggests that there is no economic case for the development of the Highland area… the economic solution to the "Highland Problem" is to induce the movement of labour out of, and not the movement of capital into, the area' (Mackay and Buxton 1965, p. 23). This was even more damaging when it emerged from the mouths of those seen as sympathetic to Highland economic development, such as former chairman of the HIDB (1965- 70), Sir Robert Grieve,

who declared in an interview with Scottish television in 1978: ‘Glasgow is one joker in the Scottish pack; the Highlands are the other’ (Hetherington 1990, p. Xv).

In the introduction of the Highland Development Act 1965, to establish the first state economic generation agency for the region, then Secretary of State for Scotland Willie Ross while demonstrating an appetite for state commitment to the region, implicitly reinforced the same stereotypes about the region by introducing the bill as thus: ‘For 200 years the Highlander has been the man on Scotland’s conscience. . . No part of Scotland has been given a shabbier deal by history from the ’45 onwards. Too often there has only been one way out of his trouble for the person born in the Highlands – emigration’ (*Hansard*, 16 March 1965).

Such sympathetic sentiment for the Highlands (Levitt, 1999) only went so far, however. Sir Douglas Haddow, head of the Civil Service in Scotland between 1965-73, saw the Highlands as a problem area that had to be kept quiet by “chucking buns across the fence” if necessary – a reference to what would become state-sponsored industrial developments in the region. In the course of saying this, leaning over a map, Haddow is reputed to have put his elbow on Fort William, stretched his arm out along the Great Glen and made a gesture westwards (covering a large swathe of the region) stating ‘as far as that area is concerned, it’s out’, referring to the intentions of the Scottish Office in its approach to industrial development in the region (Hetherington, 1990, pg. 3). The Highland region boundary line was the ‘fence’ Haddow was referring to, further reinforcing the idea that the Highlands was a distinct region from the rest of Scotland with its own peculiar characteristics.

The Highlands Development Act saw the creation of the new Highlands and Islands Development Board (HIDB) as the first dedicated regional development agency in the UK. Influenced by the success of Roosevelt’s Tennessee Valley Authority (TVA) electrification of rural areas in the USA, the new board used the TVA example as a kind of blueprint for Highland development. George Houston, one of the drafters of the proposals for a Highland Development Authority, later to become the HIDB, cites the TVA as an influence on the plans for the new board (Grassie, 1983; Hetherington, 1990). The TVA’s success with electrification and stimulation of local industry was seen as an approach that could be mimicked in the Highlands to address the challenges the region was facing.

The HIDB sought to further develop industry and clusters throughout the region as a matter of urgency. Its new chairman Professor Robert Grieve was intent on taking a proactive

approach to planning in the Highlands, in part as a response to warnings by opposition MPs that the board should not be little more than an 'exercise in theoretical socialism' (Hetherington, 1990, pg. 3). Based on this, the board identified fishing, industrial production (manufacturing), agriculture, forestry, tourism and recreation, transport (a longstanding issue in the region), and a university for the region as areas for improvement and support (HIDB, 1967). Nearly thirty years previously the Hilleary report, published in 1938, proposed a development board for the Highlands with executive powers as well as development in agriculture, forestry, fisheries, tourism (especially in light of the development of the motor-car in the UK) and the development of industrial centres where possible (Hilleary, 1938). The HIDB and its focus on industrial development was thus a long time coming.

Despite this wide-ranging remit, the HIDB's principal focus tended to be the attraction of large-scale industrial developments to the area, believing that they would act as growth poles in line with the recommendations of the Toothill Report at the start of the decade (Toothill, 1961), based on Perroux's work the preceding decade (1955). Based on this, it promoted existing large developments including Dounreay nuclear power station created in 1959 (MacKenzie, Knox, and Hannon, 2020) and Wiggins Teape's paper pulp mill at Corpach established in 1966 (MacKenzie, 2019), and a number of future developments including the British Aluminium smelter at Invergordon in 1967 (MacKenzie, 2012; Perchard, 2012), the tourist facility at Aviemore established in 1966 by Sir Hugh Fraser at the behest of the Scottish Office (MacKenzie and Gannon, 2019), and a series of fisheries which ultimately beget the more recent focus on fish farming as a prominent cluster on the west coast of the region and the Orkney and Shetland isles. The Board identified the Moray Firth area as an area with industrial cluster potential and the opportunity to establish a growth pole in the area to bring population numbers back up (HIDB, 1967). Within a year of starting the board commissioned a report into the feasibility of the area becoming an industrial cluster focused on food processing, fibre board, minerals, chemicals, engineering, and services in 1966 (HIDB, 1966). Whilst this never quite materialised in the way envisioned, the area nevertheless did see a growth in population terms, as did the whole region in time.

