

# **Best Practice? Geography, Learning and the Institutional Limits to Strong Convergence**

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## **ABSTRACT**

According to many, we live in an age in which convergence between formerly distinct national 'models' is taking place. Central to this process is a learning dynamic in which best practices originating from within one model – Japan in the 1980s, United States in the 1990s – are supposedly adopted by firms elsewhere. This paper addresses two key questions concerning this process which have not hitherto received sufficient attention. First, what are the actual mechanisms or processes through which this learning-driven convergence might occur? Second, what role do institutions play in shaping, influencing, or constraining firms' choice of practices and their ability to 'learn'? Which institutions matter, and at what spatial scale? The paper examines eight specific channels of convergence representing a continuum of opportunities for learning-through-interacting. It then assesses critically a range of competing arguments about the role of institutional influences at three different scales: the region (the learning region hypothesis and the concept of regional embeddedness), the nation-state (national innovation systems, national business systems) and the firm (actor-network theory, corporate strategy, absorptive capacity, resource/capability/competence based theories, communities of practice). It concludes that while regional and firm-level arguments, on their own, do not provide an adequate explanatory framework for understanding how firms' practices are determined, national level theory needs to be made supple enough to accommodate a significant role for regional institutions and the agency of the firm. Nevertheless the paper argues that the prospects for strong convergence are limited at best, and will remain so as long as national institutional frameworks retain their distinctive character.

Keywords: scale, learning, convergence, national institutions, region-state, the firm

According to an increasingly accepted view, the sovereignty of national economies has been eroded to the point where nation-states “have become little more than bit actors” (Ohmae, 1995, 12). With the development of globalized financial markets, the rising power of multinational corporations (MNCs), and the emergence of a new set of supranational institutions to govern economic processes on a continental or world scale, nation-states are said to have lost the ability to manage their own domestic economic affairs, having ceded control over exchange rates, investment, and even fiscal policy to extranational forces (Strange, 1997). Moreover, with the increasing leverage and reach of MNCs further contributing to the erosion of national economic sovereignty, the once distinctive character of particular national industrial ‘models’ is said to be under imminent threat.

While it may still be possible to identify at least three clearly distinctive national models -- an Anglo-American model, a Rhineland (German) model, and a Japanese model – the decline of national institutions, the intensification of competitive forces on a global scale, and the cross-penetration of national markets by MNCs are said to have propelled a process of *convergence* between these different national models (see Martin and Sunley, 1997 for a review of these arguments). In most representations of this globalization dynamic, convergence is regarded as inexorable and unstoppable.

One of the most important processes underpinning this dynamic is *learning*. At the global level, large corporate actors are allegedly learning from each other, so that the most successful corporate practices are emulated and diffused cross-nationally at an increasingly rapid pace. In the late 1980s and early 1990s, considerable attention was devoted to the diffusion of methods of production and workplace organization perfected by Japanese producers of cars and consumer

electronics, in which American, Canadian, and European manufacturers were shown to be learning methods such as just-in-time, kaizen/continuous improvement, and other aspects of 'lean production' techniques from their Japanese competitors (Womack, Jones and Roos, 1990). Since the resurgence of the United States economy beginning in the second half of the 1990s, American practices have apparently become the object of global firms' affections, with large corporations in Europe and Asia adopting the core characteristics of US-style 'shareholder capitalism': especially flexible labour market practices, 're-engineering', and the empowerment of shareholders (*The Economist*, 1996a; 1996b).

Closely bound up with this narrative on convergence and learning is the key concept of 'best practice', a term which has diffused into the lexicon of business school theory, corporate rhetoric, management consulting, and the popular business press with startling speed. It reflects the idea that there is *one universal standard* against which all firms (anywhere) can – and should – measure their operational performance. Moreover, best practice is applied to both *outcomes* (e.g. defect rates per thousand; labour hours per vehicle assembled) and *processes* (e.g. ISO 9000 and ISO 14000 standards for quality management and environmental practices; as well as specific techniques and modes of production organization). Not surprisingly, an entire industry dedicated to the *benchmarking* of firms' practices, processes and achievements has arisen, led by international management consultancies such as McKinsey, Boston Consulting Group, KPMG, PricewaterhouseCoopers and others.

Despite the compelling nature of this narrative about learning-driven convergence and best practice, at least two major questions remain contentious and unresolved. First, what are the principal mechanisms and channels through which learning-driven-convergence is alleged to take place? The absence of detailed analysis of this issue in both the scholarly literature and the business press is

troubling. Concepts such as learning and best practice have become, implicitly, both self-evident and unassailable. As a result they have also become deproblematized, in the sense that not only their definition but also their implementation and attainment are accepted as straightforward. The arguments presented in this paper aim to demonstrate the utter folly of this position, while analysing the principal mechanisms and processes through which learning-driven-convergence could conceivably be achieved.

