

Inertia and change in multinational enterprise subsidiary capabilities: an evolutionary economic geography framework

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Abstract

In this article we argue for a process-centred use of the dynamic capabilities-based view of evolution in multinational enterprise (MNE) subsidiary capabilities. In particular, we consider changes in the scale, scope and specialisation of resources and capabilities at subsidiaries over time by drawing on Dodgshon's (1998) study of change in empires and societal systems. Following Dodgshon, we classify changes at MNE subsidiaries into processes of (i) expansion or contraction, (ii) reduction, (iii) involution, (iv) aggregation upwards and outwards, (v) accretion and (vi) replacement/substitution, illustrating this framework with reference to the extant literature. We suggest that the potential of this framework lies, in part, in its embrace of both change and inertia within MNEs and at their subsidiaries. It is important to consider both change and inertia if we are to understand the implications of MNE subsidiary evolution national and subnational economic development policy.

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1. Introduction

Dynamic capabilities have emerged from the resource-based view of the firm (Penrose, 1959; Barney, 1991) as potentially unifying concepts within international business (Teece, 2014). The concept of (dynamic) capabilities now figures prominently in the discussion of the performance and organisational form of multinational enterprises (MNEs) and evolution in MNE subsidiary roles and capabilities (e.g. Birkinshaw and Hood 1998).

However, there are a number of problems with the dynamic capabilities perspective in this last respect, which this paper seeks to address. First, unless dynamic capabilities are distinguished from ordinary capabilities or resources, and unless the question of the sustainability of MNE subsidiary businesses is separated from that of their competitive advantage, the dynamic capabilities perspective can appear tautological (Priem and Butler 2001a, 2001b); dynamic capabilities are considered to lead to sustained

competitive advantage, whereas revealed sustained competitive advantage is taken as evidence of the existence of dynamic capabilities. To resolve this problem we suggest that it may be that the presence and effects of *dynamic capabilities are best observed indirectly through examining different processes of change at MNE subsidiaries*. Secondly, conceptually, the dynamic in dynamic capabilities is ambiguous (Ambrosini and Bowen 2009) and may *skew the perspective towards an analysis of change rather than inertia within MNE subsidiaries*. Thirdly, the increasing emphasis placed on dynamic capabilities within the international business literature has come in an era when the international business environment has become markedly less stable. This poses the question of whether *the dynamic capabilities perspective is overly oriented to explaining the present competitive advantages of MNEs and their subsidiaries*. If the dynamic capabilities perspective is to gain a grasp on evolution in the capabilities of MNE subsidiaries, then such entrepreneurialism must be put in a longer-term historical context (Jones and Wadhvani 2007) and must have a stronger geographical aspect to it.

In this article, we present an evolutionary economic geographical framework that refers to different processes of change as a way of analysing the connection of MNE subsidiary capabilities to sustainable competitive advantage. The broader historical–geographical perspective adopted here implies both inertia and change in the evolution of business capabilities and the need to decompose change at subsidiaries into a number of distinctly different processes. To do this we introduce the work of historical geographer Dodgshon (1998) into the extant international business literature on the evolution of MNE subsidiaries.

In the next section, we consider the limitations of the dynamic capabilities perspective with regard to understanding evolution in MNE subsidiary capabilities. This leads us in the subsequent section to adopt a classification of processes of change drawn from historical geography to understand the presence, absence and effects of dynamic capabilities at MNE subsidiaries at different times and places. We illustrate the framework with examples drawn from the extant literature. We then pass on to outlining elements of a future agenda based on the study of processes of change. In the conclusion section, we stress the value of the framework to the development of evolutionary understandings of the firm within the fields of international business and economic geography.

2. A process perspective on MNE subsidiary capabilities

As a means of understanding evolution in MNEs subsidiary capabilities, the resource-based view of the firm and the concept of dynamic capabilities have some limits that we seek to overcome by focusing on processes of organisational change.

2.1. Embracing process in the dynamic capabilities perspective

The resource-based view of the firm, from which the dynamic capabilities perspective has emanated, does not provide an understanding of *how* MNEs develop ownership advantages. This has led to a focus in the literature on distinguishing resources from the dynamic capabilities that drive the generation of ownership advantages. Resources are the valuable, rare, inimitable, non-substitutable ‘assets’, ‘factors’ or ‘stocks’ that are specific to firms. They can encompass tangible (such as equipment) and intangible (such as knowledge and relations with external organisations) (Barney, 1991) factors.

In contrast, dynamic capabilities are the foundation of a firm's ownership advantages, as they are the organisational capacity and means by which resources are (re)deployed and (re)configured to achieve particular priorities (Teece et al., 1997).

The problem is that the linking of dynamic capabilities (as an input) to sustained competitive advantage and associated organisational forms (as outputs) can appear tautological unless dynamic capabilities are distinguished from the obsolete or *inert* resources and routines that impede change (Ambrosini and Bowman 2009; Priem and Butler 2001a, 2001b). Instead, then, dynamic capabilities have come to be regarded as '... the antecedent organisational and strategic routines by which managers alter their resource base acquire and shed resources, integrate them together, and recombine them – to generate new value creating strategies' (Eisenhardt and Martin 2000, 1107). In this way, dynamic capabilities govern the rate of change of ordinary capabilities or resources (Collis, 1994, cited in Winter, 2003). However, the struggle to distinguish dynamic capabilities as the antecedents of resources has proved problematic for the resource and dynamic capabilities-based view of the firm, as it can entail an infinite regress to successively higher orders of dynamic capabilities to explain sustained competitive advantage (Priem and Butler 2001a; Winter, 2003).

As Winter (2003, 994) goes on to argue '... some of the mystery and confusion surrounding the concept of dynamic capabilities arises from linking the concept too tightly to notions of generalized effectiveness at dealing with change and generic formulas for sustainable competitive advantage. ... clarity is served by breaking this linkage'. However, when we break this linkage we find that '... if the dynamic capability can only truly exist "in action", then we should expect the organization to be in a continual state of change or "becoming"' (Ambrosini and Bowman 2009, 40). Not only does this artificially force attention towards both dynamic capabilities and incessant organisational change thereby underplaying organisational inertia (a point we return to shortly), it also suggests that dynamic capabilities and their effects are likely to be difficult, if not impossible, to demonstrate empirically *directly*.

