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Have the effects of its history resulted in a Scottish construction industry that differs from its counterparts in the rest of the UK?

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Abstract

Considering that the legal, financial and educational systems in Scotland all differ structurally from those in the rest of Britain, it may be argued that its industrial condition should also be expected to show differences, both historically and currently. This new examination of the history and statistics of the construction industry in Scotland demonstrates these differences and provides strong arguments for the Scottish construction industry to be regarded as a separate entity. The institutions, attitudes and practices, developed in a geographically and politically isolated country on the edge of medieval Europe, have carried forward with surprisingly few changes to the modern era. If the industry, and the political and economic institutions which surround it, wish to see progress and development, particularly in such areas as human resources practice and modernisation and training in the SME sector, then it is essential to understand where and how the industry in Scotland differs from that in the rest of the UK.

Keywords: construction industry, history, Scotland, statistics, structure.

Introduction

The construction of buildings and infrastructure constitutes one of the most important of economic activities of a country. Without this initial effort, little else beyond the most basic of subsistence agriculture can progress. Since the rebirth of the Scottish Parliament in 1999, the feeling that Scotland is not just another province of the United Kingdom, but has unique historical and structural differences, has become more obvious. Many types of data, not previously available at all in a form that allowed extraction of information about Scotland, are now gathered by the Scottish Executive. Considering that the legal, financial and educational systems in Scotland all differ structurally from those in the rest of Britain, it may be argued that its construction industry should also be expected to show structural differences, both historically and currently.

The economic relationship between Scotland and the rest of the UK has varied from total isolation to one of total dependence and various points between. Economists consider Scotland a “region”, as a geographically compact area with a population in millions and a labour force with more internal mobility than external (Krugman, 2003). Until the Act of Union (1707) Scotland was not only a separate nation, she was also

physically isolated by poor transport links, a situation not rectified for at least another hundred years. This physical, economic and political isolation did not prevent movement of labour or ideas, but the nation remained very much itself. The industrial revolution brought Scotland to the forefront in Britain's manufacturing, particularly in the metal trades. Glasgow became the Empire's manufactory, drawing in labour from all over Scotland, Ireland and northern England. The subsequent decline, from the start of the 20th century, resulted in an outflow of manufacturing and its labour force and a return to a largely regional market and economy. If manufacturing and its labour force was and is mobile, the same is not true for the output of the construction industry. Scotland's builders may follow the work abroad (although Krugman (2003) argues that the Scottish expatriate working population is peculiarly likely to return to Scotland at all stages of life), but the industry's products cannot. It is perhaps for this reason that construction workforce training, economic control and planning regulations have remained different in Scotland, even before the return of the nation's own Parliament.

To set some context for other research into the unique aspects of Scotland's construction industry and its history, this review of literature and statistics aims to assemble data to consider the following questions:

- How did its constituent parts, structure and organisations change over time?
- What constitutes an industry in the eyes of its members and of outsiders? Is there evidence of a perception of a distinct entity for a construction industry in Scotland?

Due to the historical peripheralisation of Scotland's political status, much of the available literature refers either mainly or exclusively to the development of the construction industry in England, even when the title of the work includes the word "Britain". This is not an attempt to create new data but rather to extract existing data and to view it in a new light, drawing new conclusions from the new assemblage of information. This paper will draw together existing data, currently widely and thinly spread, to provide a new and coherent body of information for scholars.

Method

The research aimed to answer the questions by looking at the Scottish construction industry in the context of historical statistics. Data concerning industry structure and perceptions was sought by a literature search, in libraries and from internet sources, into the following topics:

- The general economic and industrial history of Scotland
- The Incorporations of trades and trades guilds
- The construction trades unions
- The construction industry employers' organisations
- The housebuilding industry

Statistical sources were searched for evidence of the extent of construction activity since earliest times, including the following categories:

- Numbers of participants

- Structural patterns- sizes of firms undertaking construction work
- Access to materials and other inputs
- Output: housebuilding, industrial, commercial and infrastructural construction figures.

For evidence of levels of activity prior to the advent of systematic statistical collection, such as the first Statistical Account of Scotland, much has had to be inferred from remaining evidence.

Evidence of changing structure over time

Until modern times, many buildings were constructed informally, by the people who needed them, e.g. crofters constructing farm buildings. Major structures, however, virtually from the earliest times, required at least some expert skills in wood- or stone-working and some knowledge of the techniques required to achieve the desired result, with the aid of local unskilled labour.

There is implicit evidence for the extent to which surplus labour could be diverted from essential food production to undertake important building projects in the past. Prehistoric building effort in Scotland, such as Skara Brae stone village, in Orkney, with its 10 interconnected family homes of worked masonry and wood, implies at least some skilled masons, who could not be expected to acquire such skills overnight. Perhaps there were a few such skilled workers traveling around the neighbourhood providing their services as required (Armit, 2003).