By the end of the HIDB's functional life, it had invested £531m in supporting the industrial development of the region (HIDB, 1991), with only a few notable successes to show for it. The major industrial developments at Corpach, Dounreay and Invergordon were all either gone or being wound down in the 1980s and only Aviemore remained as a measure of

success, albeit with a very chequered past (Levitt, 2005; MacKenzie and Gannon, 2019). The effects of these closures coincided with the contraction of jobs in oil and gas support industries after the dramatic fall in oil prices in 1986. Employment in the industry fell by 14,000 between June 1985 and December 1986 alone and continued; while many of the small Scottish companies formed to meet the boom went bust because of insufficient capital reserves (Pike 1993). These contractions, such as in the case of the Invergordon smelter and the Nigg fabrication yard (established the same year as the smelter became operational in 1971) to supply North Sea oil and gas development, compounded the issues for the region. Both the Invergordon smelter and the Nigg yard had attracted workers (and their families) being made unemployed in other contracting lowland Scottish heavy industries (such as shipbuilding) who then swelled unemployment figures in the area. In the case of Invergordon, it also suffered from being identified as one of another Scottish 'poster child of decline', with the area suffering considerable hardship in the 1980s and 1990s (Perchard, 2017). There were a number of investments in digital infrastructure in the form of Integrated Services Digital Networks (ISDN) in the region jointly by HIDB and British Telecom (HIDB, 1989) which made the region more connected than it had ever been, forming the basis for future digital connectivity which exists in the current day.

Alongside the large industrial developments were a series of attempts at establishing and supporting smaller industries across the territory including support for the (now world famous and statutorily protected) Harris Tweed cluster of weavers in the Western Isles in 1990 when it saw a collapse in sales (HIDB, 1991), and the promotion of seafood, Scotch whisky, wool, and other Highland products throughout its lifetime which contributed to the maintenance of what are now relatively stable, and in Scotch whisky's case hugely successful, sources of Highland industry. More recently a range of industries, including Scotch whisky, Harris Tweed, forestry, and tourism have created clusters of industrial activity across the region; perhaps the most notable examples being the Scotch whisky concentrations in the island of Islay on the west coast and Speyside in the Highlands (home to nine and 49 whisky distilleries respectively) which attract millions of visitors and concomitant spending in the areas.

What the varied attempts at state initiatives in the region illustrate is the often-conflicting interests in this period between local needs and national interests, as symbolised by the large industrial developments. They also demonstrate wider failings in modernist planning, and

inconsistency in British industrial and regional policy. The most glaring illustration of this was the Invergordon smelter, a monumental industrial folly built on a hubristic belief of the Wilson government in the limitless imagined possibilities of a new generation of nuclear power stations (to be cross-subsidised by the aluminium companies) while at the same time reducing reliance on imports of aluminium ingot. When the former failed to materialise, then British Aluminium was left with spiralling energy costs, in no small part arising from their own inattentiveness and proximity to government (MacKenzie, 2012; Perchard, 2012; Perchard and MacKenzie, 2020). In fact, as other activities illustrated, the HIDB enjoyed plenty of success, including helping the likes of Norfrost and Caithness Glass, to start up, and making loans and grants where necessary for new businesses (HIDB, 1983, pg. 5), albeit without much success in establishing sustainable clusters of development. However, the visibility of these large-scale industrial developments created the illusion of widespread failings. The legacy of all of this was to compound the image of the region as failing, locking into a downward path. The HIDB had focused on the promotion of the Highland cause in regional policy terms, emphasising the need for development and encouraging central Scottish and UK departments to consider the area as being suitable for larger industrial projects, whilst simultaneously trying to encourage smaller businesses.

From Top-down to Bottom-up development: Highlands and Islands Enterprise

Towards the end of the 1980s it became apparent that the UK government were moving towards enterprise agencies rather than development boards like the HIDB. The HIDB was thus replaced by Highlands and Islands Enterprise (HIE) in 1991, a government agency whose metier is to facilitate small-scale industrial and economic development from the ground up through encouragement of local enterprise, completing the government's withdrawal from economic planning activities in the Highlands. This was part of a wider reorganisation of economic development functions of government in Scotland with the concomitant creation of Scottish Enterprise in 1991. Consistent within the creation of two separate agencies was the recognition that the Highlands remained different from the rest of mainland Scotland and faced particular challenges of population dispersal and economic lag, requiring a bespoke approach.