Instead, we suggest that the presence (or absence) and effects of dynamic capabilities may be inferred *indirectly* from observing *processes* of organisational change rather than observed or demonstrated directly in the outcome (output) of revealed business performance and associated organisational forms. It is the mediating processes of organisational change that may provide an alternative way of gaining some analytical and empirical purchase on the presence, absence and effects of the otherwise elusive dynamic capabilities.

2.2. The limits of the extant literature

The problems presented by linking dynamic capabilities too tightly with their presumed outcomes are apparent in a number of nevertheless valuable extant frameworks for understanding subsidiary roles and capabilities and aspects of evolution in them developed over the past three decades (Bartlett and Ghoshal 1989; Birkinshaw and Hood 1998; Jarillo and Martinez 1990; White and Poynter 1984). Thus, Kraaijenbrink et al. (2010, 365) contend that conceptualisations of dynamic capabilities treat them in terms of possession and potential rather than processes of enactment and that future studies should concentrate on the 'context and *processes* of resource deployment in realizing the value of resources' (see also Rugman et al., 2010, on resource bundling as part of the 'fine slicing' of value chains). Where an understanding of processes of

change in subsidiary roles, resources and capabilities has emerged under such extant frameworks it has been as a by-product; evolution is implied rather than specified in terms of distinct processes of change in the scale, degree of specialisation and range of capabilities found at subsidiaries over time.

Birkinshaw and Hood (1998, 773) were able to observe that ‘what is missing . . . is an understanding of *how* subsidiaries change roles’. This remains an important, but open, question because one recent study was still able to observe how: ‘scant attention has been paid to how roles evolve over time as the subsidiary’s capabilities develop. Consequently, existing studies offer limited insights into the dynamic and complex process of subsidiary development’ (Kim et al., 2011, 35). Moreover, if subsidiary evolution is ‘the result of an accumulation or depletion of capabilities over time’, the reality is that ‘. . . a single evolution process for subsidiaries cannot readily be identified’ (Birkinshaw and Hood 1998, 781 and 773). Arguably, then, *we are still in need of an adequate classification of the processes of change in MNE subsidiary capabilities*.

2.3. Embracing both inertia and change in the dynamic capabilities perspective

The dynamic in the dynamic capabilities perspective is highly ambiguous, as

If . . . dynamic capabilities consist of repeated processes that have evolved through time, this suggests that dynamic capabilities are in some sense quite static phenomena . . . If dynamic capabilities act upon the resource base, we have a stable phenomenon (the dynamic capability) impacting on another static phenomenon (the resource base). Thus the dynamism does not consist in either the dynamic capability or the resource base. . . . dynamism consists in the *interaction* of the dynamic capability and resource base’ (Ambrosini and Bowman 2009, 34 emphasis added).

That is, some element of the tautology within the dynamic capabilities perspective might be overcome by incorporating a greater appreciation of the sources of organisational inertia.

Despite an interest in sustained competitive advantage and despite their origins in the dynamic process of business diversification, renderings of the resource-based and dynamic capabilities view of the firm can appear static (Priem and Butler 2001a). Perhaps, as a result, the extant frameworks for understanding MNE subsidiary roles and capabilities only provide a partial guide to processes of business change. They speak partially to the *scale, scope and specialisation* of subsidiary roles, by way of a concern with the bundling of resources and dynamic capabilities. Yet, it is clear that the process of evolution in subsidiary capabilities can lead in each of these different directions, and often simultaneously.

Moreover, the linkage between dynamic capabilities as the cause of organisational outcomes as revealed competitive advantage and organisational form can, for example, produce a narrow linear and cumulative view of evolution in subsidiary capabilities. There is a strong sense in the literature that a subsidiary ‘changes its role through an incremental process’ (Kim et al., 2011, 34), although this may greatly underplay the potential for discontinuous change at subsidiaries. Drawing on a study of acquisition processes in post-socialist countries, Clark and Geppert present a process of change that is relatively smooth—whether leading to accumulation of resources and capabilities at MNE subsidiaries or exit. However, they also acknowledge that ‘we need to understand

more about how complex event sequences are composed over time' (Clark and Geppert 2011, 412). Instead, evolution in subsidiary capabilities varies markedly according to the capability concerned, and can display step-like or intermittent progress (Collinson and Wang 2012) and even be related to periodic organisational crises (Kim, 1998 cited in Eisenhardt and Martin 2000, 1115).

What the discussion to this point suggests is that we need to fill the 'process black box' of the dynamic capabilities perspective with content that can speak to non-linear and non-incremental processes of change in particular. Such content is not to be found in the deductive reasoning of economics or even the adjusted assumptions associated with evolutionary economics but with the method of inductive classification found in the disciplines of history and geography, which may be less familiar sources for those studying international business.

2.4. Embracing history and geography in the dynamic capabilities perspective

Cantwell (2014, 5) distinguishes truly evolutionary perspectives on the firm from the assumptions and deductive logic of neoclassical and evolutionary economics perspectives in which experimentation in capability formation implies Darwinian natural selection, 'yet some measure of variety is often retained rather than being completely driven-out by such processes of evolutionary selection...' (Cantwell, 2014, 5). The dynamic capabilities perspective on the MNE and its subsidiaries is only partially in the spirit of evolutionary theorising (Tece, 2007, 1341). What is needed, then, is a greater appreciation of this variety of strategies and organisational forms that persists across global, national and subnational stocks of MNE parent companies and their subsidiaries. We argue here that the inductive method more commonly associated with historical and geographical analysis—but also population ecology as applied to business organisations (McKelvey and Aldrich 1983)—is vital to developing a process-centred dynamic capabilities perspective on the evolution of MNE and subsidiary capabilities.

McKelvey and Aldrich (1983) outlined the utility of selectively applying and adapting the principles of population ecology to produce an 'evolutionary organisational ecology'. Methodologically, this evolutionary organisational ecology sought inductively to describe and classify different populations of organisational forms (McKelvey and Aldrich, 1983, 110). It is certainly a method that resonates more with that found in business history than with that found in economics and international business. Thus, the dynamic capabilities perspective may, from an historically informed perspective, be overly restricted in its purview since '... broad generalizations based on high-technology start-up firms in a few locations in the United States, has severely limited understanding of the role of entrepreneurship in a much wider range of geographical and temporal settings' (Jones and Wadhvani 2007, 25).