4750 years ago the economically pointless, but presumably culturally vital, structure of Maes Howe (Orkney) had taken 100,000 person hours to build and involved masons with advanced stone-working and structural skills, as well as huge amounts of unskilled labour. The latter would have had to be spared from food production, probably during the agriculturally crucial summer season. 3,000 years ago the climate cooled and the northern mainland population migrated to the warmer south, triggering the construction of many hill forts, as lowlanders attempted to defend their resources against incomers. Eildon Hill North, in the Scottish Borders, was the site of a huge hill fort, with 16 hectares of fortified enclosure and 500 associated stone houses, i.e. a "City" of possibly 3-5,000 people. The total population of mainland Britain at that time was about 200,000, so this must have therefore been one of the largest single gatherings of people in the land. The labour and organization involved in that one construction alone must have been substantial.

Figure 1 Interior of Maes Howe, Orkney, showing slabs of carefully worked masonry (Picture courtesy of Piers Pettman)

Figure 2 Eildon Hill North, where there was a large fort and settlement (Picture courtesy of Jan Pohunek)

Iron Age technical advances, such as iron ploughs (700BC) and rotary querns (200 BC), released labour from food-production work. At this time, the huge and structurally very sophisticated stone Brochs and “Atlantic” roundhouses were providing settlements all over Scotland, again representing major amounts of construction work.

Figure 3 Broch of Gurness, Orkney, showing circular walls, fireplaces and some of the stone furniture. (Picture courtesy of Piers Pettman)

The Romans’ departure from England, in 410AD, enabled the Scots to enter ‘Scotland’ for the first time, from Northern Ireland, and built stone forts for prestige as much as for defence. The arrival of Columba in 563AD, to convert Scotland to Christianity, marks the beginning of church-building in Scotland. The building of churches and castles created a demand for unskilled labour, which was often compulsory for the local peasantry, but always overseen by skilled masons, who were also taking on some of the roles we nowadays associate with engineers and architects.

The Norman King David 1 introduced the feudal system of land tenure, which has influenced patterns of urban growth to the present day. The King is the top of the feudal system and any town with aspirations needed to become a Royal Burgh with the privileges of raising taxes and holding markets. The layouts of older towns, with Mercat crosses, Tollbooths and wide high streets suitable for authorized markets, date from this system, and remain the underlying principle of the layout of many Scottish towns and cities. The Burgesses were allocated plots of land along the high street and the right to build behind them, resulting in the narrow entrance lanes still to be seen and even replicated in modern tenements.

Scottish incorporated trades’ guilds started as a way for craftsmen to gain a say in the running of the Burgh, along with the Burgesses and guilds of merchants. The 13th Century provides the earliest records of master builders contracting for a building and employing other workers on a "measure and value" basis, assessed on completion. In 1222, Aberdeen had the first Dean of a merchant guild, with responsibilities for overseeing public works and for approving applications to build new buildings - the early planning application process (McWilliam, 1975). James I decreed (1424) that each trade should have a Dekyn or Master to oversee the quality of work of that trade’s members.

The trades' incorporations oversaw the professional and social welfare of their members. The trades were protected by limiting the number of new entrants and requiring a 7 year apprenticeship, followed by 2 years as a servant under a master, before the tradesman could offer his "Essay piece" for approval for entry to full membership or "freedom" to work (hence "Free" masons). "Unfree" tradesmen were obliged to settle beyond the boundaries of burghs if they wished to carry on business. It was not unknown for trades' guilds in the burghs to assist unfree men working beyond the burgh areas. A Glasgow mason was honoured by his guild for his work to help the unfree masons working in between Glasgow and Dumbarton.

In 1605, a Letter of Guildry was granted to the trades (except the Wrights, who chose not to join) in Glasgow, which laid a basis for settling increasing disputes between trades and merchants. Throughout the 17th Century, local incorporations of trades formalized their constitutions and interactions with the Kirk, burgh and merchants, by means of the Seal of Cause. In 1659 the Dundee Master masons were allowed to "Combine" to protect jobs, at an agreed rate for agreed hours.16s 8d per 12-hour day. This was highly unusual, as the burghs were generally terrified of "Combinations" like this, which were early forerunners of the closed shop trades union. Strenuous efforts to outlaw them continued right into the 19th Century.

The Wrights (woodworkers) building Glasgow cathedral were granted a Royal Charter in 1057 (Trades House) by King Malcolm III, enabling the governing structure of that craft to have state recognition. The charter initially covered all the building trades, including the joiners, masons and coopers, but the latter two separated from the joiners under a Seal of Cause from the City of Glasgow in 1600. In Dundee, the Seal of Cause is thought to have been granted even earlier, in 1587. In some Scottish cities, slaters were incorporated into either the wrights (because of the woodwork required in a roof) or in the masons (because slate working was stone working). However, in Dundee the Slaters were a separate trade. Their earliest date is not now known because their "Lockit books" were destroyed in the 16th century.

