Resource longevity and the 'pull' of existing organisational paths: strategic adjustment and response by UK producers to a new international division of labour in the ceramic tableware sector

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This paper presents the findings from a study that explores the implications of a new international division of labour in the ceramic tableware sector for UK producers. Many UK producers have struggled over recent years to adapt to changing competitive and market conditions in the sector. The findings suggest that strategy choice and success for UK producers during the period of interest (1996-2008) has not been exorable and homogenous. Instead, past actions, events and outcomes, as well as the 'pull' of existing organisational paths, appear to have influenced past capability selection and accumulation decisions, shaping the historically conditioned, rent-generating competencies upon which case study firms had based their respective responses to changes in competitive and market conditions. This has increasingly conditioned two distinctive focal action patterns within the sample, each, seemingly, presenting its own respective 'lock in' effects.

KEYWORDS competitive advantage, resource-based theory, path dependence, ceramic tableware

Introduction

Many ceramic tableware producers in the United Kingdom (UK), traditionally clustered within the city of Stoke-on-Trent, North Staffordshire, have struggled over recent years to adapt to a new international division of labour within the sector. Sales, market shares and production have been increasingly ceded to producers within low-wage cost and low-social cost developing economies, in particular the Far East. As a result there has been a significant change in the position of the UK within the sector, moving from a long-standing major net exporter of ceramic tableware up until 1996, to become a net importer. This has resulted in multiple plant closures and workforce redundancies within Stoke-on-Trent.

This article presents the findings of a study that examines the strategic change and innovation undertaken by UK producers in response to this new international division of labour in order to regain competitive advantage in the sector. This draws upon themes and concepts from resource-based theory and organisational path dependence literatures. Data were drawn from interviews with various strategic actors within the UK ceramic tableware sector, such as representatives from trade and employers' associations and the trade union; qualitative case studies of six Stoke-on-Trent ceramic tableware producers; numerical data; and documentary and other contemporary sources. In particular, the analysis is presented here from the perspective of the six qualitative case study Stoke-on-Trent producers.

The structure of the article is as follows. The second section presents background trade data for the recent performance of the UK in the ceramic tableware sector to provide an overview of recent trends. The third section outlines key theoretical concepts used as a coding paradigm to develop categories from the empirical evidence, which include themes drawn from resource-based theory and organisational path dependence. The fourth section outlines the research design and sources of data used for the study. The fifth presents the empirical findings, drawing on the

concepts of strategy choice and success as a function of resource longevity, organisational path-dependent lock-ins and the 'pull' of self-reinforcing processes in the formation of organisational paths to analyse the data, while the sixth section concludes.

Background and context

Sales by UK firms of ceramic tableware have decreased significantly following a peak for the post Second World War period in 1996. This decline is illustrated by the data for 'porcelain or china tableware and kitchenware' (CN691110) presented in Table 1.[1] These show the significant shift in the UK's total net balance of trade for this commodity from a surplus of £155m in 1996 to a deficit of £24m in 2009. This progression, from a major net exporter to net importer, was primarily the result of an 80 per cent decrease in extra-EU exports and a 161 per cent increase in extra-EU imports. All this occurred during a time when the UK market net supply decreased by 55 per cent between 1996 and 2009 (ONS, 1999; 2009).

< Table 1 about here>

The developments seen within the UK market were indicative of the changing performance of the UK in the ceramic tableware sector since 1996. This is illustrated by the data presented in Table 2 for selected economies' shares of total global exports in 1996 and 2009 (CN691110). This selection of economies collectively accounted for 77 per cent of total global exports in 1996 and 89 per cent in 2009. During this period, while total global exports increased by less than 1 per cent, the value of exports from the UK decreased by $230m. This represented the largest net decrease within this selection of economies, and saw the UK's share of total global exports of this commodity decrease from 11 to 3 per cent. In contrast, China recorded a 159 per cent increase in the value of its exports of this commodity, from $586m in 1996 to $1.5bn in 2009. This saw China's share of total global exports increase from 21 per cent to 55 per cent. As the data show

however, despite the increase in their collective share of total global exports, only three other economies within this selection (Indonesia, Malaysia and Sweden) recorded increases in their respective global market shares. Furthermore, combined with the significantly larger growth rate in the value of Chinese exports, the distribution of shares across this selection became increasingly uneven during this period.

< Table 2 about here >

Conceptual framework

This section outlines the conceptual framework for the study. The first part presents themes and concepts relating to the issue of resource longevity in strategy choice and success; the second introduces the issue of organisational path-dependent lock-ins in capability selection decisions; while the third outlines positive feedback, self-reinforcing processes involved in the formation of such paths.

Strategy choice and success as a function of resource longevity

The generation of long-term economic rent through the development of sustainable competitive advantage remains a fundamental dependent variable at the heart of the strategy literature. Conventional perspectives consider strategy choice as an economically rational process within the constraints of limited information, cognitive biases and causal ambiguity (Amit & Shoemaker, 1993; Ginsberg, 1994; Lippman & Rumelt, 1982; Peteraf, 1993; Reed & DeFillippi, 1990). Despite this conserved economic rationality and apparent consensus that rents can only be sustainable if other organisations are, somehow, prohibited from successfully implementing identical strategic choices (thereby diminishing any source of superior performance for any one or small numbers of firms), opinions differ, however, in relation to the preventative pressures, or 'barriers to imitation'

(McGee & Thomas, 1986), that sustain them (McGahan & Porter, 1997; Runelt, 1991; Schmalensee, 1985).