The reference to geographical settings here is intriguing. To begin with, the inductive method of generalising has been an important one within geographical analysis. Moreover, while economic geographers have argued, not unreasonably, for shifting the analytical focus from the steady-state processes of equilibrium (Martin, 2010, 22) towards processes that entail 'path destruction' (MacKinnon et al., 2009, 142), it is also quite apparent that a proportion of businesses change in ways that are indicative of inertia—this is one implication of work on the segmented economy (Taylor and Thrift 1982). It is to a classification of processes of change drawn from the work of historical

geographer Dodgshon (1998) that we turn to understand inertia and change in MNE subsidiary capabilities in the next section.

3. MNE subsidiary capabilities: an evolutionary economic geography framework

One of the few systematic classifications of processes of change over time comes from the historical geographer Dodgshon (1998), though there are advantages and disadvantages to using this classification in the study of business organisations. On the one hand, he writes from an organisational perspective on the evolution of spatial systems towards those that are both more heterogeneous and hierarchical (Dodgshon, 1987, 4–5), which makes his classification quite compatible with the subject matter at hand. On the other hand, Dodgshon's ideas were developed and illustrated with the history of empires in mind. As a result, his classification of aggregate processes of macro-systemic change includes the effects not only of *in situ* change among, but also the entrance and exit of, organisations within spatial systems. Here we suggest that, while this does introduce an element of conceptual ambiguity at points that we note later, the classification can also provide a useful way to decompose *in situ* organisational change at the level of the MNE subsidiary and potential entry and exit when considering aggregations of businesses within national and subnational economies.

Dodgshon (1998) identifies six distinct processes of change, which are listed in Table 1. We see no reason why, in principle, the letters of the alphabet in Table 1 cannot refer to different parts of the division of labour, different functions (i.e. manufacturing, sales, marketing, research and development) or resources and associated routines transformed, or not as the case may be, by dynamic capabilities found at MNE subsidiaries depending on the grain of analysis desired.

Some of the six processes of change are *quantitative* in nature (the scale of the same resources) and imply a strong sense of inertia in business practices. Some processes involve *qualitative* changes (in the degree of specialisation in, or the scope of, resources and capabilities). Following our earlier discussion, in Figure 1, we suggest how the presence and effects of dynamic capabilities and ordinary resources may be inferred from particular processes of change. In Figure 1 we suggest the processes of reduction, expansion or contraction and involution are those in which resources appear largely unchanged or where the presence and effects of dynamic capabilities are less prevalent. In these instances it is clear that the business proposition is being sustained but less clear

Table 1. Six processes of change in subsidiary capabilities

Change by reduction (abcde, abcd, abc, ab, a)
Change by expansion or contraction (a-A, A-a)
Involutionary change ($a-a^1$, a^2 , a^3)
Change by incorporation or aggregation upwards ($a+a=a=B$) and outwards ($a+a=a=A$)
Additive or accretionary change (a-ab-abc)
Change by replacement or substitution (a-b-c)

Source: Dodgshon (1998).

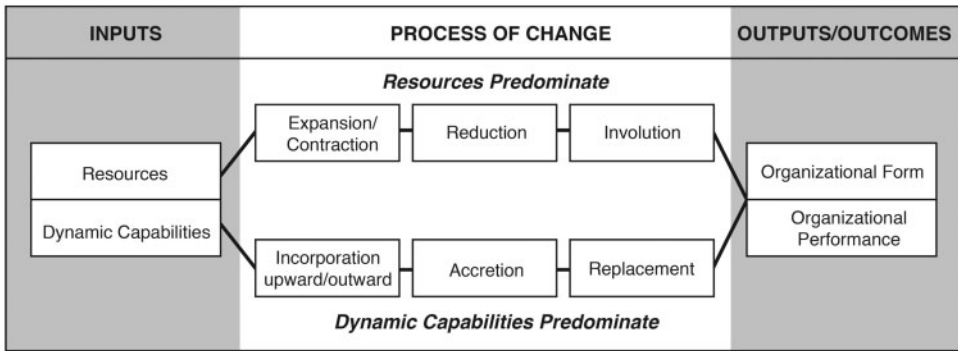


Figure 1. Observing the presence and effects of dynamic capabilities in processes of organizational change.

that value is being created or captured. There are other processes in which dynamic capabilities appear to prevail (incorporation upwards and outwards, accretion, replacement) to promote sustained competitive advantage.

In the remainder of this section we elaborate and illustrate how the presence, absence and effects of dynamic capabilities might be inferred from the different processes of change. Given the importance of taking longer-term historical and wider geographical vantage points, we necessarily draw upon a diverse set of examples from the extant literature in international business, strategic management and economic geography. We order the discussion beginning with those processes of change in which dynamic capabilities are less prevalent but where business organisations can sustain themselves proceeding towards a discussion of those in which dynamic capabilities sustain value creation and competitive advantage.

3.1. Inertia in MNE subsidiary capabilities

3.1.1. Change by expansion (or contraction)

Change by expansion or contraction involves more (a-A) or less (A-a) of the same resources being added or subtracted at any given subsidiary that involves only a quantitative change. Here, because dynamic capabilities are more than the simple addition of resources (Zott, 2003 cited in Teece, 2007, 1344), they appear to be largely absent.

A proportion of organisational change over time embodies a degree of adding or subtracting more of the same production capacity, leaving technology, work practices and skills constant. Such activities would be particularly related to internally focused initiative-taking by subsidiaries where parent company designation of responsibilities and resources are dominant and where there are correspondingly low levels of autonomy (Young and Tavares 2004). In such environments, the corporate centre enacts processes of expansion and contraction in line with strategic responses to, and proactive interventions in, market dynamics (Egelhoff et al., 1998).

This process of change is also explicit in ‘capacity subcontracting’—deployed as a strategy by MNEs in which production is farmed-out to subcontractors on a temporary basis as orders and shortfalls in internal production capacity dictate, where firm-specific

inputs are required, or as part of a cost reduction strategy (MacKenzie, 2008). It is also explicit in the term ‘branch factory’, where large companies, frequently MNEs, opened new branches and subsidiaries to expand capacity in the short-term. In Britain, restrictions on in situ expansion in the southeast of England and incentives offered for industrial relocation actually accelerated this process (Watts, 1981). In the USA, industrial recruitment in southern states, coupled with entrenched industrial relations and tight labour markets in the manufacturing heartland, prompted increases in capacity under ‘dual sourcing’ strategies.