Many of Scotland's castles and churches were built in the 13th-15th Centuries: Edinburgh (Great Hall 1510), Crathes (1596), Dunrobin (1236), Ravenscraig (1460), requiring enormous amounts of skilled and unskilled labour. There is evidence, from masons' personal marks, to show that skilled building workers were moving around the country, from contract to contract, to supervise the local unskilled labour. In 1503, a statute required all seaboard towns in Scotland to use their own money (the now controversial "Common Gudis" fund) to build a defensive seawall of lime mortar and stone to protect against the English fleet. By the middle of the century, when many towns were enlarging, Elgin had to employ surveyors to mark out land for house building and Glasgow's population had tripled from that of a century previous.

The "Act Anent the uphalding of decayed landis within burghs" in 1594 pressurised owners of substandard property to maintain or rebuild, leading to a "great rebuild". By the end of the 16th Century, the effects of the religious reformation were being felt, with parishes obliged to build a kirk and a school in every parish. Most

Burghs had Tolbooth towers and markets, harbours and bridges were being built to facilitate trade, reflecting the Scotland's economic improvement.

The act protecting the textile industry from imports (1681) led to an early boom in industrial building, with many rural towns developing rapidly and building wool mills. This created a new type of work, which was to be very important to the building trades over the following two centuries: industrial and commercial structures.

Scotland's major cities expanded fast in the 18th Century, with concomitant infrastructure building. The Barony parish of Glasgow, alone, expanded from a population of 3905 in 1755 (Gray, 1975) to 18,451 in 1791 (Sinclair, 1799), necessitating the building of 486 new dwellings in the decade to 1799.

Following the first Jacobite uprising in 1715, General Wade and Major Caulfield used soldiers to build hundreds of miles of road and tens of bridges to facilitate military access to the Scottish Highlands. Although they chose, for understandable political reasons, not to use indigenous building workers for the construction of the roads, Major Caulfield set up a system of localized responsibility to ensure their future maintenance. The Turnpike Act of 1751 enabled the building of further hundreds of miles of toll roads in the Lowlands, with tollbooths (and "Turnpike" gates) at 5-mile intervals (McWilliam, 1975). In the 1780s the rapid expansion of industry needed factory villages for workers, such as New Lanark's textile village, and mining towns in coal areas. Edinburgh and Glasgow expanded during the 18th century, each laying out "new town" areas. However, from 1739 to 1760s, there was a general economic depression, followed by a recovery in 1790, leading to another huge increase in infrastructure spending. This meant the system was under a sudden strain and, when war came in 1793, there was another collapse of credit and the output of the brick making industry dropped 40% in 2 years. The draconian Highland Clearances of this period meant that cleared families went either to the cities (mainly Glasgow) or to the coasts, requiring a rapid development of coastal villages. Scotland differed from England in how it dealt with poverty. In England, younger healthy or "outdoor" paupers were placed in obligatory apprenticeships to trades masters, administered under the Poor Laws by the parish, and known as parish apprenticeships (Walmsley, 1990). Surprisingly this also heralded a rare period when young women could get apprenticeships in the manual crafts, including metal working and building crafts. However, the trades' incorporations in Scotland still strongly controlled entry to the building crafts and this system of parish apprenticeships did not occur (Mitchison, 1988). There were instances of public and infrastructure work employing numbers of paupers as unskilled labourers, sometimes on a more or less "make-work" basis.

The end of the 18th Century saw the beginning of the general contractor type of firm with subcontractors, ending the earlier system of employing individual craft workers directly via an agent, master builder, architect or surveyor. In 1780, new rules required Government departments commissioning building work to use the new "Contract in gross" procurement system.

In 1803, a system of Commissioners for Highland Roads appointed Thomas Telford to rationalize Wade's road system and extend it into the NE. He reported that more than 1,000 bridges were needed on 780 miles of road, and that 200 new towns and planned villages should be developed at major junctions and river crossings. This major work extended into the first half of the 19th Century (McWilliam, 1975).

The first official census, in 1801 (Figure 4), demonstrated that there had been a major increase in pre-industrial revolution urban populations. Burghs had to develop and expand, particularly requiring workers' housing and the town houses for Lairds etc.

Figure 4 Scottish Population to 1821 (Sinclair, 1799 and censuses)

In 1846 the Act Abolishing Exclusive Trading Privileges ("Recissory Act") removed the political and monopolistic trading rights for the trades' guilds, which became welfare and social groups. This meant that all tradesmen could operate anywhere at will, but also meant that there could be less oversight of standards for new entrants. However, apprenticeships, on similar lines to those used since the Middle Ages, continued to be usual mode of (controlled) entry for the next hundred years.