Second, while the evolutionary paradigm in economics (Hodgson, 1988; 1993; Nelson, 1995), as well as the closely associated multi-disciplinary field of socio-economics (Granovetter and Swedberg, 1993), emphasize the central role played by institutions in the structuring of practices inside the firm and in inter-firm relations, there remains considerable debate and uncertainty about which institutions matter, how they exert their influence to shape, constrain, limit or govern firms' practices and ability to learn, and whether or not this is changing at present. In particular, our understanding of the role of these institutions in mediating social learning processes by firms remains rather underdeveloped (Glasmeier et al., 1996). These questions also raise the important issue of *scale*: what is the relative importance of different scales of institutional governance in the regulation of these economic processes? In this paper, the well-known arguments about the declining purchase of the nation-state and the rise of new institutional forms at the regional level to fill the regulatory void will be reconsidered, along with a set of more recent claims about the growing importance of a third source of governance – the firm – whose influence allegedly transcends institutional boundaries at both the regional and the national scale.

## **MECHANISMS AND CHANNELS OF LEARNING-DRIVEN CONVERGENCE**

Since ‘convergence’ appears to mean many things to many people, it is best to begin by clarifying the sense in which it is being used in the present context. Simply put, convergence may be said to occur when firms originating in different national-institutional spaces implement the same production methods or practices. Here, ‘methods or practices’ must be broadly defined to embrace two different scales. They include practices *internal* to the individual firm, such as the use of particular machinery and process technologies, production systems and the organization of work flow, the division of labour within individual plants or offices, quality management approaches, inventory management systems, employment relations, and inter-divisional relationships (between, for example, research and development, production, and marketing).

They also include practices *external* to the firm, that is inter-firm relationships and transactions of both a vertical and horizontal nature. The former encompass relations with customers and suppliers – the types of relationships established (e.g. contractual/arm’s length, collaborative), including what Lundvall (1988) and others refer to as user-producer interaction, as well as the technologies used to support transactions (logistics, information systems). The latter refer to relations between firms in the same or closely related industries (e.g. direct collaboration, other forms of associative action) and firms’ relations with institutions (e.g. education and training, research, producers’ associations, chambers of commerce).

Two further comments on this definition are warranted. First, this broad definition of ‘practices’ is adopted explicitly to foreground the social context in which they are developed, diffused and implemented. It also corresponds to broader conceptions of ‘technology’, not dissimilar to classical Marxian definitions which emphasize both forces of production and the social relations in

which those forces are applied (Harvey, 1982). Second, notice as well that ‘convergence’ as employed here does *not* refer to the narrow economic definition of diminishing differences in incomes, wages, productivity or industrial structure between regions over time (for a critical review of this literature, see Martin and Sunley, 1998). While the processes outlined above may ultimately lead to such outcomes, this is by no means a foregone conclusion.

Before considering the actual mechanisms or channels of convergence, it is important to make one further distinction which is frequently overlooked in less-than-systematic accounts of convergence dynamics – that is, the key distinction between weak and strong convergence. When a firm originating in country A establishes (or acquires) a branch in a new host country B, and adopts the distinctive practices characteristic of the host country (B) at its foreign site, this constitutes convergence of a sort. However, when the same firm adopts ‘country B’ practices for implementation in its home country (A) operations (with or without having first established a foreign branch), arguably a much more profound form of convergence has occurred. One must therefore distinguish between the former (an example of weak convergence) and the latter (strong convergence). This is more than a semantic distinction. While the former case provides evidence of the growing internationalization of production systems, it stops well short of dismantling the characteristic practices that constitute the industrial ‘model’ of either country A or country B. While some might be tempted to argue that one ultimately leads to the other – that learning and adoption of new practices abroad represent a first step toward their implementation at home, there is no *a priori* reason why this would be either desirable or easily attainable. We return to these issues below. First, however, we shall consider the precise mechanisms through which such convergence processes might unfold.

### *Channels of Convergence*

As with most of the existing literature on convergence, the issue of how convergence in industrial practices might actually occur has been considered so obvious or self-evident as to require no systematic consideration. Implicitly, the logic runs something like the following. Firms somehow become aware of a 'best practice' (which differs from their own status quo) and, once enlightened, simply implement the new practice in straightforward fashion. Notice the number of hidden assumptions and processes embedded in this simple approach. First, the notion of 'the firm': presumably, what is usually meant by this is individual managers within these firms, although the dynamics of competition between individuals or divisions within large firms – each of which may possess rival approaches and agendas based on competing paradigms, different professional orientations, and personal experience – is not acknowledged (Schoenberger, 1997). We return to a more extensive discussion of the firm and these issues in a later section.