An extreme example of this form of change at MNE subsidiaries is apparent in the ‘obsolescing bargain’ represented by extractive industries’ foreign direct investment (FDI) (Kobrin, 1987). The vulnerability of a MNE’s investment and its commitment to a host territory and institutions are at its highest at the moment of investment given the initial ‘sunk costs’ in acquiring a concession and financing the operation. Over time, as resources are depleted and returns are made, the commitment becomes less. This is a very literal interpretation of change by contraction—of the quantitative exhaustion of the resource, and a corresponding diminution of the corporate resources invested over time.

3.1.2. Change by reduction

Through the shedding of one function or capability, a subsidiary with a complete range of functions and associated resources and capabilities a,b,c,d,e becomes one with a lesser scope—a,b,c,d—under change by reduction. The counterpart of reduction is the process of accretion, where the range of capabilities of a subsidiary expands over time and which we will discuss later. These two represent qualitative changes at the MNE subsidiary in that the functional scope or range of resources is changing over time. Yet the implications for dynamic capabilities are ambiguous. On the one hand, strictly speaking, what both these processes of change alert us to is the *inert* co-presence of activities implying the absence of dynamic capabilities. Yet, since the capability development process itself changes as a consequence of changes in the scope of the business (Jacobides and Winter, 2005 cited in Teece, 2007, 1331), it could be argued that the presence and effects of dynamic capabilities will be altered in some way through this process.

Of widespread significance over the past 40–50 years and associated with moves towards greater regional and international economic integration are processes of rationalisation in the operations of MNEs in many advanced nation host economies. Perhaps the most recognisable and immediate process of change at many subsidiaries was one of change by reduction, leading to a loss in the scope of resources and capabilities. An integral element of such processes is the reduction of subsidiaries’ responsibilities in line with both parent company designation and the locational advantages presented by the potential bundling of external resources (Jarillo and Martinez 1990). Reduction is suggestive of a subsidiary having indistinct assets within the MNE, or having failed to ensure its asset advantages are recognised by the parent company (Birkinshaw et al., 1998). Indeed, subsidiaries experiencing such processes of reduction are typically those deemed ‘low-power’ subsidiaries lacking internal resources and capabilities, legitimacy and centrality within corporate networks, all of which make subsidiary-led initiative taking highly problematic (Bouquet and Birkinshaw 2008).

As research by White and Poynter (1984) and Young et al. (1988) made clear, the most immediate manifestation of regional integration was the rationalisation of

so-called miniature replica subsidiaries with a market-seeking logic. By the 1970s, parent MNEs had come to operate many of these miniature replica subsidiaries to serve the numerous national markets partitioned at the time by barriers to trade and investment. Subsidiaries performing this role typically replicated much of both the functional scope and supply chain of the parent MNE in host economies. Since this time, in their place, we have seen the emergence of specialised, functionally narrower, rationalised manufacturers or product specialists in White and Poynter's (1984) terminology.

As the process of rationalisation of excess capacity continued during the 1980s and 1990s, these subsidiaries began to occupy ever more particular roles within hierarchical MNE parent company organisations (Papanastassiou and Pearce 2009). Further narrowing and specialisation of subsidiary capabilities has been associated with the fine slicing of the value chain and a sophisticated asset-seeking logic, as MNE parent companies have sought to better attune subsidiary capabilities to the opportunities presented by host territories (Rugman et al., 2010).

3.1.3. Change by involution

As defined in *The Shorter Oxford English Dictionary*, involution represents an inward turn and consists of a process in which a quantity is multiplied into itself any number of times. In involutory change, a single important set of technologies, resources and capabilities -a- becomes refined over time to the *n*th degree, signalling a qualitative change of increased specialisation. Here dynamic capabilities are present though they are extremely path-dependent and lock the subsidiary into the development of an ever more narrowly circumscribed set of resources and routines to the point where any remaining dynamic capabilities presumably eventually fail to qualify as such. Thus, what economists regard as evolution in terms of selection, path dependence or lock-in (Arthur, 1989; David, 1985) might also consist, in part, of *involution*. The possibilities for involutory change become exhausted because diminishing returns eventually set in (Dodgshon, 1998), and it is these that can prompt rupture and revolution within empires and, we can suggest, MNEs as large organisations.

Involution was the term famously used by Geertz (1963) to describe the effects of 'changeless change' promoted by one of the earliest MNEs—the Dutch East India Company—in the Indonesian economy. The peculiar system under which the Dutch incentivised local agricultural commodity production was oriented merely to extracting output so that agricultural practices remained untouched by those from the West, while at the same time being able to absorb population increases of the time to become 'rigid through an over-elaboration of detail' (Geertz, 1963, 82).¹

Another historical example of involution might be Singer's subsidiary in Clydebank. One of the very first manufacturing FDIs in Britain in 1867, it eventually closed around 100 years later, having for much of this time produced the same products with the same 19th-century technology as when it started and having developed a huge vertically integrated organisation on site. Little wonder that Hood and Young (1982, 50) were

1 Intriguingly, in light of Dodgshon's (1998) emphasis on the spatial dynamics to processes of change and in light of the process of incorporation outwards, the process of involution could be considered in spatial terms. Geertz (1963, 126) notes how 'Involution. . . proceeded relentlessly onward, or perhaps one should say outward. . .' from Java to the rest of Indonesia.

able to recount informed views of the time that ‘there is no place like Clydebank. It has such an entrenched system’. Such sentiments speak strongly of the sort of technological and organisational inertia that had come to characterise this subsidiary.

Singer is an extreme example of what had become a more pervasive problem within many US MNEs and their subsidiaries that began to struggle by the 1970s. This was certainly the case in the automotive industry in the 1970s and 1980s where producers had become locked into a particular geography of production and associated industrial relations. This place-based lock-in was a product of the national system of bargaining regarding industrial relations, wages and work practices put in place since the 1940s. Producers began to experiment with new work practices and industrial relations in ‘new’ industrial spaces in the 1960s, but these only later became a focal point for corporate strategy and union responses (Phelps, 2002).