For resource-based theory (Barney & Clark, 2007; Penrose, 1959; Priem & Butler, 2001; Wernerfelt, 1984), firm heterogeneity and economic rent are considered a function of the rational selection and application of capabilities that are valuable, rare, imperfectly imitable and non-substitutable (Barney, 1991; 1994). In this respect, whether focusing on the heterogeneity and immobility of resources and imperfectly competitive strategic factor markets (Barney, 1986; Dierickx & Cool, 1989), core competencies (Prahalad & Hamel, 1990) or organisational knowledge and learning (Grant, 1996), strategy choice and success can be considered an economically rational process with economic rents presented, and sustained, through barriers to imitation in the form of internal 'isolating mechanisms' (Rumelt, 1987). These relate to the possible social complexity, causal ambiguity and the cultural and historical antecedents that make it difficult for rivals to imitate, substitute or, indeed, even observe an organisation's rent-generating capabilities effectively (Mata et al., 1995).

Decisions concerning the selection and accumulation of rent-generating capabilities are, therefore, often considered a function of resource longevity. This proposes that key resources and competencies owe their heterogeneity, immobility and imperfect imitability to their embeddedness within organisational structures, processes, people and culture (Conner, 1991; Tecce, 1988; Tecce et al., 1997), while their value is derived from time compression diseconomies (Amit & Hoemaker, 1993; Conner, 1991; Dierickx & Cool, 1989; Oliver, 1997; Powell 1991; Teece, 1988). This is where the quicker a firm develops such resources and competencies, the higher their development costs (Pacheco-de-Almeida & Zemsky, 2007). Hence, history matters (Nooteboom, 1997), in the sense that decisions concerning the selection and accumulation of rent-generating capabilities, and,

accordingly, strategy choice and success, are historically conditioned - with past actions, events and outcomes influencing future action choices (Teece et al., 1997).

Nevertheless, despite the economic rent and isolating mechanisms presented through resource longevity, it has been argued that this same embeddedness can also lead to organisational inertia and the suboptimisation of resources and competencies. This is by increasing the likelihood that decisions regarding key capabilities are normatively replicated without question (Oliver, 1997). In the sense that they can become critical core rigidities; inhibiting subsequent development and success (Leonard-Barton, 1992), whereby an organisation's learning domain is defined, and, in many respects, constrained, 'by where it has been' (Teece, 1988: 265).

Capability selection as a function of path-dependent lock-in

If resource longevity can, therefore, be considered both an opportunity and a constraint for economically rational strategy choice and success, a key concern relates to how organisations can (a) effectively avoid inertia and the suboptimisation of resources and competencies resulting from the normative replication of decisions, while (b) still realising the rent potential of these embedded valuable, rare, imperfectly imitable and non-substitutable capabilities. The solution, it is suggested, resides in unlocking the puzzle of inertia and 'lock-in' through the 'particular kind of process' presented by organisational path dependence (Sydow et al., 2010).

Work on organisational path dependence in the social sciences (Pierson, 2000; Schreyögg & Sydow, 2010; Sydow et al., 2009; 2010; Thelen, 1999) has often stayed close to the theoretical antecedents of previous work on technological path dependence (Arthur, 1994; 1989; David, 1985; 1986). This is conceptualised as a non-static, active process; 'triggered' by a single, or a succession of interrelated, events, which, in time, gains momentum and is reinforced through a system of positive, self-reinforcing feedback; leading to the increasing predominance of a pattern of social

practices over alternatives; proceeding along a path that ultimately leads to a corridor of restricted scope of action and contingency (organisational lock-in) that often reflects limited efficiency and opportunity (organisational inertia). These lock-ins can be cognitive, normative, process and/ or resource related.

The triggering point – whether small (Arthur, 1994), random (David, 1985), large or unrandom (Bassanimi & Dosi, 2001; Cowan, 1990; Cusunano et al., 1992) – signifies a stimulus that builds up into, what may become, a path dependent process by eliciting subsequent action choices. In the sense that not all organisations will, inherently, be set along a path following a triggering point decision or action. It is, therefore, imperative to be able to effectively identify why (and importantly how) lock-ins and inertia emerge in some instances, but not in others, as well as how organisational paths can be broken, or, indeed, created intentionally. In this respect, by exploring the 'particular kind of process' presented by organisational path dependence, research seeks to develop a 'deeper understanding of the historicity of inertial phenomena beyond the general principle that 'history matters' but also pushes the explanation beyond such well-known concepts as organizational imprinting, institutional legacy and structural inertia' (Sydow et al., 2009: 704-05).