The 19th century saw the emergence of trades' unions and a measure of industrial organisation at all levels of the industry for both workers and employers. The employers acted vigorously, together and individually, to oppose "combinations" and unionisation for as long as possible and, with most construction work being small scale and short-term, levels of unionisation in the Scottish industry remained low. The industry was notoriously conservative both in technical practice and in conditions of work, with most workers favouring the specialised craft union over a whole-industry type of union common in the metal trades. The United Operative Masons of Scotland Society was started in1830 and, in 1844, bricklayers combined to prohibit piecework in Scotland (Marwick, 1936). The masons obtained the legal right to strike in 1836 and reformed ten years later as the Scottish United Operative Masons Association, whose membership rose to 14,000 in 1877 with representation in 40 towns and cities throughout Scotland (Jones, 1861). The masons were the only trade to be so widely represented at that time. Carpenters and joiners formed various unions from 1836 and became the Associated Carpenters and Joiners in 1861, in competition with another London-based union. Some plumbers joined unions based in England and some formed small local trade clubs but were not usually very highly unionised because of the small, itinerant nature of their jobs. There was a small Scottish Slaters' Society from the 1860s, operating mainly on the West Coast, a Scottish National Operative Plasterers union from 1888 and a Scottish National Federation of House and Ship Painters from 1887. The plasterers had about 1,000 members and their main activity was to employ quality control inspectors to ensure plasterers were not undercutting colleagues by 'scamping' on work. Bricklayers, joiners, glaziers, painters, plasterers, plumbers, slates and masons all had their own meeting places in Glasgow in 1861but this was unusual and reflects the huge amount of work taking place there.

Table 1. Numbers recorded in Decennial Census returns as working in construction related occupations

This level of organisation was not reflected in the firms themselves. Most firms were small, ephemeral and badly managed. Many kept no accounts and even the largest had no idea about market research or supply and demand. Anyone could call themselves a builder, or style themselves as undertaking any trade. Following the lead of Cubitts in England in 1815, some larger Scottish firms started to employ the full range of trades throughout the year, to provide all the work for a contract without subcontracting. Many became speculative builders in order to provide full employment (Bowley, 1966), but the practice was far less popular in Scotland and the industry remained dominated by small firms.

In 1834 the first forms of contract were agreed and Institute of British Architects and Builders' Society were founded, that later became the RIBA and Chartered Institute of Building. In 1850, the Royal Incorporation of Architects in Scotland was founded as the Architectural Institute of Scotland. 1868 saw the founding of the Institution of Surveyors, which ultimately became RICS in 1946. Competitive tendering requirements, particularly for public works, led to dangerously low tenders and consequent bankruptcies, leading the Public Office of Works to draw up approved lists of potential tenderers. Previously, most subcontracting trades would provide their own materials but this became less common during this period, so that subcontractors were only paid for the labour they provided, but worked from more detailed plans under closer supervision (Bowyer, 1973).

One of the prominent features of the commercial construction industry of the Victorian era in Scotland, was its huge and varying cast of large and small companies (Morgan, 1990). A feature not much acknowledged generally is the scale of employment opportunity (Table 1) the industry offered in all parts of the country, often more than 10% of those at work and not often much less. McAlpines employed a staggering total of 7,000 people in 1904, but there were many more contractors operating at the significant level of over 1,000 employees at that time.

Figure 5 Industrial and infrastructural construction in the 19th Century in Scotland

Construction in the nineteenth century featured huge amounts of industrial and infrastructure works (Figure 5). Nearly every major player of the time was involved in building or financing some part of the railways, but these were not always a sure way to success and the Talla water scheme bankrupted the previously large and successful company of Robert Young. The few firms founded over a hundred years ago which are still around

today are those which were able to diversify successfully. Finance for builders came from a multitude of different sources, large and small, formal and informal, and the ability of any builder to raise capital for a speculative venture depended upon the firm's own credit rating. Many small firms relied on informal credit and were chronically under-capitalised (Rodger, 1999). Such firms were therefore very susceptible to failure, and individuals commonly moved in and out of the contractor/journeyman roles.

Figure 6 Number of homes for which plans approved: Glasgow (Parry Lewis 1965)

For most of the 19th century the family firm, large or small, was the normal model. However, very few survive to the present day, let alone in a form recognisable as a family firm. The effects of inheritance choices on the part of proprietors affected the lifecycle of all family firms. The advent of the limited liability company saved many small family firms in inheritance crises and enabled them to take in a wider range of directors, some from outwith the family but usually encompassing a wide network of interconnected families. Most of the firms were small and only capable of taking on small projects, but this period saw the start of widespread change and many large housebuilding and industrial contracts.