Further evidence for this particular process of change is found in recent literature on ‘competence-exploiting’ subsidiaries that are driven by research and development (R&D) requirements stemming from the needs of technological adaptation, with subsidiaries concerned with assembly responsibilities and market-servicing investment (Cantwell and Mudambi 2005). Such subsidiaries do not pursue strategies geared towards technological creativity in sub-national host locations offering knowledge-based resources (Almeida, 1996), but seek to adapt or refine existing technologies for relatively static market demands over the short- to medium-term. Rugman et al. (2010) highlight the reduction of responsibilities for Japanese automotive subsidiaries in the USA to a position of *contributors* for production, largely because the country does not present locational advantages in production, innovation and administration.

3.2. Change in MNE subsidiary capabilities

3.2.1. Change by incorporation upward or outward

Unlike change by expansion or contraction, incorporation upwards or outwards implies the presence or development of dynamic capabilities over time. A *qualitative* change (presumably promoted by dynamic capabilities) can result from a *quantitative* change (a change in the scale of existing resources or capabilities). Expressed in the formal terms of the framework presented here, such a process of change seems obscure, to say the least. Although it is conceivable that dynamic capabilities may lie dormant for a while as ordinary capabilities or resources before being reactivated, this appears for any number of reasons to be unlikely in general (Winter, 2003) and in this process of change in particular.²

The process of incorporation upwards where addition of more of the same resources and capabilities (a+a+a) leads eventually to a new set of capabilities (B) is perhaps best illustrated historically by subsidiaries that assumed a status, additional resources and dynamic capabilities as functions of supplying a very large, single, domestic or continental market. We can see such thinking with resource dependency-based accounts of power within MNEs, with subsidiaries in control of large operations being able to exercise greater influence on parent companies (Birkinshaw et al., 1998). There is also the suggestion in the literature that older, and by implication larger, subsidiaries are

2 It is perhaps here where the problems of recourse to successively higher-order explanations for business change apparent with the resource and dynamic capabilities-based view of the firm may also be apparent.

more likely to internalise external sources of knowledge from the host locality (Frost, 2001).

There is a line of thought that has existed in policy circles that the scale of operations at a subsidiary can confer status within the parent organisation and result in the allocation of particular roles and charters—a process of change by incorporation upwards in Table 1. For example, an early and influential Science Council of Canada (1980) study stressed the achievement of sufficient scale in MNE subsidiary operations not only to fend off the likelihood of rationalisation and closure but also to be better positioned for the award and retention of product mandates.

The process of incorporation or aggregation outwards—whereby the addition of more of the same resources and capabilities (a+a+a) results in more than the sum of the parts in the spatial expansion of the MNE—most clearly bears the marks of the origins of Dodgshon's framework in the study of empires in which he stresses the importance of the peripheries of societal systems to change when set against the inertia associated with cores. While the core areas of societal systems are prone to their internal contradictions, 'Peripheral areas of society, defined socially or geographically, offer the greatest scope for changing the established order of things or responding to new opportunities. It is in these areas that we are most likely to find examples of... change that goes beyond the possibilities of the existing system' (Dodgshon, 1987, 356).

These ideas find some confirmation in the literature on dynamic capabilities where it is considered that 'Enterprises search the core as well as to the periphery of their business ecosystem' (Teece, 2007, 1324). They also provide a perspective on the role of emerging market countries as sites of innovation as a result of new market opportunities and external environmental resources for MNEs has been recognised (Peng, 2003). Finally, the importance of peripheries is signalled in MNEs using organisationally and geographically peripheral subsidiaries as platforms for 'spring-boarding' (Pla-Barber and Camps 2012) and locating and expanding at sites that present potential sources of innovation beyond established 'clusters' (Cantwell and Santangelo 2002).

According to Dodgshon, 'unused degrees of freedom' exist in the peripheries of empires as sources of radical or discontinuous change. His use of this term is similar to the idea of the 'dormant resources' that can be mobilised within processes of institutional recombination (Crouch, 2005). Here again, the international business literature appears to indicate that opportunities exist for subsidiaries organisationally and geographically peripheral to the parent company with modest responsibilities and capabilities to change through initiative-taking. In some instances, such entrepreneurialism is supported by parent companies often lacking information on subsidiary activities (Bouquet and Birkinshaw 2008; Ciabuschi et al., 2011). In other instances, the continued role of parent companies in orchestrating, monitoring and optimising such subsidiary entrepreneurialism remains apparent (Ambos and Andersson 2010; Andersson et al., 2007; Birkinshaw and Ridderstrade 1999).

The contemporary expansion of retailing MNEs would provide perhaps the best example of incorporation or aggregation outwards as the logic of high entry sunk costs drives a greater embeddedness in host environments, involving both a growing quantitative and qualitative engagement with local consumers and institutions. This form of change corresponds quite closely to the strategies of replication (Winter and Szulanski, 2001) deployed presently by some of the largest and fastest growing, market-seeking MNEs. It would be easy to assume that dynamic capabilities are not at work in such replication but the process is a subtle one because 'Growth by replicating such a

“formula” requires the capability to recreate complex, imperfectly understood, and partly tacit productive processes in carefully selected sites, with different human resources every time . . .’ (Winter and Szulanski 2001, 731). Thus, a key feature of retail MNEs is ‘the need for an unusually high level of *investment in embeddedness* in host markets. Retailers need to sink capital into physical assets in markets simply to access them’ (Wrigley et al., 2005, 441 original emphasis). On one level, this sinking of investment is a process of *quantitative* territorial or market expansion—aggregation outwards. However, there is doubtless a degree of *qualitative* transformation and organisational deepening that means that eventually ‘each retail store is potentially an autonomous centre of innovation . . .’ (Wrigley et al., 2005, 440).