The 'pull' of self-reinforcing processes in the formation of organisational paths

The interrelated concepts of self-reinforcing processes and increasing returns represent key concerns for organisational path dependence. These are considered to be key driving forces behind the increasing predominance of a focal action pattern, whether relating to original technological issues such as utility (Arthur, 1989; 1994; David, 1985; 1986) or more recent developments regarding self-reinforcing social mechanisms. These build paths through a regime of positive feedback, whereby increasing returns represent 'self-reinforcing processes with increasing benefits;

repetitive pursuits to earn this increasing rent are likely to culminate in a patterned dynamic' (Sydow et al., 2009: 694). Thus, a focal action pattern of decisions concerning particular resources and competencies will gain increasing predominance over 'unfavourable' alternatives, and, as a result, becomes increasingly irreversible, particularly in cases of high fixed costs and levels of investment (Ghemawat, 1991).

For Sydow et al. (2009), coordination effects, in the form of more efficient interactions between agents arising from their adoption and application of identical institutions such as an organised rule or routine, represent one possible self-reinforcing mechanism. This reflects a growing interest over recent decades in the social and institutional embeddedness of economic activity and their definition, or indeed enforcement, of behaviour, such as in the resolution of collective action problems. In this respect, institutions cannot just be considered as rules-of-the-game (North, 1990), but rather as 'durable systems of established and embedded social rules that structure social interactions' (Hodgson, 2006: 13). Hence, they can be considered as constraints as well as enablers of agents' capacities and behaviour; as self-organising as well as externally enforced; and as agent-sensitive or agent-insensitive (Hodgson, 2006). Consider, for example, a self-organising configuration as a coordination game. In that, in the event that agents have comparable strategies and preferences, coordination rules can emerge spontaneously and be self-reinforcing; with the resulting coordination equilibrium both self-policing and stable (Schotter, 1981).

Nevertheless, in the light of growing arguments that institutions matte*r*, key questions remain nevertheless, notably: 'how [do] they matter, under what circumstances, to what extent, and in what ways' (Powell, 1996: 297). Consequently, despite an increasing focus within institutional as well as sociological perspectives in expanding the scope of strategic action (Deephouse, 1999; Lounsbury & Glynn, 2001), a clear understanding has yet to be formulated regarding exactly how

agents can use institutions to develop sustainable competitive advantage (Oliver, 1997), such as in the breaking, or, indeed, intentional creation of organisational paths through coordination effect self-reinforcing processes.

Research design and data sources

The study was conducted between January and September 2008. A qualitative research design was chosen in order to facilitate the examination of a number of possible explanations for emerging empirical findings, as well as building empirical checks into the analysis process.

Data were drawn from a number of different sources. Firstly, twenty interviews with various strategic actors within the UK ceramic tableware sector and Stoke-on-Trent cluster. This included representatives of local, national and international trade associations and organisations; the industry trades union; ceramics technologists; education and training providers; suppliers; and ceramic artists/ designers. Secondly, previous published research and documentary sources from national, industry, trade union, community and company archives; other contemporary sources, such as attendance at trade shows, exhibitions and industry networking events and seminars; and numerical data relating to industry/ firm performance, industry structure, comparative world trade performance and intellectual property/ patent registrations.

Thirdly, six qualitative case studies of Stoke-on-Trent ceramic tableware producers drawn on interviews with senior management personnel, factory visits and available secondary sources. An initial screening process (April - May 2008) identified a population of thirty-six active ceramic tableware producers in the Stoke-on-Trent cluster from original company registers drawn from KOMPASS (Product Code '33680' – Pottery, Porcelain and Chinaware for Domestic and Catering Use) and FAME (Product Code '2621' – Ceramic Household and Ornamental Articles) company databases.[2] Six companies - three small (labelled for anonymity purposes as Companies A, B and

C), one medium (Company D) and two large enterprises (Companies E and F) – were subsequently selected for qualitative case study analysis.

An open coding process was initially used in order for substantive codes and concepts to emerge from the empirical evidence. An axial coding process was subsequently undertaken in order to develop categories from the data and identify possible relationships between substantive codes/ concepts. In this process, analysis was carried out using a coding paradigm – a group of theoretical concepts drawn from the literature.

Strategic adjustment and response by the case study firms

The findings from the qualitative case study analysis are structured within three subsections, which are focused on the themes of resource longevity, organisational path-dependent lock-ins and self-reinforcing processes. The main findings presented within each subsection are summarised in Table 3.

< Table 3 about here >

Strategy choice and success as a function of resource longevity

All six firms had looked to secure competitive advantage through the identification of, and, if necessary, the refinement of the business around, aspects of existing capabilities, prior to their application in meeting the particular factors for strategic change and innovation faced. Their adjustment and response had therefore not been a function of the products they had produced. Rather, in line with resource-based theory (Barney & Clark, 2007; Penrose, 1959; Priem & Butler, 2001; Wernerfelt, 1984), it had been a function of resource longevity through the rational selection and application of historically conditioned, rent-generating capabilities. This principally concerned core competencies (Prahalad & Hamel, 1990) in production and new product development. In this

respect, history had mattered (Nooteboom, 1997). In the sense that, in line with previous accounts in the literature, these owed their heterogeneity, immobility and imperfect imitability to their embeddedness within organisational structures, processes, people and culture, with their value derived from the reduced development costs presented through time compression diseconomies and their longer-term development.