Few family firms lasted beyond the second generation and most of the Victorian firms were gone by 1918. One of the deciding factors was the Increment Duty Act of 1910, which severely affected income from the feu duties and ground rents on which many speculative builders relied for their reserve income (Slaven & Checkland, 1990). This prompted many firms to move into property management and factoring, and so survive the building slump at the start of the century but meant there was a very small industry remaining to deal with demand between the wars. Mergers and takeovers saw the disappearance of some previously important names, such as Brand, Morrison and Mason and the spectacular collapses of formerly strong family firms. Smaller firms could not normally make that change and many folded, as they lacked the business skills. The interwar years featured huge growth, particularly in building by private contractors (e.g. Mactaggart & Mickel and Millers) for local authorities. The Scottish Housing Group brought together a number of firms to collaborate on erecting non-traditional housing.

The structure of the industry continued to include high numbers of small firms, with many individuals operating flexibly as employer or skilled employee to facilitate survival of such small firms. In 1930 there were 317 firms in Scotland with more than 200 employees each and 44,028 firms with less than 10 each. This pattern was uniform in all building trades (Milnes 1936) and areas of Scotland. Edinburgh (Figure 7) in this period shows how medium sized firms predominated numerically. Interestingly Robertson (1936) commented that Edinburgh building practices at that time were likely to be less efficient than other parts of Scotland or the UK, due to the

higher level of manual labour used in Edinburgh. Perhaps this explains why the shape of this graph is not as skewed to the smaller firms as would have been expected.

Figure 7 Structure of building industry in Edinburgh 1923-34 (Milnes, 1936)

If a house was estimated to take 1 person year to build, there were fewer than 1,000 firms in Scotland (1935) who could build more than 100 houses/year and only 31 that could construct more than 1000/year. Many builders avoided public contracts because they were seen as either unfair or unprofitable. At this period the term "Contractor" applied strictly to public works contracting (roads, sewers etc.) and this group employed a larger percentage of unskilled labour than the "Building" firm. The pressure to take on novel methods and materials suited some companies, such as Melville Dundas and Whitson (concrete) and Robert Barclay Shaw (structural steel). However, the sector retained its reputation for conservatism, and small traditional builders could still find contracts, although they continued to be very vulnerable to economic cycles, against which they had insufficient resources to cushion themselves. In the interwar period, there was first a severe materials shortage and then a shortage of skilled labour, particularly bricklayers. Councils did not have their own building workers and the huge amount of public housing was mostly done under contract by private companies, such as Mactaggart & Mickel (Glasgow) and James Miller (Edinburgh).

The industry continued to be conservative in its practices both in the employers' and employees' associations. The construction unions held out against the concept of an industry-wide union even longer than some other industries and resisted attempts to merge with English counterparts. The Scottish Plasterers' Association refused the offer of a merger with the English National Association of Operative Plasterers in 1952 (Newman 1960). The Amalgamated Society of Woodworkers (ASW), believing that their special skills protected them against change, refused in 1959 to join with other unions to form an industry-wide union. This was not to come about until the Union of Construction, Allied Trades and Technicians (UCATT) formed in 1971, taking in the ASW, the Amalgamated Society of Painters and Decorators, the Association of Building Technicians and the Amalgamated Union of Building Trade Workers.

The Scottish Special Housing Association (SSHA), with its strong links to government subsidy and central organisation was superceded, at the end of the 1940s, by two umbrella groups: the Scottish Housing Group (SHG) operating mainly in the west and the Cruden Group in the east. SHG included Melville, Dundas and Whitson, John Lawrence, MacTagggart and Mickel, John Bisset and William Tawse, James Miller and W&JR Watson and was a cartel, aiming to exclude English contractors. The Cruden Group focused on novel methods and prefabrication and included Alexander Hall, Laidlaws, Alliance Construction and J. Wrights. These organisations helped bridge a gap until dominant companies could develop. In the 1950s the Miller Group (in Edinburgh) and John Lawrence were major players, employing thousands of workers on site and in factories and taking ownership of building materials suppliers too.

The oil crisis of 1973 led to a fall in construction output of 22% 1973-1981, particularly in the public sector. Construction as more cyclic from this period onwards and with a slower upward trend than the rest of the Scottish economy (SPIC 2000). Thatcherite policies to encourage private ownership changed the direction of the housebuilding industry so that, from the 1980s, there was far more private, speculative housebuilding, although commercial and industrial construction stabilized and fell. In 2000 the Scottish Executive's Economic Report (2000) described the Scottish construction industry as less cyclic than it had been in the mid 1980s, and also less cyclic than its UK and European counterparts.

The Scottish housebuilding market was also less overheated than that of the south east of England, where land shortage and house price inflation caused problems. As competitive tendering forced profit levels down to as low as 1.5%, however, not many firms still found it profitable to continue in the speculative market. Some of the largest dropped out altogether and moved into the PFI field, where long-term stability was guaranteed by maintenance contracts for profit levels up to 15% (Corporate Watch UK, March 2004). The modern construction industry now has huge numbers of very small firms and sole traders in Scotland, as in the UK generally (Figure 8). However, Scotland has a lower percentage of sole traders and very small firms than the UK, but a higher percentage of larger firms.