By 1995 four of the rural areas of Scotland with the highest distribution and intensity of multiple deprivations were located in the Highlands and Islands (Pacione, 1995). The region was identified by the European Commission (EC) as a 'lagging region' and accorded Objective 1 status in January 1994, netting it £250m between 1994 and 2000, with a further £200m in transitional funding between 2000 and 2006 (Lee 1996; Cameron 1996; Peat and Boyle, 1999). Despite some advances made in improving infrastructure (notably transport and ICT) of and planning within the region, falling GDP by 2001 prompted the award to the region – as one of the poorest areas within the UK – of a further £106m by the EC for the period 2006-13 (BBC, 2008). Ironically the observations made about capital investment in transport infrastructure in Highlands and Islands Enterprise's *A Smart Successful Highlands and Islands* (2005) are remarkably similar to those the Hilleary Committee made nearly seventy years previously (HMSO 1938). HIE's approach to building enterprise initiative from the ground up took some time to bed in and bear fruit, seeing it garner a great deal of criticism for much of its early life (Perchard and MacKenzie, 2013).

In the late 1990s/early 2000s the Scottish Office followed a clustering strategy for the whole of Scotland, seeking to develop industrial clusters around the country in order to promote sustainable economic growth. Consistent within this strategy was recognition of the Scotch Whisky industry as a "classic industrial cluster" worthy of attention and support from HIE (Select Committee on Scottish Affairs, 2001). It is interesting that no other industrial concentrations or clusters were identified in the region, in part because of the difficulty of establishing any sense of what clusters there were and are in the area. Work by Munyoro and Dewhurst in 2010 identified the lack of industrial clusters ten years later, which suggests the strategy was not a success in the region (Munyoro and Dewhurst, 2010).

More recently the region has been hailed as a Scottish success story. In a speech in Edinburgh in November 2005 the former HIE chairman, and highland historian, James Hunter was sanguine about the contemporary picture of the Highlands and Islands and its future prospects. In particular he drew attention to the reversal of the historic trends of the outward flow of the population from the region, to the decline in unemployment to levels below the Scottish and UK averages, and to higher business start-up rates than the rest of Scotland (Hunter 2000 and 2005; HIE 2007). In addition, the long-thwarted plans for a higher education institution for the region bore fruit; the UHI Millennium Institute (a federation of higher and further education colleges) was established in 1992, with UHI receiving taught

degree awarding powers in 2008. UHI's Centre for History, established in 2005, was at first led by James Hunter. Hunter's optimistic note was echoed in the Organisation for Economic Cooperation and Development's *Rural Policy Review: Scotland* (OECD, 2007). Certainly, recent years have seen a growth in small businesses with an improved spread across the region (not least prompted by the roll out of broadband (ISDN), the Highlands 'communications revolution'), as well as larger capital projects in and around Inverness.

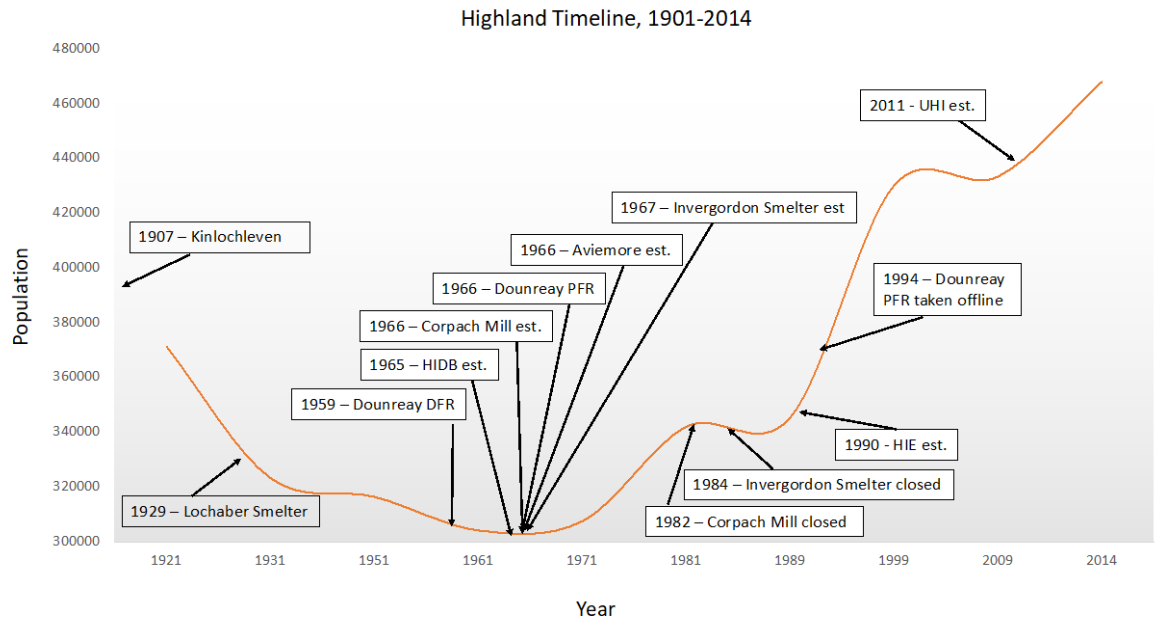
Much has also been made of the region's growing potential as the sustainable energy powerhouse of the UK. This is key to meeting the Scottish Government's ambitious renewable energy targets (as well as the potential for Scotland of exporting the technology), and the confidence and importance of it is reflected in the considerable investment made in renewables. World renowned clusters such as Harris Tweed and the Speyside and Islay whisky concentrations, and the growth and development of forestry and fish farming, have established the region as a relative success story. HIE has overseen over considerable growth in the area since its inception – the area's population is now more than 470,000 and it has over 22,000 businesses in operation (HIE, 2020). It is nevertheless important to recognise that its focus on small-scale industrial development finds its roots in the early attempts of the HIDB to encourage bottom-up development, and its relatively limited resources for doing so. For example, early support of and investment in tourism and food and drink have seen both grow to become the largest and most obvious cluster type developments in the region (Izsak, Markianadou, and Reid, 2016), and similarly HIE identify the life sciences cluster in Inverness as the largest of its kind in Scotland (HIE, 2020).