This approach reflected the conventional perspective within the literature that considers strategy choice as an economically rational process within the constraints of limited information, cognitive biases and causal ambiguity (Amit & Shoemaker, 1993; Ginsberg, 1994; Lippman & Rumelt, 1982; Peteraf, 1993; Reed & DeFillippi, 1990). Decisions had been based upon internal motives for efficiency, effectiveness and profitability (Connor, 1991); external factors such as industry and product market structure; and, above all, the relative value, rarity, inimitability and substitutability of considered sources of competitive advantage (Barney, 1991; 1992).

As well as witnessing their withdrawal from certain, often long-standing, product markets or market segments, and/ or the adaptation, or indeed termination, of long-established products, this, seemingly, economically rational, resource-based approach was demonstrated by the firms' outsourcing policies during this period. Although all six firms acknowledged the intensification of low-price competition since 1996, four (Companies A, D, E and F) indicated that it had represented an important factor for strategic change and innovation. In response, all four had at some point outsourced some production activities to suppliers in the Far East. However, despite this apparent homogeny in selected region, the productive activities concerned, the specific location of the supplier(s), as well as the point at which such policies had been initiated varied across the four firms. This was because a range of criteria, and not simply cost/ price, had been involved in the decision-making process in all four cases. These additional criteria concerned: (a) the retained home-based capabilities of the case study firm itself; (b) the combination of factors for strategic

change and innovation it had faced; (c) its competitive strategy; (d) the locality of the target market(s); and (e) the capabilities of the designated supplier(s).

Despite apparent equivalence in strategy success - in terms of securing demand for their products and in opening up new markets since 1996 - there were, however, important differences between the case study firms in relation to the perceived future sustainability of the economic rents generated by the capabilities each had selected. This did not, however, relate to perceived differences in imitation barriers (McGee & Thomas, 1986) such as entry and mobility barriers between their respective product market positions (Caves & Porter, 1977) or in the isolating mechanisms (Rumelt, 1987) shielding their respective historically conditioned, rent-generating competencies in production and new product development functions.

They related instead to differences in the time horizons in which management believed they could continue to operate certain home-based competencies effectively. This was linked to the availability of certain strategic factors required to support them. In this case this was labour equipped with the higher levels of operative manual skill and dexterity, judgment and product and process knowledge required to operate the more craft orientated and semi-mechanised, smaller-batch production processes traditionally operated within the ceramic tableware sector up until mid-way through the second half of the twentieth century. Differences in the potential exposure of the firms to the availability of these craft orientated, semi-mechanised production skills was linked to differences in the nature of the competencies upon which their respective competitive advantages were based.

The larger case study firms (Companies D, E and F) did not utilise many (if any) of the more craft orientated, semi-mechanised production skills used, to varying extents, by the three small firms (Companies A, B and C) in a number of key value-adding, home-based production activities. Their utilisation of such skills had been reduced, and for most production activities

eliminated altogether over many years, through successive phases of operational reorganisation and process automation. Consequently, the key home-based production and new product development activities resided in alternative resources, core competencies and strategic factor market 'imperfections' linked to more capital-intensive automated processes and mass-production techniques. As a result, the larger case study firms believed that they were not, and importantly would not be in the future, faced with significant skill shortages.

In contrast, if they were not experiencing them in some areas already, the three small case study firms (Companies A, B and C) foresaw significant skill shortages in the short- to medium-term through natural wastage, notably employee retirements. These shortages concerned the more craft orientated, semi-mechanised production skills they used, to varying extents, in a number of key, value-adding activities. Crucially, however, the craft orientated, semi-mechanised production skills upon which they depended - whether possessed by their existing workforces or by labour in the external labour market – represented remnants from internal labour management policies previously operated by, often, larger concerns across the Stoke-on-Trent region. However, analogous to the experiences of Companies D, E and F, successive phases of organisational restructuring and process automation had seen such policies replaced with labour management policies based upon more transferable, less-specialised skills.

This workforce skill and dexterity, judgment and product and process knowledge was valuable, rare and considered by management to be imperfectly imitable and non-substitutable (Barney, 1991; 1992). In this respect, rents appeared to have been generated for the small firms through strategic factor market 'imperfections' (Barney, 1986; Dierickx & Cool, 1989) in creating and supporting aspects of certain historically conditioned, rent-generating competencies. This was through their prior possession (and the regional concentration) of valuable and rare workforce skill and dexterity, judgment and product and process knowledge. However, the very same imitability

and substitutability constraints presenting these 'imperfections' (Barney, 1986) would, seemingly, restrict their own future duplication of key home-based competencies in the absence of such skills and expertise. This was as incumbent skilled labour retired or left the sector for alternative, and often perceived to be more 'attractive' (in terms of the nature of the work and working conditions, pay and future employment prospects), employment opportunities. If unresolved, management at all three firms believed that these shortages would necessitate changes to existing home-based production processes in the short- to medium-term. This would, correspondingly, have implications for sustaining a number of the key historically conditioned, rent-generating competencies upon which their strategic responses had been founded.