The next step – 'somehow become aware of a best practice' – is equally problematic, on two grounds. First, the process by which 'firms' become aware is rarely if ever spelled out; second, the status of 'best practice' is itself assumed to be self-evident. The characteristic of universal superiority is presumed to have been established, as have the criterion/criteria by which this superiority is to be judged. Moreover, there is an implicit presumption above that, once 'firms' have become aware of a new practice which they believe to be superior to their own status quo, they will strive to adopt the new alternative. Clearly, this is somewhat unrealistic since the cost of change may be high and the anticipated benefits must be large enough to justify these costs. It is probably more reasonable to assume that firms depart from the status quo only when they perceive some kind of crisis or major threat to their competitive position. As for the final step, in which firms 'simply implement the new practice in straightforward fashion,' even a moment's reflection should be sufficient to convince one

that this process is nowhere near as simple as it might seem. The annals of technology implementation analysis are replete with case studies in which new process technologies or modes of work organization have encountered serious – sometimes fatal – difficulties (Gertler, 1995). While the origins of these difficulties are often alleged to include insufficient investment in training of managers and workers, poor initial design, and overly enthusiastic sales people who make unsustainable promises concerning the capabilities of new technologies, the real foundations for such problems are usually found at a much deeper, institutional level, as we shall see below.

Although each of the steps outlined above is seriously problematic, the one which has received the least attention in prior research is step two: how firms ‘become aware of a best practice’, and all of the issues implicitly associated with this process. One helpful approach to this question invokes actor-network theory from the sociology of scientific knowledge (Callon, 1991; Blauhof, 1994; see Leyshon and Pollard, 2000 for a development and application of these ideas in retail banking). This tradition views the diffusion of process innovations as the circulation of conventions which are promoted through three types of channel or media: texts (industry conferences, industry and trade journals); people (actors such as consultants, seconded employees, new hires, other personal contacts, social networks); and artefacts (‘hard’ technologies, including advanced machinery, information and communication technologies, database systems). Furthermore, it argues that such innovations are more likely to be adopted when they are perceived by firms to be capable of responding to specific operational problems.

This approach has the virtue of emphasizing the active and social nature of the process by which practices (best and otherwise) migrate between firms, industries, regions and countries. While it is a helpful beginning, it can be improved upon. Among other things, despite signalling the social

nature of the practice-diffusion process, the role accorded to actors (agents) in shaping firms' practices is far too large since, as I shall argue below, it fails to acknowledge a significant enough role for institutions (structures) at a variety of spatial scales . Moreover, the three-way typology of texts, people and artefacts is not sufficiently specific. By focusing on the *medium* through which interaction occurs rather than the nature of the interaction *process* itself, this scheme is of limited use: a more systematic typology would differentiate between different channels of transmission according to their *degree of activeness* since some forms of interaction are clearly more important while others are more superficial.

To address the issue of greater differentiation between various channels or media, the following typology (see Figure 1) proposes a continuum of channels which can be conceived as learning opportunities involving varying degrees of interaction.

[ Figure 1 about here ]

Of the eight channels specified in Figure 1, only three have received much attention as vectors of possible convergence: media (print, video, electronic), trade through organized market transactions (that is, transactions in which the two parties are at less than arm's length, and in which the exchange is supported by considerable prior interaction between them) and alliances (extra-market collaboration for the purpose of sharing and/or jointly developing technology). For example, one of the seminal events in Germany in the 1990s was the publication of *The Machine That Changed the World* (Womack et al., 1990) in German translation (as *Die Zweite industrielle Revolution*) one year after its original publication in English. This book, which coined the term and championed the concept of

‘lean production,’ arguably did more to propagate the *idea* of lean production within German manufacturing industries than any other single source of influence. Its impact on the rhetoric of management discourse was considerable (Benders and van Bijsterveld, 2000) and it also figured in negotiations between management and unions, although ‘lean production’ as implemented in Germany bore very little resemblance to the paradigmatic Japanese version. Ultimately, the book’s impact on actual production organization and practices has been judged to have been quite limited (Streeck, 1996), for reasons which will become evident below.

Trade through organized market transactions has been examined in some detail at least since the pioneering work of Lundvall (1988) and von Hippel (1988), who considered the role of close interaction between technology users and producers in the propagation of new production practices (i.e. process technology innovations). Lundvall’s thesis, simply put, is that when the technology in question represents a significant departure from the user’s existing practice, it can only be transferred effectively when it is supported by extensive user-producer interaction and information sharing before, during and after the new technology/practices have been implemented. This process, which takes place over an extended period of time, is more properly thought of as a joint or social process of technology production: if there is any technology transfer *per se*, it is in fact mutual and bidirectional. Moreover, such interaction works best when users and producers are proximate – geographically, organizationally, and culturally (Lundvall and Johnson, 1994; see Gertler, 1993 and 1995 for a more complete discussion).

Such organized market transactions stand in contrast to simple market transactions, in which commodities (i.e. ‘artefacts,’ to use the terminology from actor-network theory) are purchased ‘off-the-shelf’ with minimal or no interaction between user and producer. This channel provides considerably

more limited opportunities for learning through interaction. While it may be an appropriate medium for the transfer of simple technologies and associated practices, it has also been used in tandem with ‘reverse engineering’ strategies in which complex forms of new technology are purchased and disassembled to enable potential competitors to gain an understanding of their inherent principles of construction and operation for the purpose of imitation. Although reverse engineering may enable an imitator to replicate a particular piece of machinery or equipment, other more fundamental forms of knowledge – such as the ability to develop and improve upon the technology, or the knowledge of how best to organize the manufacture of the good in question – are far less likely to be transferred.