3.2.2. Change by addition or accretion

Much of the extant literature on subsidiary evolution speaks of this form of change and carries with it assumptions that accretion of capabilities has positive implications for subsidiary autonomy and national and subnational economic development. After all, the ‘truncation’ of parts of the occupational hierarchy was considered to have contributed to regions becoming ‘branch plant economies’ (Watts, 1981). This was the tenor of literature critical of the contribution of MNEs to national and subnational economic development in the 1970s and its later partial revision (Phelps, 1993; Phelps et al., 2003). Academic and policy interests focused on renewed possibilities for subsidiary upgrading in national and subnational territories that had become reliant on FDI and called forth a series of improvements to policies and delivery organisations. In the UK, these centred on better targeting in the attraction of FDI and ‘after care’ and the integration of FDI attraction and retention into economic development strategies (Young et al., 1994a, 1994b).

This process of change can also be seen in accounts of subsidiary initiative-taking by Ambos and Andersson (2010, 1112), which found that the greater the subsidiary value chain scope the larger the number of ‘opportunities to discover and see more potential for pursuing initiatives’. The semi-autonomy of subsidiaries, defined in terms of a set of resources, capabilities and opportunities with which to move beyond parent company strategic designation (Birkinshaw et al., 1998), suggests that subsidiaries are able to exploit market opportunities, external network relations (e.g. with customers) and intra-corporate investment opportunities for more advanced responsibilities (Andersson and Forsgren 1996). Some subsidiaries have been able to demonstrate their resources and capabilities to the parent company (Birkinshaw and Hood 1998), whereas others have engaged in clandestine actions exploiting market opportunities, or external network possibilities independent of the parent company (Andersson and Forsgren 1996; Bouquet and Birkinshaw 2008).

The potential for a qualitative change to arise from the accretion of capabilities over time centres on the potential for foreign host locations to present technological and knowledge resources for MNEs not available in home countries. Frost (2001, 115), for instance, found that subsidiaries with ‘technical leadership’ in generating patents within their MNEs built upon ‘prior inventions originating in the subsidiary’s local (host country) environment’. Moreover, for Birkinshaw et al. (2005), subsidiaries that are externally focused in this way have greater levels of entrepreneurship, autonomy, scope of activities and market responsibilities, suggesting a mutually reinforcing relationship

between the scope of subsidiaries and the potential of host environments to contribute further to the development of resources and capabilities.

Subsidiaries with responsibilities for lower value-added activities have been able to accumulate more advanced responsibilities through such a process (Delany, 2000) in which the combination of parent company designation and subsidiary entrepreneurship with host location advantages is apparent (Birkinshaw and Hood 1998; Andersson et al., 2007). One of the most celebrated examples of rejuvenation of an MNE subsidiary is the case of National Cash Register Corporation (NCR) in Dundee. Though NCR was steeped in a narrow technological base and had monopoly shares for many of its mechanical and electro-mechanical products, it faced major competition from the electronics and computer manufacturers emerging in the newly industrialising nations. It actually benefitted from an accretion of a R&D function, as the parent company actively decentralised R&D to individual subsidiary operations (Hood and Young 1982). It is this re-synthesis of the division of labour and the possibilities for the development of local capabilities that presented wider opportunities for a strong degree of autonomy in local management strategy and the subsequent success of the subsidiary as a world product mandate for ATM machines (Birkinshaw, 1996).

Yet, the co-presence of the likes of manufacturing and service functions does not necessarily entail synergies between these activities or the development of dynamic capabilities, a point alluded to by Rugman et al. (2010) in their identification of subsidiaries with varied responsibilities that do not necessarily constitute advanced or autonomous units. Black & Decker's manufacturing operation in the northeast of England was co-located with one of the small number of decentralised R&D centres worldwide, but this did not stop the parent MNE switching production to the Czech Republic because of production cost advantages after 40 years, a string of awards and a high degree of organisational centrality (Phelps and Waley 2004).

3.2.3. Change by replacement or substitution

Finally, change by replacement or substitution (a-b-c) involves discontinuous change of a qualitative nature at a subsidiary where one set of resources and routines might be replaced by a different, quite possibly unrelated, set of resources.³ Replacement reflects the sorts of non-linear processes involved in subsidiary development alluded to by Malnight (1995) and Collinson and Wang (2012). It implies a life cycle to the renewal of dynamic capabilities and their mobilisation in the creative recombination or the acquisition and absorption of resources (Helfat and Peteraf 2003).

This form of change affecting MNE subsidiaries is apparent in the award of charters or mandates. Economic geographers had long recognised the negative local economic development implications of the decentralisation of standardised products and technologies via branch factories of domestic and foreign companies. Despite being subject to the same life cycle tendencies, product mandates had excited attention by virtue of what they appeared to imply for the autonomy and capabilities of individual subsidiaries and local economic development. The fact that 'In many cases the mandate is fully understood only by the subsidiary that holds it' (Birkinshaw, 1996, 480)

3 Here the limits of the framework, with its emphasis on the *in situ* change in MNE subsidiary capabilities, are apparent since replacement—as it affects the stock of capabilities at the aggregate level of a national or regional economy—is likely to be produced also by the exit and entry of FDI entities.

indicates a degree of subsidiary autonomy from corporate hierarchies and a potential 'escape route' for host regional economies reliant on growth allocated from parent companies.

The gaining of mandates is typically a dynamic process involving mandate life cycles (Birkinshaw, 1996) gained with some degree of subsidiary proactivity, though often in conjunction with the parent company and the institutions of host territories. Mandate development commonly involves product, geographical and functional extension and renewal. This process of change is far from evolutionary in that it involves pronounced punctuation between qualitatively different business propositions. The intriguing implication here is that dynamic capabilities may be at their most developed in this discontinuous process of change.

Product mandates have been the subject of early, innovative and systematic national policies as in the case of Canada. However, policy measures seem to have had little influence on the gaining of the most prized world product mandates, with prospects instead limited to the larger numbers of narrower mandates—the longevity and impacts of which have been questionable (Birkinshaw, 1996; Hood, Young and Dunlop, 1988). Instead, some of the more successful examples of change by replacement at MNE subsidiaries have come as the result of the strategies of the 'network developmental states' of Ireland (O'Riain, 2004) and Singapore (Phelps, 2007). Both these countries have moved from the indiscriminate attraction of FDI to a more selective approach aimed at securing higher value-added, asset-seeking FDI by leveraging on locational and ownership advantages outside of their home economies by way of strategies that are explicitly *extra-territorial* in nature—a point to which we return in the discussion. In the case of the former, this has involved the mobilisation of the Irish diaspora (Delany, 2000; O'Riain, 2004) of expatriate corporate executives and investment promotion professionals to attract FDI and to mediate in the assignment of new roles and capabilities for Irish subsidiaries by parent company head offices. In the case of the latter, it has involved the development of overseas industry and technology parks to which low-value-added manufacturing activities can be decentralised while Singapore-based subsidiaries have typically been upgraded in one way or another (Phelps, 2007). In both cases, national economies have cycled through several distinct industry specialisations as a result of entry, exit and *in situ* change in FDI.