Capability selection as a function of path-dependent lock-in

In a 1998 report by ECOTEC Research and Consulting (Ltd.), a 'parochial outlook' on the part of owners and managers was considered a key contributory factor for the 'painfully slow' take up of new technology – notably computer-aided design/ manufacturing systems - by many, particularly smaller, UK ceramic tableware producers (ECOTEC, 1998). Interpreted from an organisational path dependence perspective, the ECOTEC (1998) study suggests that the social context of decision-making – in the form of individuals' norms and values – had reduced the scope of action and contingency. This was through a possible normative lock-in (Sydow et al., 2009; 2010) towards conformity with traditions, or, indeed, regional identity and industrial heritage. Stoke-on-Trent producers are strongly identified historically, both socially and operationally, with particular product specialisations, resources and competencies. This could have led to the replication of focal action patterns concerning aspects of craft orientated, semi-mechanised production processes, within – what would be considered – the final lock-in phase of a path-dependent process (Schreyögg & Sydow, 2010; Sydow et al., 2009; 2010). Thus, differences in action choices across

the sample of case study firms could be considered a function of their avoiding such normative lock-ins through differences in their management of normative rationality (Oliver, 1997).

Management at the three small firms had, however, not only been aware of the technical merits of the new technology that could be used to support such arguments, but, during the period of interest (1996-2008), had been willing to routinely review many of the real benefits their selection and accumulation could present. This included the potential reduction, or indeed elimination altogether, of their future exposure to crucial skill shortages. Nevertheless, none had implemented such technology following such reviews. The reasons they identified for this were three-fold: (a) the levels of investment required; (b) the continued demand for products based on aspects of more craft orientated, semi-mechanised production processes; and (c) concerns regarding the possible limitations and constraints aspects of new technology would impose upon opportunities for responding to current and future changes in competitive and market conditions.

Their concerns regarding the possible limitations and constraints aspects of new technology were significant in relation to the competitive advantages and imperfectly competitive product market positions the firms had looked to secure in response to changes in competitive and market conditions since 1996. All three small case study firms indicated the possible limitations of new equipment and machinery for alleviating their use of aspects of more craft orientated, semi-mechanised production processes. Indeed, management across all six firms questioned the impact of aspects of new equipment and machinery and increased automation on their capacity to meet current and future developments. Instead, they suggested that extensive deskilling, automation and a resulting overreliance on new technology in a number of key value-adding activities had, in fact, been a key contributory factor for the difficulties experienced by a number of other UK producers in responding to changes conditions. The reasons they presented for this were two-fold. The first related to the increasing homogeneity of many production processes across the sector as a result of

technology and process transfer. The second concerned the possible constraints of new technology and more automated production processes on some key value-adding activities and flexibility for responding to current and future changes in competitive and market conditions. In addition to the larger batch sizes often required to ensure any new technology introductions were cost-effective and fulfilled payback criteria, this issue concerned the constraints they could impose on the scope for product differentiation and innovation.

For resource-based theory, sustainable economic rent is not just dependent upon whether or not a firm's competitive strategy can create an imperfectly competitive product market position, but also on the costs of implementing the chosen strategy. This relates to issues of resource immobility and heterogeneity through imperfectly competitive strategic factor markets (Barney, 1986; 1991; 1992). In this respect, each case study firm had, seemingly, weighed up (a) the perceived costs of implementing competitive strategies based upon aspects of new technology against (b) the potential returns to be derived from resulting product market positions. Crucially, however, their expectations for generating above normal economic returns from such strategies differed within the sample. This was due to differences in the possible strategic factor market 'imperfections' (Barney, 1986; Dierickx & Cool, 1989) presented by their existing resources and competencies.

In the case of the three small firms (Companies A, B and C), the perceived value of the economic returns derived from resulting product market positions had not appeared sufficient to outweigh the perceived costs (the aforementioned capital, scale and technical issues) for securing them. What's more, the nature of their existing resources and competences had appeared to present limited 'imperfections' in strategic factor markets relating to aspects of capital-intensive automated processes and mass-production techniques. Consequently, even if they could create imperfectly competitive product market positions through such strategies, their expectations were that this would (a) not generate above normal economic returns, with the full value anticipated in the acquisition of

the technological resources required, and (b) such positions would be effectively imitable due to the relative mobility and homogeneity of certain technological resources and associated competencies. The contrasting expectations for the larger firms (Companies D, E and F) derived from their possession of alternative resources and competencies that were already linked with more capital-intensive automated processes and mass-production techniques. This had presented them with strategic factor market 'imperfections' (Barney, 1986; Dierickx & Cool, 1989), and, therefore, contrasting opportunities for ensuring that the value and returns from competitive strategies based upon aspects of new technology would outweigh any costs of implementation.

These findings suggest that technology selection and accumulation decisions by the three small firms were exemplified with a greater degree of economic rationality and strategic intent otherwise suggested by arguments for (a) a reduced scope of action and contingency through a normative lock-in and (b) differences in their capacity to manage their normative rationality. Consider also that all three small firms had come to similar conclusions in regular strategic reviews despite (a) differences in product specialisations, product market positions and strategic capability profiles; (b) differences in the factors for strategic change and innovation they had experienced; and, notably, (c) changes to the social context of decision-making – in the form of individuals' norms and values – through changes in decision-makers during the period of interest (1996-2008) within each firm. This followed changes to senior management personnel; corporate governance structures and (for two firms) ownership; and in the backgrounds, task specialisations and experience and skill profiles of decision-makers.