Alliances (strategic alliances, partnerships, joint ventures, and other forms of formal agreement) represent a deeper, more active form of interaction capable of fostering opportunities for the circulation of new practices (Mytelka and Delapierre, 1999). For example, in the automotive industry such agreements have been employed by American assemblers in a quid pro quo arrangement with Japanese producers, whereby the former gain the opportunity to learn Japanese production methods while the latter achieve more secure access to the American market. Alliances represent an intermediate form of channel, between market transactions (organized or simple) and merger and acquisition, in which explicit ownership stakes are acquired (and assets purchased) as a means of learning new production practices.

Other more passive and superficial channels of learning through interaction include travel (whereby prospective users attend conferences or conduct site visits and tours to witness demonstrations of new practices) and the hiring of management consultants – typically, both forms of externally sourced ‘quick fixes’ to managerial or operational problems. The rise of the global management consultancy firm has been fed by a wave of mergers which has reduced the number and

increased the size and reach of the remaining players. The large global firms in this sector have attained such stature that some even describe them as “now the most important source of new ideas of ‘how to do’ contemporary business” (Leyshon and Pollard, 2000, 211).

Finally, foreign direct investment (FDI) constitutes arguably the most active channel available to firms to promote the circulation of new practices. This may be achieved either through the acquisition of existing assets or the establishment of new production facilities abroad. Because of the scale of commitment of resources that such an investment represents, this constitutes a long-term, comprehensive process through which practices may be disseminated. Once such an investment has taken place, it may be accompanied by the exchange of personnel between the firm’s different production locations (i.e. between branch and head office or other branches owned by the same firm). Such mobility is often promoted by multinational firms as a way of stimulating or facilitating the transnational diffusion of particular practices (for one such case study, see Gertler, 1999). It is important to point out that the circulation of personnel may also occur between a firm and its suppliers or customers – that is, within the context of simple or organized trade (Ichigo, von Krogh and Nonaka, 1998). However, when such exchange occurs, it is normally conducted on a short-term basis.

Of these various mechanisms of potential convergence, foreign direct investment is arguably the most likely channel by which weak – and possibly strong – convergence might actually be achieved. For example, Clark et al. (2000b) demonstrate how pressures to change pension systems and management compensation practices amongst German firms are especially strong in those cases where firms have established branches in the US or UK. These overseas operations have given such firms the opportunity to learn first-hand about the benefits and use of alternative practices, which they may then attempt to implement in their home operations. However, as we shall see below, there is

often a gulf between the purely cognitive act of learning (i.e. acquiring awareness or understanding) and being able to implement what one learns – especially when the social environment or system in which implementation is to occur differs substantially from that which pertains at the site of original learning.

In sum, the preceding discussion illustrates that there are multiple mechanisms, processes and channels by which industrial practices may be transmitted, propagated or diffused. Moreover, some mechanisms clearly hold greater potential to effect weak or strong convergence than others. The analysis above indicates that the three-way typology of texts, actors, and artefacts is far too simplistic to capture the complexities with which corporate practices from different national systems diffuse and intermingle. It also suggests that the process by which convergence might actually occur is anything but straightforward. For example, a simple market transaction (even one supported by instructional videos and manuals) may prove to be insufficiently rich or interactive to enable effective transfer of specific production practices. Even organized market transactions incorporating extensive interaction between users and producers of novel practices may be insufficient if the ‘distance’ between them is too great. And as the recent celebrated examples of troubled mergers indicates – for example, the ill-fated takeover of the British car firm Rover by Germany’s BMW – even this level of interaction between two substantial firms with considerable technological and financial resources is fraught with risk of failure as a means to transfer distinctive production practices. In the following sections of this paper, we investigate in greater depth the more fundamental sources for such difficulty. As suggested above, the capabilities and limits of the actors involved as well as the characteristics of the networks in which they participate tell only a part of the story.

## **SCALE AND THE INSTITUTIONAL GOVERNANCE OF INDUSTRIAL PRACTICES**

The discussion to this point has considered the role of learning as a key phenomenon in the process of adopting new practices which may ultimately lead to convergence. We have also examined the different mechanisms or channels through which convergence might conceivably be achieved – noting that they represent a continuum of opportunities for learning-through-interacting. However, we have not yet considered the larger implicit question underlying this analysis: namely, what forces determine or influence firms’ practices? As noted in the opening section of this paper, there is a growing appreciation of the role of institutions in shaping ‘how firms do what they do’ – that is, their intra- and inter-firm practices – although there is still no clear consensus about which institutions matter and precisely how they shape, constrain, limit or govern firms’ practices and ability to learn.

In this section, I critically assess three sets of arguments concerning institutional influences on firm practices which are differentiated primarily on the basis of scale: regional, national, and firm-level. In the following section, I then attempt something of a reconciliation or resolution of these competing claims in order to provide some signposts for future research and conceptual development.