Figure 8 Structure of the Scottish and UK Construction Industries 2003 (DTI Construction Annual, 2003)

Conclusions

It can be seen that there was a distinct and distinctive Scottish construction industry from earliest times and that aspects have changed remarkably little over time. The pre-industrial revolution era was marked by very slow change in both technological and structural aspects of the construction industry. Materials, tools, contracting systems, the scale of work and control of manpower and means of production scarcely changed over hundreds of years. The new technology and massive movement of people during the nineteenth century affected these issues to a greater or lesser extent in the building industry. The Scottish construction industry profile remained one of a few large firms and a preponderance of very small local firms. The latter's difficulty in getting finance to sustain them through slumps made the Scottish industry peculiarly resistant to technical and structural change. A single technological change which Scotland has, however, made its own from the late twentieth century, is the use of timber-frame housing, in which Scotland substantially outpaces the rest of the UK. It is still relatively conservative in outlook, with a less diverse workforce than in England. Scottish arm of the UK construction industry retains a local character but is very much in the public eye, acknowledging its vital importance to national economic development.

Naturally, in arguing that the Scottish construction industry is a separate and individual entity apart from the construction industry in the rest of Britain, and possibly national rather than regional in character, other questions come up which this research has not addressed. Will the emergence of the Scottish Parliament and any concomitant change in national identity be reflected in changes in how the Scottish construction industry operates? The Parliament and the Scottish Executive could be said, even 6 years after their introduction, to be still in a "shakedown" situation. Interactions with the UK government are still developing and altering, responding to conflicting demands for uniformity or difference in policy or implementation for Scotland. One area where a uniform policy impinges on a non-uniform situation is that of the effects of interest rate changes (e.g. for mortgages). Interest rates are among the fiscal measures used by the government to manipulate the market and control inflation. The well-known problem of house-price inflation in the South East of England is not uniform across the whole of the UK, but the mortgage interest rates are. If the Scottish housing market and hence the housebuilding part of the Scottish construction industry are operating in a different financial atmosphere, how are they affected by such uniform policies as the interest rate changes? What would happen to the Scottish construction industry, if the Scottish Parliament decided to enable the use of the Euro in Scotland, even the rest of the UK did not?

In Scotland, life and business may feel they operate in a separate "Nation", regardless of political formalities but, from the south of England, Scotland may seem like a tiny region of Britain and no different from, say, the English Midlands. Many of these questions have more or less relevance depending upon which end of the North/South telescope you look through.

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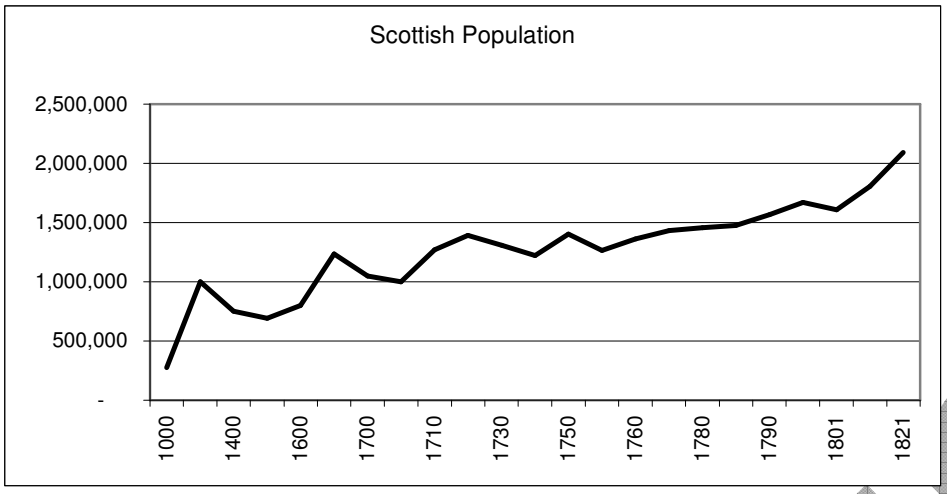

Figure 4 Scottish Population to 1821 (Sinclair, 1799 and censuses)