In this respect, two different focal action patterns appeared to have been increasingly conditioned through the action choices of the six case study firms during the period of interest (1996-2008). This was with the craft orientated and semi-mechanised, smaller batch production strategies of the three small firms on the one hand, and the more capital intensive, automated mass-

production based strategies of their medium-sized and large counterparts on the other. What's more, these increasingly appeared a function of resource, rather than normative lock-in path-dependent processes (Schreyögg & Sydow, 2010; Sydow et al., 2009; 2010). In that, the nature of the existing resources and competencies case study firms possessed had shaped contrasting expectations concerning (a) the returns and costs associated with creating imperfectly competitive product market positions through the selection and accumulation of aspects of new equipment and machinery, while (b) avoiding (or overcoming) any potential 'homogenisation effects' of such technology on firm heterogeneity and, thus, rent potential.

The 'pull' of self-reinforcing processes in the formation of organisational paths

As well as differences in their utilisation of certain craft orientated, semi-mechanised production skills in various key value-adding activities, a key factor for differences in the potential exposure of the case study firms to potential skill shortages was their operation of training and development policies. Company size – in terms of scale of operations and access to resources - represented an important factor in the operation of such policies. The three small firms (Companies A, B and C) provided no training at all to their employees; the medium-sized firm (Company D) had recently (at the time of the study) undertaken some subsidized employee training and development involving external training bodies; while the two large firms (Companies E and F) conducted both internal and external employee training and development activities.

The three small and one medium-sized firm indicated that they lacked the necessary scale and resources to operate internal training and development policies. In terms of external policies, the compatibility of the small firms' home-based production strategies and resulting workforce skill requirements with available external training and development provisions was a key factor. For, unlike their medium-sized counterpart, the three small firms did not conduct external training and

development policies, or, indeed, even grant their employees time off to participate in them. The reasons they presented for this were three-fold. Firstly, the initial cost to them as small businesses, in addition to the limited assurances that any trainee would remain for a sufficient period of time afterwards for them to see a return on their investment/ realize sufficient benefits. Secondly, training courses were often conducted during work hours and away from the workplace, which affected productivity by removing key workers. Thirdly, and most notably, in contrast to their large and medium-sized counterparts, the assistance available could not meet their more asset-specific, vocational skill requirements. This assistance, in the form of grants, subsidies, external training and development providers and public bodies, focused on more general, transferrable skills, often resulting in the awarding of nationally recognised qualifications (for example, National Vocational Qualifications (NVQs)). Consequently, although management at all three small case study firms acknowledged the possible benefits of such courses for their employees outside the workplace (for instance, by enhancing their future earning and employment prospects in the external labour market), as employers they did not require any of the skills and qualifications provided.

The substantive codes and concepts that emerged from the data suggest the role of path-dependent 'coordination effect' positive feedback, self-reinforcing processes (Pierson, 2000; Schreyögg & Sydow, 2010; Sydow et al., 2009; 2010) in shaping focal action patterns concerning capability selection and accumulation decisions within the sample of case study firms. In the sense that the sets of rules and expectations (Hodgson, 2006) that define and shape behaviour within the UK economy had influenced producers' past action choices; over time, shaping their crucial production and new product development competencies; and, as a result, conditioning the strategic factor market 'imperfections' they had possessed, and, thus, the imperfectly competitive product market positions they might create and effectively occupy, in a new international of labour in the ceramic tableware sector.

This reflects arguments for contrasting 'skill equilibria' as a result of crucial differences in the coordinating institutions that define and enforce systems of education and associated incentive structures (Finegold & Soskice, 1988), which it is proposed can create crucial 'imperfections' in strategic factor markets relating to the workforce skills and competencies possessed by firms. As a result, it is argued that different economies' firms can be presented with contrasting opportunities and constraints for creating, and effectively occupying, particular imperfectly competitive product market positions. In proposed 'low-skill equilibrium' economies such as the UK, where incentives for individuals and employers to invest in training or the quality of training provisions are considered to be low, it is argued that firms become accustomed to creating and occupying product market positions in which workers are required to possess little, or less specialised, transferable, skill and expertise. This imposes few demands on the system for improvement; with the equilibrium sustained by forces for both supply and demand (Finegold & Soskice, 1988).

The 'pull' of such coordination effect self-reinforcing processes (Sydow et al., 2009) was evident in the increasing predominance of a pattern of capability decisions within the three larger case study firms (Companies D, E and F) during the period of interest. These decisions focused around the selection and accumulation of more general, less asset-specific specialisations in workforce skill requirements. For instance, at the time of the study, Company D had recently retrained and internally reallocated a proportion of its production workforce - using subsidised external training provisions – in order to facilitate the implementation of additional aspects of new technology and equipment, which had removed a number of more asset-specific skill profiles within its home-based production workforce.

Discussions with management at the three larger firms identified that, in a context in which incentives for them to invest in training appeared low and where the training system seemingly concentrated on, often subsidised, general, transferable skills, this focal action pattern had become

increasingly prominent - consequently maintaining an apparent 'low-skill equilibrium' and imposing few demands on the system for improvement - through four factors:

- The high costs, uncertainties and limited supportive institutions (North, 1990) for the transactions required to implement competitive strategies based upon alternative, more asset-specific skills and other associated assets and resources.
- Expectations that such alternative strategies would not generate above normal returns, with the full value anticipated in the transactions to secure such skills for their implementation.
- Increasing returns arising from the adoption and application of strategies closely aligned with the persisting incentive and training system, and, thus, which utilised intensely available assets and resources such as general, transferable skills.
- The increasingly irreversibility of certain elements of the focal action patterns due to the high fixed costs and levels of investment required for some associated assets and resources, such as new production equipment and machinery.