### *Regional Institutions: ‘Embeddedness’ and the Learning Region Thesis*

Perhaps no idea has gained currency with more speed and enthusiasm within economic geography than the notion that place plays a key role in determining the innovative capabilities and performance of individual firms. The provenance of this argument is lengthy and gradual, dating back at least to the 1950s theorizations of growth pole theorists such as Perroux, the fascination with agglomeration economies in the 1960s and 1970s, and the more recent attention given to *milieux innovateurs* in the

1980s. However, real interest in the regionally-organized nature of the innovation process and, in particular, the social character of learning dynamics underlying successful regional clusters did not take off until the late 1980s and 1990s (Scott, 1988; 1996; Porter, 1990; Putnam, 1993; Saxenian, 1994; Storper, 1997; Cooke and Morgan, 1998).

The central argument running consistently through this work is the idea that the geography of economic advantage and innovative capability is highly uneven, owing primarily to spatial variation in the social-institutional character of places. In these lucky places, firms become 'embedded' in close vertical and horizontal relationships with other nearby firms, and within a rich, thick local-institutional matrix that supports and facilitates the production (private and socially organized), transmission and propagation of new technologies (product and process). The ability of firms in such regions to do so is based on shared language, culture, norms and conventions, attitudes, values and expectations which generate trust and facilitate the all-important flow of tacit and proprietary knowledge between firms (Grabher, 1993; Amin and Thrift, 1994). In other words, a set of characteristic practices emerges and rapidly spreads to many firms within the region, becoming in turn a part of the shared conventions characteristic of the local production cluster (Storper, 1997).

Closely related to this set of arguments is the idea that such regions can be characterized as learning regions – that is, places which foster social learning processes amongst firms, between firms and other local organizations, and reflexive learning by local and regional economic development agencies in the public and quasi-public sector (Florida, 1995; Morgan, 1997). Under such conditions, the 'region-state' emerges as the scale best suited to the management of economic development and innovation. Especially important institutional entities include research centres and universities, other educational and training institutions, local producers' associations, chambers of commerce, and

technology-transfer agencies. Taken together, these elements have been characterized as constituting a *regional innovation system* (Braczyk et al., 1998), analogous to the earlier idea of the national innovation system (Lundvall, 1992; Nelson, 1993). It is these institutional forces which are seen as being primarily responsible for producing and reproducing the characteristic firm practices (both internal and inter-firm) which are so important to the economic success of such regions. Furthermore, even large, globe-spanning multinational firms are said to be attracted to those places which have produced strong concentrations of distinctive capabilities, since these firms are anxious to exploit the innovative richness which is said to arise from the social dynamics of such learning regions.

Underlying these arguments about the rising prominence of the region-state as a source of successful economic governance is the parallel idea, referred to at the outset of this paper, that the spread of the global economy has undermined and hollowed out the nation-state. National governments are viewed as no longer capable of governing the practices of firms within their borders to ensure economic prosperity, having ceded this role to institutions at the subnational (regional) and, to some extent, supranational levels (Ohmae, 1995). Indeed, this view has become so widely accepted as ‘received wisdom’ that it has provided the rationale and guiding framework for economic development policy initiatives at the subnational level in many countries.

It is hardly surprising that the learning region thesis has caught on so quickly with policy makers. After all, it offers a vision for development that is squarely based on ‘high road’ strategies of high value-added, knowledge-intensive, high-income economic activity. Moreover, it holds out the promise to regional-scale policy makers that the major levers for intervention are within their control – indeed, that they alone are best suited to design and deliver strategies to promote innovative economic development. However, as we shall see below, there may be good reasons to approach the

learning region and region-state hypotheses with a healthy degree of skepticism and caution.

*National Institutions: Innovation Systems, Business Systems and the Nation-State*

In the past few years an important and lively debate has taken shape concerning the validity of the thesis just outlined, that the nation-state has lost the institutional purchase required to regulate and manage (i.e. govern) the national macroeconomy. Critics such as Hirst and Thompson (1996) and the contributors to Boyer and Drache (1996), Cox (1997), Berger and Dore (1996) and Boyer and Hollingsworth (1999) have raised serious concerns about the empirical accuracy of such claims. They argue that nation-states continue to wield many important powers in the economic realm (see Dicken et al., 1997 and Leyshon, 1997 for thoughtful reviews of this debate). A growing body of research in geography, economics, and international political economy asserts the following thesis. Notwithstanding the undeniably increasing influence of supra-national institutions such as the European Union, the North American Free Trade Agreement and the World Trade Organization, and while acknowledging the growing importance of the region-state and other non-state regional initiatives, the nation-state and its institutional legacy still continue to exert a crucial influence over the practices of firms. However, precisely *how* this influence is exerted remains the subject of some debate, with at least two diverging views evident.

A major study by Pauly and Reich (1997) performed on behalf of the US Office of Technology Assessment, examined the practices of American, German, and Japanese MNCs (both at home and abroad), focussing on specific functions including corporate governance, finance, research and development, and intra-firm investment and trade. Their conclusion is clear and unequivocal in finding (still) strongly distinct national models evident in the continuing practices of these large firms.