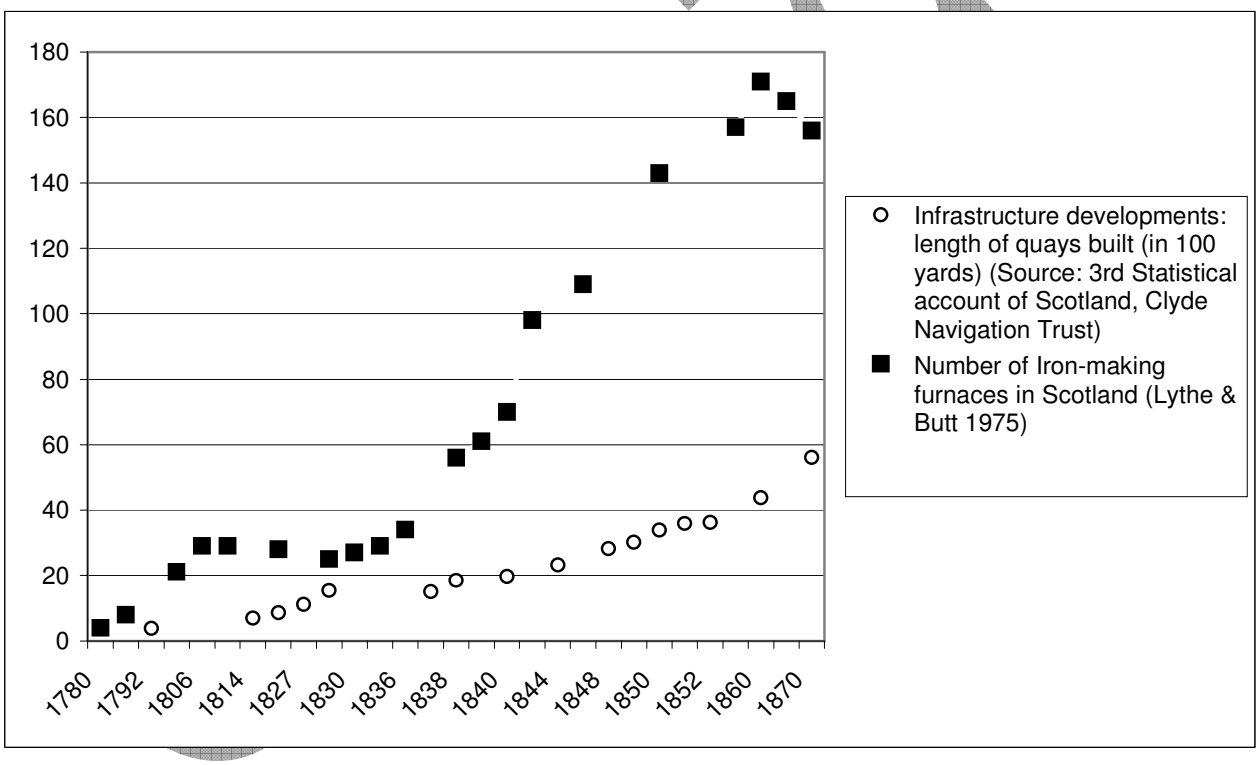

Figure 5 Industrial and infrastructural construction in the 19th Century in Scotland

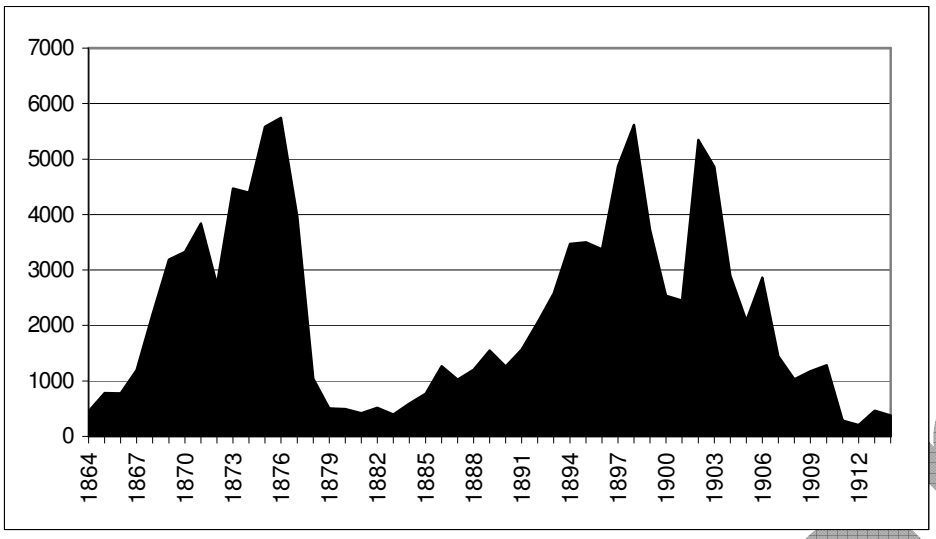

Figure 6 Number of homes for which plans approved: Glasgow (Parry Lewis 1965)