Nonetheless, over time, the 'pull' of these processes appeared to have reduced the scope of action and contingency for the three larger firms; seemingly 'locking in' their opportunities for occupying product market positions to those linked to the intense utilisation of transferable, less-specialised skills and other associated assets and resources through automated, high-volume production processes. As a result, shaping their expectations for heterogeneity and rent potential in a new international division of labour within the sector. As well as being evident in the increasingly prominent focal action pattern of decisions across the three larger firms (Companies D, E and F), the 'pull' of such processes also appeared, indirectly, evident in the actions by the three small firms (Companies A, B and C) to try to avoid their potential impact on firm heterogeneity and

rent potential. This had seen them look to utilise alternative, yet, in the longer-term, unsustainable, skills and other associated assets and resources. This was in order to open up, seemingly, otherwise unavailable opportunities for economic rent through the occupation of alternative imperfectly competitive product market positions. However, the increasing returns and 'pull' of this alternative focal action pattern had, in time, increasingly narrowed their own scope for action and contingency, which, as identified earlier, appeared to present its own respective potential, future lock-ins and inertia for the three small producers concerned.

Conclusions

The empirical evidence suggests that strategy choice and success for UK producers can be considered an issue of both resource longevity and organisational path dependence.

Resource longevity in the sense that, in line with resource-based theory (Barney & Clark, 2007; Penrose, 1959; Priem & Butler, 2001; Wernerfelt, 1984), each case study firm had sought to secure imperfectly competitive product market positions through the identification of, and, if necessary, the refinement of the business around, aspects of existing capabilities, prior to their application in meeting the particular factors for strategic change and innovation faced. This principally concerned core competencies (Prahalad & Hamel, 1990) in production and new product development, which owed their heterogeneity, immobility and imperfect imitability to their embeddedness within organisational structures, processes, people and culture, with their value derived from time compression diseconomies.

However, the empirical evidence suggests that firms' strategic adjustment and response was also an issue of organisational path dependence (Sydow et al., 2009; 2010). In the sense that while past decisions, events and outcomes had shaped these valuable rent-generating production and new product development competencies, they had also signified the emergence of two organisational

paths within the sample of firms. The 'pull' these paths appeared to have narrowed the scope of action and contingency in response to the factors for strategic change and innovation firms had faced. What's more, coordination effect positive feedback, self-reinforcing processes (Pierson, 2000; Schreyögg & Sydow, 2010; Sydow et al., 2009; 2010) appeared to have played a part in the emergence of these paths. This was through their influence on capability decisions concerning the selection and accumulation of workforce skills and associated assets and resources.

For the larger firms (Companies D, E and F), this action pattern of decisions – focused around automated, high-volume production processes – had, seemingly, increasingly constrained opportunities for occupying product market positions to those linked to the intense utilisation of transferable, less-specialised skills and other associated assets and resources. Thus, shaping firms' expectations for heterogeneity and rent potential in a new international division of labour within the sector.

In contrast, the pattern of decisions for the three small firms (Companies A. B and C) was focused on production strategies based upon higher levels of operative manual skill and dexterity, judgment and product and process knowledge. These were required to operate the more craft orientated and semi-mechanised, smaller-batch production processes operated within the UK sector up until midway through the second half of the twentieth century. Increasing returns appeared to have arisen for the three small firms through the adoption and application of strategies closely aligned with the intense utilisation of labour equipped with these valuable, rare, imperfectly imitable and non-substitutable skills that had been already available in internal and regional external labour markets. These returns were in the form of the opportunities such strategies presented for maintaining firm heterogeneity and rent potential in the face of the 'homogenisation effects' and capital and scale barriers for overcoming trade-offs associated with aspects of new technology. However, these skills represented remnants from past internal labour management policies by, often,

larger concerns, which had been phased out sometime before. As a result, the three firms foresaw significant skill shortages in the short- to medium-term as imperfectly imitable and non-substitutable skilled labour became increasingly unavailable in internal and regional external labour markets. However, over time, the replication of this focal action pattern appeared to have also developed resource 'lock-ins for the three small firms; leading to possible future inertia, with management believing that they had limited scope of action and contingency for sustaining key historically conditioned, rent-generating competencies in the short- to medium-term as a result of skill shortages.

In conclusion however, more research is required in order to develop a more detailed and comprehensive understanding of the possible path dependence mechanisms and processes that have shaped the strategic resources and competencies of UK ceramic tableware producers. This is required in order to explore the triggering point - or the critical juncture - behind the transition away from a reflectively 'open system' with limited constraints on producers' scope of action (an initial 'preformation phase'), to be followed by the gradual emergences of organisational paths (the 'formation phase'). This is as their 'pull' increasingly reduced the scope of action and contingency, increasingly conditioning the emergence of the two patterns of decisions and choices over time. In this respect, it might be possible to explore the extent to which (and importantly how) UK producers might effectively break from the conditioned action patterns of their existing paths, or, indeed, intentionally create new ones for securing alternative imperfectly competitive product market positions in the new international division of labour within the sector.