They argue that these MNCs forever bear the markings or imprint of their national origins. Although these firms do respond and react to (or anticipate) changing competitive conditions, the path or strategy they choose is most strongly shaped by the national institutional legacy of their *home* country (see Doremus et al., 1998 for a more complete rendition of these findings).

These findings are consistent with the body of work which has been framed within a national systems of innovation perspective. The contributors to Lundvall (1992), Nelson (1993), and Edquist (1997), as well as Pavitt and Patel (1995), assert that distinctive nationally organized constellations of institutions shape firms' innovation practices and longer-term trajectories. Drawing on evolutionary theory in economics (Nelson, 1995), they argue that these sets of institutions, once in place, generate slowly changing, path-dependent processes over time. Moreover, as Pavitt and Patel (1999) have recently argued based on their study of research and development and patenting activities by the world's leading multinationals, there is no compelling evidence of convergence in national activities for technological accumulation since the 1970s and even some evidence of divergence, implying that national innovation systems have become more (not less) distinctive over time.

Another related literature – on national business systems – offers a complementary perspective which goes well beyond the study of innovation-generating activities alone to argue that virtually *all firm practices* (day-to-day practices as well as long-term strategies) are strongly influenced or governed (though not wholly determined) by national macroregulatory institutions and 'market rules' (Maurice et al., 1986; Christopherson, 1993; 1999; Streeck, 1996; Lane, 1997; Whitley, 1998; 1999; Lazonick, 2000; O'Sullivan, 2000). Moreover, firms are quite often not conscious of the influence that this larger institutional matrix exerts on their choice of practices. The argument implicit in this literature is that the contours of the national macroregulatory framework make certain choices easier

or more likely, and others less so. Thus, firms' time preference structures and investment payback rules are shaped by the structure of the capital markets in which they principally raise their investment finance (i.e. at home). Corporate strategy is also bounded and constrained by these same national capital market structures and characteristic national systems of corporate governance. Employment practices and relations and training regimes are strongly shaped by nationally distinctive systems of labour market and industrial relations regulation. These time horizons, labour market practices and industrial relations systems in turn shape technology choice and use. Even firms' predisposition for co-operation and collaboration with customers, suppliers and competitors is shaped by domestic competition policy, labour market regulation and trading rules.

In contrast to these striking conclusions, other recent work suggests that the framework national institutions of the *host* economies are most influential in shaping the practices and strategies of multinational firms abroad. Wever (1995), focussing on dimensions of workplace organization such as the distribution of autonomy and power, decision-making with respect to new technologies, and the use of teams or other participatory methods, examines the experiences of American firms operating branches in Germany as well as German firms with branches in the United States. In a detailed assessment of these cases, she reports that both sets of firms were frustrated in their attempts to institute the 'home' way of doing things in their foreign branch operations. Hence, over time, the US firms' branch operations in Germany took on an increasingly German style of industrial relations and work practices, despite the parent firms' initial intent. The same is true of the German firms' branch operations in the United States. Hence, according to Wever, when MNCs go abroad, the rules of the host country hold sway.

In another study of the transfer of German practices and technology abroad, I conducted

interviews with German advanced machinery manufacturers serving the Canadian and American markets (Gertler, 1996), having also interviewed their customers in Canada. These interviews provided a unique window on the very different ways in which advanced machinery designed and built in Germany was implemented in North American workplaces compared to German workplaces. The analysis of this information focussed on eight specific dimensions of machinery implementation and use in order to provide a structured framework with which to compare industrial practices in North America and Germany (Gertler, 1997). In two of the fifteen German case studies conducted, the machinery-producing firms were supplying manufacturing systems to their own branch plants in North America that were producing other products under the same corporate umbrella. In essence, these particular examples became case studies of the parent firms' attempts to transpose their characteristically German system of production to a North American workplace. The overwhelming conclusion of this work was that the most fundamental sources of difficulty for the North American users (including German-owned user plants) stemmed from the starkly different macro-regulatory environment and institutions regulating labour markets, industrial relations, corporate governance, and capital markets in these two 'models' (Gertler, 1999). In other words, the 'host rules' prevailed here too, even though they did not provide a very effective framework for the implementation of German manufacturing practices in North America.

Similar results are evident in the work of Abo (1996), in his cross-national comparison of Japanese-owned 'transplant' operations in the automotive and electronics industries. In seeking to determine the degree of completeness with which the Japanese model of production was transposed to these foreign plants (measured by decomposing the 'Japanese model' into 23 discrete elements), he found sizeable differences in the manner in which the 'model' was actually applied. The emerging

'transplant geography' documented by Abo reflects the strong differences in national regulatory frameworks and institutions evident within his sample of 'hybrid factories'. The strongest concordance with the Japanese model is found in transplants in those nations (such as South Korea) whose national regulatory frameworks for corporate governance, industrial finance, labour markets, and industrial relations most strongly resemble Japan's. Not surprisingly, the weakest concordance is found in American transplant operations. Interestingly, Abo's results stand in fairly stark contrast to the work of Kenney and Florida (1992) which has emphasized the success with which Japanese firms have been able to transplant their production system into their US operations.