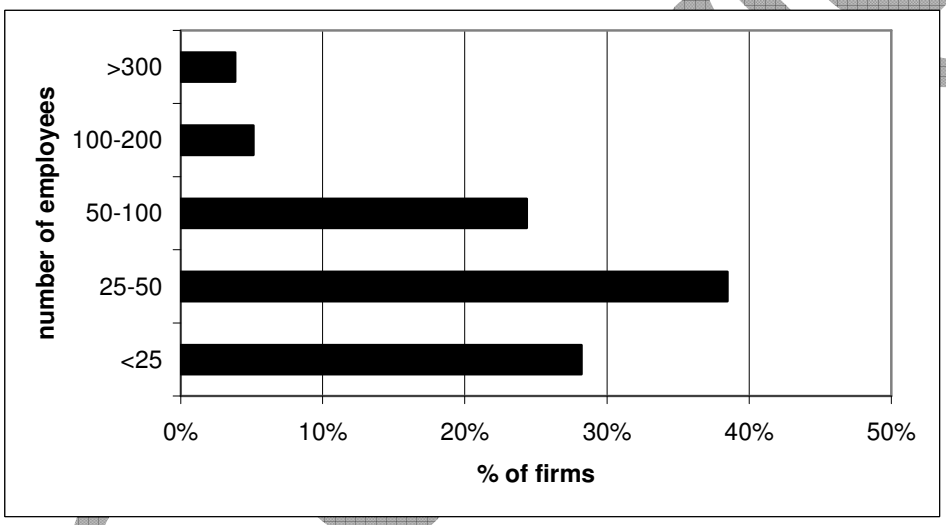

Figure 7 Structure of building industry in Edinburgh 1923-34 (Milnes, 1936)

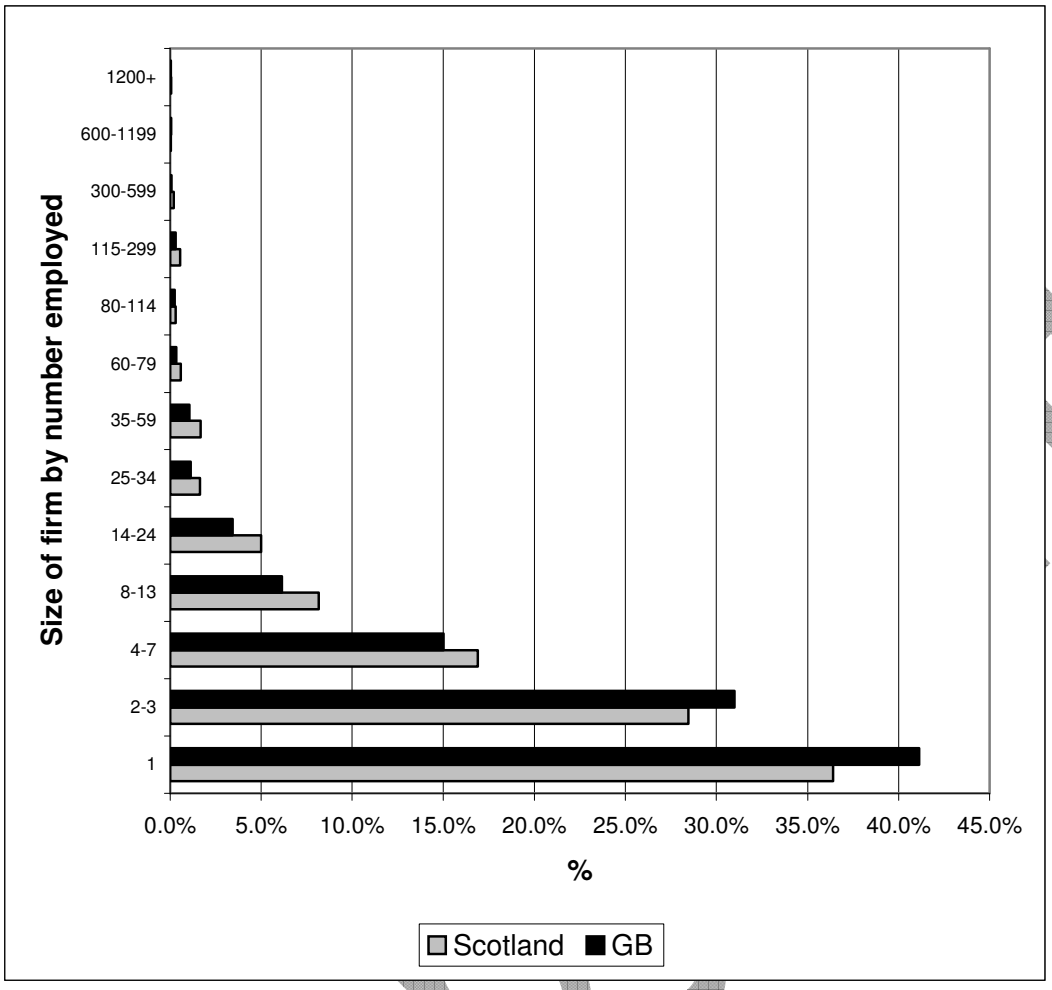

Figure 8 Structure of the Scottish and UK Construction Industries 2003 (DTI Construction Annual, 2003)

Table 1. Numbers recorded in Decennial Census returns as working in construction related occupations

	Males in construction	Females in construction
1841	61904	158
1851	75440	187
1861	81457	184
1871	98184	324
1881	112572	560
1891	216244	819
1901	112528	681