[1] The decline in sales of 'porcelain or china tableware and kitchenware' (PCC26211130/CN691110) during this period was indicative of the overall decline in the sales of other product categories of ceramic tableware by UK firms. During this period, all the ceramic tableware product categories witnessed significant net decreases in manufacturers' sales and exports. For example, UK Exports of 'earthenware or fine pottery tableware, kitchenware, other household articles, and other toilet articles' decreased by 89 per cent (from £179m in 1996 to £21m in 2009), 'ceramic tableware, kitchenware, other household articles, and other toilet articles' by 57 per cent (from £9m to £4m), 'common pottery tableware, kitchenware, other household articles, and other toilet articles' by 19 per cent (from £8m to £6m), 'stoneware tableware, kitchenware, other household articles, and toilet articles' by 45 per cent (from £37m to £20m), 'porcelain or china statuettes and other ornamental articles' by 64 per cent (from £20m to £7m)) and for 'ceramic statuettes and other ornamental articles' by 53 per cent (from £19m to £9m) (ONS, 1999; 2009 (2003=100)).

[2] In terms of ownership, this process identified within the final population 31 privately owned firms (86 per cent of population) and 5 public listed firms (14 per cent), consisting of 27 (75 per cent) small (<100 employees), 4 (11 per cent) medium-sized (100-500 employees) and 4 (11per cent) large (>500 employees) enterprises, with 1 firm (three per cent) not specifying its number of employees.

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TABLE 1
UK SALES (£000S) OF PORCELAIN OR CHINA TABLEWARE AND KITCHENWARE (CN691110), 1996 & 2009.

	Value (£000s)		Change (%)
	1996	2009	1996 to 2009
UK manufacturers' sales	306,050	44,643	-85.41
Intra-EU exports	42,052	20,296	-51.74
Intra-EU imports	24,816	21,368	-13.89
Net balance	17,236	-1,072	-106.22
Extra-EU exports	158,573	32,144	-79.73
Extra-EU imports	21,216	55,338	160.83
Net balance	137,357	-23,193	-116.89
Total UK exports	200,625	52,441	-73.86
Total UK imports	46,032	76,706	66.64
Net balance	154,593	-24,265	-115.70
UK market net supply	151,457	68,908	-54.50

Source: original date from ONS (1999; 2009), subsequently adjusted for inflation by the author.

TABLE 2
SELECTED ECONOMIES' SHARES OF GLOBAL EXPORTS OF TABLEWARE AND KITCHENWARE OF PORCELAIN OR CHINA (CN691110), 1996 & 2009.

Reporter	Share (%) of total global exports		Net change (%) 1996 to 2009
	1996	2009	
China	21.15	54.86	159.49
Czech Republic	4.23	3.75	-11.42
Denmark	1.29	1.17	-9.22
France	4.84	3.35	-30.74
Germany	15.19	12.20	-19.61
Indonesia	1.31	1.79	37.42
Italy	3.09	1.77	-42.81
Japan	6.14	1.44	-76.59
Malaysia	0.18	0.24	28.91
Netherlands	1.21	1.04	-14.38
Portugal	2.07	1.31	-36.75
Romania	0.76	0.29	-62.23
Sweden	0.65	0.75	15.53
Thailand	1.91	1.48	-22.29
UK	11.29	2.99	-73.52
USA	1.91	1.06	-44.18
Annual coefficient of variation for selection's shares	*1.24*	*2.40*	
Value ($) of total global exports	2,765,891,505	2,767,335,992	0.05

Source: original data from UN COMTRADE, subsequently adjusted for inflation by the author.

TABLE 3
OVERVIEW OF MAIN FINDINGS

Subsection	Main findings
Strategy choice and success as a function of resource longevity	• Low-price competition represented one of a number of critical factors. • Buyer demand for the faster introduction of new products represented the most significant competitive pressure. • Each firms' adjustment and response had been a function of the rational selection and application of historically conditioned, rent-generating competencies in production and new product development. • There were important differences in relation to the sustainability of the economic rents generated by the capabilities case study firms had selected. • This related to the time horizons in which management at the three small firms believed they could continue to operate certain competencies effectively. This was due to the unavailability of certain skills required to support them. • If unresolved, this would have crucial consequences (in the short- to medium-term) for sustaining certain key historically conditioned, rent-generating competencies.
Capability selection as a function of path-dependent lock-in	• Divergence in technology selection and accumulation decisions represented a function of resource, rather than normative lock-ins on the part of the three small firms. • In addition to the incompatibility of elements of key production and new product development competencies with aspects of new technology, key factors for their continued reliance on aspects of craft orientated, semi-mechanised production processes were the levels of investment and output required to implement and operate new equipment and machinery effectively. • In this respect, the strategic responses by the firms can be considered an issue of path dependence - with the 'pull' of existing paths influencing actions and choices in response to recent changes in industry structure.
The 'pull' of self-reinforcing processes in the formation of organisational paths	• Coordination effect self-reinforcing processes appeared to have influenced past capability selection and accumulation decisions concerning workforce skill specialisations; over time, shaping the development of firms' production and new product development competencies; and, as a result, the product market positions they might occupy effectively in a new international of labour in the sector.

Source: Author.