Finally, Schoenberger's (1999) recent analysis of US multinationals with Japanese branches lends further support to the argument that rules in the national 'host' setting prevail. Her case study of Xerox corporation reveals that the American parent had ample opportunity to learn from the obviously successful practices of its Japanese subsidiary (a joint venture with Fuji), but failed to do so. While Schoenberger attributes this failure to the "cultural crisis of the firm", her analysis raises some important questions about the difficulties or barriers to intra-firm learning across major boundaries between distinct national systems (a theme to which I shall return below).

The work reviewed above offers many important insights in support of the general proposition that the nation-state (whether 'home' or 'host') is still a primary source of influence over industrial practices. Moreover, in contrast to the claims of the literature extolling the rise of the region-state, this work argues implicitly that *all firms are embedded* within an institutional matrix whether they realize it or not. This is *not* a process that happens just in those places lucky enough to have abundant trust and local institutional thickness. As a result, according to this view, the success with which firms can transpose a distinctive set of practices from one national space to another (i.e. 'learn') where the

institutional environment is not as conducive or supportive of such practices will be limited at best. Moreover, although there is very little analysis of this issue in the literature, the same limitations ought to apply to *inter-firm* as well as *intra-firm* practices. Hence, for example, to what degree and how successfully can German or Japanese firms setting up production operations in North America also recreate the unique set of ‘network’ user-producer (or buyer-supplier) relations that have been so important to the earlier competitive success of their home operations? Moreover, given that the key macro-regulatory features of the German ‘stakeholder capitalism’ model and the Japanese variant are so different from those in North America (Christopherson, 1993; 1999; Wever, 1995; Pauly and Reich, 1997; Lane, 1997; Whitley, 1999; O’Sullivan, 2000), what impact might this have on (i) the ability of these foreign firms to transpose their internal and interfirm practices to North America, or (ii) their ability to transpose ‘lessons’ learned in their North American operations back to their home plants? After all, in order for us to be able to document strong convergence between national industrial models, we would need to find evidence that North American (or Anglo-American) practices learned abroad were in fact being ‘imported’ back to Germany or Japan to transform practices there. In order to answer these questions, it is necessary to develop a detailed understanding of the processes by which inter-firm learning occurs.

Appealing as this line of argumentation is, it suffers from at least two obvious limitations. To begin with, the role of the region remains somewhat underdeveloped in these accounts. And yet, our earlier review of the literature on regions, institutions and learning suggested that this scale of analysis has become more, not less, important in recent years. Moreover, as Peck (1996) has recently reminded us, we should be concerned to avoid the pitfalls of an excessive reliance on “methodological nationalism” – the idea that we can read off firm traits and predict firm behaviour, strategy and

development over time on the basis of their national origins alone. Clearly, our explanatory framework must accommodate qualitative variation between firms and the role of management in shaping outcomes.

In addition to downplaying the role of regional institutions and the influence of firms and managers, the national systems perspective leaves unanswered several important questions. First, it fails to provide a convincing analysis of how the different elements of such national systems come into alignment with one another. There is a tendency to assert that these systems naturally achieve an internal coherence or integration, without specifying how this coherence might be attained. Second, this perspective offers little guidance on how such national systems change over time. While there is a sense that economic crises create a perception among dominant stakeholders of a need for ‘change’, we still do not understand who leads such change and under what conditions this will be ‘successful’. A key question, for example, is: can firms (or groups of firms taking associative action) unilaterally lead and direct this process of change? If not, how are they constrained by national and local politics? We now turn to the issue of firms and learning processes below.

### *The Firm: Capability, Absorptive Capacity, Learning and Communities of Practice*

The large and well-established literature on corporate strategy suggests that there will be important variations from firm to firm in their willingness or ability to implement particular workplace practices or to engage successfully in inter-firm and international learning processes (Porter, 1980; Mueller and Loveridge, 1995). Recently, this level of analysis has begun to attract much more attention within economic geography (see, for example, Schoenberger, 1997; Dicken, 1998). Firm-centered approaches privilege the firm as the decisive institution shaping its own practices.

Ever since the publication of Michael Porter's classic *Competitive Strategy* (1980) two decades ago, the fundamental notion – perhaps best thought of as the original conceit of modern management theory – is that firms have the potential to be 'masters of their own destiny.' In its full-blown form, this idea has even been extended beyond the boundaries of the single firm, suggesting that firms can determine not only their own internal practices and performance, but also actively shape or control the competitive environment around them.