4. Discussion: elements of a future research agenda

We have offered a framework for decomposing processes of change at MNE subsidiaries, which combines a historical geographical perspective with the extant economic geography and international business literature. The framework presented is *descriptive* only of the processes of change that compose subsidiary evolution. It does not of itself provide an explanation of that change. We, therefore, describe it as a framework rather than a theory, as there is a measure of agnosticism in the theoretical relationships that might be developed for future research (Teece, 2007, 1320). The framework presented here is also not subjected to fresh empirical analysis. Nevertheless, we believe there are several elements that could form the basis of an agenda for future research.

4.1. Process and empirical method

Our emphasis on process has implications in terms of research methods which point to the relevance of both intensive longitudinal case studies of individual MNEs and their subsidiaries and extensive survey-based studies of aggregate change within national and subnational economies. On the one hand, then, the framework adopted here implies the need for longitudinal and context-sensitive analysis of the evolutionary dynamics within MNEs and their relations with external resources and institutions. Longitudinal studies would ‘reveal more about the variety of processes... their sequencing and internal dynamics’ (Clark and Geppert 2011, 412) and seem critical given the need to embrace non-linear processes of organisational change (Burgelman, 2011) apparent within MNEs and at their subsidiaries. In this respect, the value of qualitative methods applied to individual, or a limited number of, MNE subsidiary cases is suggested for at least two reasons. First, MNE subsidiary evolution is unlikely to be reducible to a single process of change but is likely to display elements of several at any one moment in time, let alone over time. The fine slicing of value chains makes it increasingly untenable to treat the evolution of capabilities at a subsidiary in the aggregate (Rugman et al., 2010) because ‘the development of capabilities does not proceed in every functional area at a uniform rate’ (Kim et al., 2011, 35). Second, an evolutionary perspective that focuses on processes of business change alerts us to the fact that the outputs in Figure 1 are also inputs and that this recursive aspect to business is only likely to be penetrated by longitudinal case studies of individual MNEs and subsidiaries (and network partners) over a defined period.

On the other hand, the framework might be applied alongside techniques—such as components of change (Stone and Peck 1996)—familiar in economic geography used to study regions by studying firms (Markusen, 1994). It should be noted that the framework presented here rests on assuming that the dynamics of subnational and national economies represent the ‘simple’ aggregation of the various forms of change. Nonetheless, the classification contains enough diversity in and of itself to make such aggregations potentially complex. Indeed, the classificatory framework presented here focuses attention on challenging academic and policy assumptions regarding *how* change comes about in national and subnational economies by decomposing it in a manner that is in tune with the concerns of evolutionary perspectives emerging notably in economic geography (Essletzbichler and Rigby, 2007; Martin, 2010).

4.2. Process and international management

The framework presented here focuses on processes of change over time as a means of inferring the presence or absence of dynamic capabilities and their effects on the performance and organisational forms of MNE and their subsidiaries. It follows that questions of strategy and management of the MNE and the MNE parent–subsidiary relationship ought to be refocused on the management of change.

In our presentation and illustration of the framework, change by expansion or contraction, reduction and involutory change appeared to be closely associated with the hierarchical parent company organisational forms and associated strategies of internalisation so characteristic of MNEs through much of the 20th century. Here, the exploitation of ownership advantages abroad with resources and capabilities assigned to subsidiaries often curtailed the full potential of dynamic capabilities.

In contrast, the presence and effects of dynamic capabilities implied in change by incorporation, accretion and replacement are likely to be associated with greater levels of subsidiary autonomy under heterarchical parent company organisations (Hedlund and Rolander 1990) that have come to the fore given the ‘genuine unpredictability from past structures and trends’ (Cantwell et al., 2010, 570). The challenge of managing the exercise of dynamic capabilities in the MNE presently is not only the delicate one of recognising and managing the process by which subsidiaries acquire and exercise autonomy and capabilities but also one of managing non-linear processes of organisational change (such as replacement) and better utilising the dynamic capabilities of organisationally and geographically peripheral subsidiaries as sources of value creation and capture.

4.3. Process and the host business environment

Tautology in the resource-based view of the firm and the concept of dynamic capabilities that has evolved from it derive from the need for an external environmental stimulus to value creation (Priem and Butler 2001a). In this regard too, ‘uncertainty has been enhanced in recent times by a widening of the complex interconnections and interdependencies between MNEs, other firms, home and host governments and civil society’ (Cantwell et al., 2010, 570). One welcome development in the international business literature is, then, the greater attention now paid to the role of MNE–host environment institution interactions, including at the subnational scale, in the generation of ownership advantages, dynamic capabilities and sustainable competitive advantage. The examples in our aforementioned discussion reconfirm the importance of local host environments in the evolution in MNE subsidiary capabilities. In particular, they point to the value of linking the varieties of capitalism (Hall and Soskice 2001), comparative institutionalist (Morgan, 2009) and business systems (Whitley, 1998) perspectives on different host country environments to processes of MNE organisational change and subsidiary evolution found within the mainstream of international business and strategic management.

Indeed, in terms of discussion of the drivers of MNE subsidiary capabilities specifically, extant frameworks in the international business literature do not contain an upper-level external environment parallel to the twofold parent–subsidiary relationship internal to the corporation. Yet, the development of MNE subsidiary capabilities surely cannot be understood without reference to the emergence of a non-territorial realm of the international economy (Ruggie, 1993) composed of a patchwork of bilateral and multilateral trade, investment and intellectual property regulatory mechanisms and agreements. We illustrated the process of replacement with reference to Ireland and Singapore where state strategies of *extra-territoriality* have strongly shaped the development of domestic and foreign enterprise at home and abroad.