Conclusion

Development in the Scottish Highlands was not a uniform or consistently approached affair – from the exhortations of politicians describing it as a problem area through to the efforts of individual businessmen in the region, the Highlands has been subject to both push and pull factors in its development. Successful cluster development in the region has largely been the result of private endeavour – the state's attempts at introducing large scale industrial developments in the 1960s based on the Toothill/Perroux growth pole idea had the effect of attracting people to the region, but with little investment in infrastructure they were in some cases destined to fail. Nevertheless, what they did do was bring people to the region and start to address depopulation problems. Attempts at establishing industrial clusters in the Highlands have largely been focused on the natural resources of the area., but this isn't

enough Industrial clusters need people – in attracting people to the region and reversing depopulation the government were, albeit unintentionally, nevertheless setting the foundations for its future economic development potential. This required a policy change towards a more facilitative than prescriptive approach from direct state involvement in industrial development to facilitation of enterprise.

The state-sponsored attempts at developing clusters in the Highlands were predominantly based on an incomplete knowledge of the region, affected by declinist narratives and a belief in the efficacy of centralised planning. The closure of the large-scale developments meant there was little choice but to move towards bottom-up development as the way to address the region's challenges. Beyond whisky and Harris Tweed there were little in the way of sustainable industrial clusters; depopulation made knowledge diffusion and attraction to the region extremely difficult.



Source: Authors' elaborations and HIDB Annual Reports, 1975-90 (1989 last publication of population stats by HIDB), HIE website.

The de-locking of the Highlands and Islands from the narrative of a failed region owed much to a far more complementary form of planning which was facilitative in nature, with more control vested at a regional level, especially after the re-establishment of the Scottish Parliament and Scottish Executive (now Scottish Government) after 1999. What this did for the region was help move it out of path dependency to path creation. Some of that path creation was the flowering of earlier initiatives and a growing cultural confidence in the

region as tourism grew, spending was focused on infrastructural development aided by European monies (both European Regional Development and Structural Funds), and support for entrepreneurship and enterprise grew alongside the population. The establishment of the University of the Highlands and Islands and its multi-campus structure covering the whole region, alongside growing recognition of the amenity, quality of life, and cost of living has helped attract people further still. What this has resulted in is the development of new clusters in life sciences, fish farming, and forestry to complement the long-standing and more traditional industrial clusters in whisky and weaving, illustrating the value of understanding agentic actors within economic systems as well as the role contingency must play in our understanding of clusters (Popp and Wilson, 2007). A further feature of clustering in the economy of the Highlands and Islands has been the importance of energy resources. The entrepreneurial capital in the region has been brought to the fore and recognition that the area is not problematic, or lazy, but rather dynamic and forward looking. It is no longer a "peopleless place" bereft of industry, but instead one whose population is higher than at any point in the last century and forging its own path ahead. As we have sought to explore, clusters were part of the initial story then fell into the background as depopulation kicked in. What our work shows is that with repopulation and a more less prescriptive approach to industrial development industrial clusters are re-emerging in the region and contributing to its growing economic and social health.

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