Finally, as Priem et al. (2013, 472) argue, ‘Ultimately, an integration of resource-side and demand side thinking . . . will be necessary if we are to better understand the specific managerial judgements that are most likely to lead to ongoing success in particular firm (internal) and environmental (external) contexts’. A focus on processes of organisational change may facilitate such an integration of production and consumption-side drivers of value creation and capture in the analysis of MNE subsidiary capabilities, as the framework presented here was by no means restricted to examples from resource or manufacturing MNEs but also included retail MNEs.

4.4. Process and national and subnational economic development

The framework presented here also helps to underline that ‘Understanding the MNE as a basis for addressing wider issues in... public policy cannot proceed without full recognition of its strategic diversity; how it perceives its global competitiveness by responding to the differences between current capacities of locations (spatial heterogeneity) and the ways these locations are seeking sources of renewal and differentiation of these capacities (temporal heterogeneity)’ (Papanastassiou and Pearce 2009: 228). Moreover, if ‘policy makers should embrace the more embedded and path-dependent potentials of these companies’ other, more dynamic, competitive concerns’ (Papanastassiou and Pearce, 2009, 55), then the reference to temporal heterogeneity confirms a role for public policy itself in the evolution of MNE subsidiary capabilities.

Some of the aforementioned processes of change in subsidiary capabilities (for example, change by accretion) have received possibly disproportionate attention in the policy-facing literature, whereas others could usefully be the subject of greater academic and policy study. The duration and different economic development impacts of other processes of change are poorly understood, perhaps as a result of their salience to less studied retail MNEs—as in the case of change by expansion outward. Moreover, those processes of change that carry with them perhaps the fullest expression of dynamic capabilities at work and the more desired direct and indirect economic impacts—the likes of change by accretion and change by replacement—appear to provide the most intractable challenges to policy-making.

Interest in the development of dynamic capabilities has increasingly drawn scholars towards a greater consideration of MNE–host environment interactions including the subnational host institutional environment (Monaghan et al., 2014). This has proved sufficiently uncomfortable terrain for international business scholars for literature on the political behaviour of MNEs to be sparse. However, the literature on the political behaviour of MNEs is replete with insights important to some of the more poorly understood properties of dynamic capabilities (such as their potential to lie dormant or be open to recombination) as they come to be deployed within subsidiaries. From this literature we understand, for instance, that: the political power or resources that MNEs and their subsidiaries possess take time to acquire but can have currency for a considerable time; that the rules of the game in any host environment are not merely givens but ‘takens’; that political resources can be considered intermediate products to be internalised; and that geographically peripheral host environments often are conducive to entrepreneurship within the MNE (Boddewyn, 1988). Moreover, there are connections to be made here with long-standing concerns over the power exercised by MNEs and their subsidiaries over host territory institutions found within economic geography (Phelps, 2000; Phelps and Fuller 2000, 2001; Phelps and Wood 2006).

4.5. Process and evolution

Finally, in terms of its broader contribution to the development of evolutionary perspectives in international business, economic geography and comparative institutionalism the value of the framework is that it allows a decomposition of the aggregate process of evolution and, as a result, a means of considering sources of *both* inertia and change. In fact, of course, the international business, comparative institutionalism and economic geography literature contain a variety of perspectives, which the framework is successful in speaking to.

On the one hand, the framework presented bears the marks of Dodgshon's (1998) perspective on societal change when emphasising that, viewed in long-term historical perspective, the organisations and institutions of mature societies are characterised by significant inertia. From this macro-perspective, while 'evolution is an endemic feature when seen in aggregate, on closer inspection of individual cases it is clear that organisations and systems cope poorly with change' (Dodgshon, 1998, 51). In some respects it comes close to the emphasis on the equilibrium properties of lock-in and path dependency found in economics and stands in some contrast to the greater emphasis on business organisational change found in the international business and economic geography literature. Here, the framework speaks to the inertia that characterises business practices despite the institutional diversity encountered (Ferner et al., 2006; Morgan and Kristensen 2006) and the literature on selection–adaptation that 'has more to say about . . . the causes of inertia than about self-renewing organisations' (Volberda and Lewin, 2003, 2111).

On the other hand, it introduces consideration of processes of change that are more in keeping with the interest of economists, international business scholars and economic geographers in business and national and subnational economic change promoted in non-linear and non-path-dependent ways. The processes of lock-in and path dependence stressed in the economics literature (Arthur, 1989; David, 1985) are recast here as involution and set alongside other distinct processes of change at MNE subsidiaries in a way that offers considerable scope for analysing the complexity of aggregate change in the stocks of business apparent over time and in different geographical settings.

5. Conclusion

In this article, we have presented a framework for analysing the evolution of MNE subsidiary capabilities. We argued that a focus on processes of change obviated some of the limitations of the dynamic capabilities perspective on the sustained performance and organisational form of MNEs and their subsidiaries. Among the limitations of the proposals contained in this article are those of applying a classification developed to study macro-societal change at the micro-organisational level and indeed in scaling back up to consider aggregations of individual businesses in the form of clusters, subnational or national economies, and the likelihood of combinations of different processes of change being apparent at any individual MNE subsidiary, let alone across the stock of subsidiaries in any given national or subnational economy.

Our approach has been inter-disciplinary and attempts to demonstrate the value of a greater dialogue between international business, economic geography and comparative institutionalism. Many of the concerns in international business with how MNE subsidiary roles and capabilities are won and lost (Birkinshaw, 2000) find a ready audience among economic geographers concerned with the limitations of policies to embed MNE subsidiaries. Moreover, decomposing change at the level of the subsidiary using a classification from historical geography (Dodgshon, 1998) we believe makes for a better understanding of the variety of corporate and 'environmental' forces of change and inertia that compose evolution at individual subsidiaries and in the stock of businesses in national and subnational economies. The use and illustration of this framework confirms that evolutionary perspectives in international business and economic geography can never be solely about novelty but must seek to adequately

address *both* inertia and change at the level of individual MNE parent companies and subsidiaries and aggregations such as clusters of industry and subnational and national economies. Moreover, applying Dodgshon's (1998) classification of change to consider business dynamics is of wider significance to evolutionary perspectives, as it suggests that 'we are dealing with a form of evolution in which some of the vital processes are changed both quantitatively and qualitatively through time and a form which has no obvious analogue amongst models of evolutionary biology' (Dodgshon, 1987, 361).

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