More recent approaches have shown considerably more humility on this matter, in particular the resource-based or capability-based view of the firm. According to this approach, the firm can be thought of as a collection of capabilities. The firm's competitive success is seen to depend especially on its ability to develop and exploit its own distinctive capabilities – that is, those which cannot be easily replicated by competitors (Kay, 1996; Maskell and Malmberg, 1999). There are obvious parallels between this approach and the key concept of absorptive capacity (Cohen and Levinthal, 1990) in that both emphasize path dependency in the evolution of firms' practices. Cohen and Levinthal argue that the ability of a firm to recognize valuable new external knowledge, absorb it and use it effectively in order to exploit recent innovations and produce new ones depends heavily on the firm's own past investments in knowledge-producing assets. In other words, past events, choices, and decisions limit or constrain today's possibilities and practices. Likewise, in the capability-based approach, most of the assets which constitute a firm's distinctive capabilities must accumulate over time and may include things such as brand identity and reputation, but also knowledge and routines embedded within teams, and relationships between the firm and its customers and suppliers.

Moreover, it is the *tacit knowledge* produced and reproduced in these teams and relationships, based on shared norms and conventions, which is seen to be key. Here, capability and absorptive

capacity merge with the closely related competence-based view of the firm, which conceives of the firm as a processor of knowledge – “a locus for setting up, selecting, using and developing knowledge” (Amin, 2000, 1; see also Fransman, 1994). Since the firm’s innovative capability is seen to be dependent on its ability to process (generate, maintain, replicate, modify and, when necessary, forget) knowledge, this approach places key emphasis on cognitive or learning mechanisms and the routines that support them. As in our earlier discussion of learning dynamics at the regional scale, this approach also views learning as fundamentally social in nature. However, the most important scale at which these social learning dynamics unfold is the *community of practice* (Brown and Duguid, 1996; Wenger, 1998). Communities of practice are groups of individuals informally bound together by shared expertise and a common problem. Typically a single large organization will contain multiple communities of practice – leading to a process of ‘distributed learning’ – and these communities may also span the boundary of a single organization to include those in other organizations working on similar issues. These communities serve as the principal ensemble in which ‘learning-in-working’ occurs – through a collective, shared process of problem-solving, trial and error, and experimentation which leads to the development of new routines, conventions and norms. In essence, communities of practice are seen as the principal mechanism through which tacit knowledge relating to new practices is produced and spread. They are also presented as vehicles through which ‘best practices’ may be spread throughout large (including multilocal) organizations (Ichigo, von Krogh and Nonaka, 1998; Brown and Duguid, 2000; Wenger and Snyder, 2000).

Amin (2000) takes this idea one step further by offering a provocative suggestion: that the received wisdom within economic geography and related disciplines concerning the centrality of the region as a source of innovation, learning and tacit knowledge production is perhaps misguided.

Instead, he offers up the possibility that *relational* or *organizational proximity* (i.e. that which is achieved through communities of practice) might be more important than *geographical proximity* in constituting “the ‘soft’ architecture of learning” (14). While relational proximity may depend to some extent on face-to-face interaction, “it can also be achieved at a distance”, thanks to modern communications technology and global business travel. He concludes (same page) that “It is in organisational spaces, with their complex geographies blending action at a distance and local practices, that codified and tacit knowledge are mobilised for competitive advantage.”

Amin’s critique of the learning region hypothesis is salutary, for it reminds us of the importance of non-local organizational ties in the production of innovations and the transmission of new practices. It is especially welcome too for emphasizing the existence and importance of diversity and variation within large organizations – a view which dispenses once and for all with the myth of the unitary organization. These diverse communities of practice are an important source of strength, creativity and resilience within the organization although, as Schoenberger’s (1999) Xerox case demonstrated earlier, the global corporation is not always capable of taking advantage of this creativity and diversity in productive ways.

Welcome as these insights are, one cannot help but wonder about the accuracy of the assumptions underlying them. The idea that organizational or relational proximity is sufficient to transcend the effects of distance (even when assisted by telecommunications and frequent travel) seems highly improbable. The contention that communities of practice can serve as the vector through which best practices are disseminated between different locales within the global corporation seems problematic in light of our earlier discussion concerning the limits imposed on the transfer of firm practices by regulatory frameworks at the national level. There is little acknowledgement that

systemic institutional influences might play an important role in helping determine which practices will flow between locations most easily and which will not. The unspoken assertion in the communities of practice literature is that the adoption of new routines (as well as the loss or ‘forgetting’ of older, less effective routines) is a relatively easy and unproblematic matter, depending solely on the volition of the individuals comprising the community of practice and an enlightened senior management that is committed to providing the resources and scope to enable these communities to function effectively. It is as if organizational space has been privileged above all other types – bringing us full circle, back to the ‘original conceit’ of management theory.

This is not to deny the possibility or feasibility of transferring best practices from one national setting to another. Under certain circumstances – that is, when the institutional and regulatory framework in the ‘sending’ and ‘receiving’ country are similar – this kind of ‘convergence’ will be relatively easy to achieve. When they differ, as in the work of Wever (1995) and others discussed above, this will be considerably more difficult even for global firms with deep resources. Hence, in the recent case study of retail banking by Leyshon and Pollard (2000), Midland Bank met with great success in the late 1980s when it transposed a set of organizational and technological innovations pioneered by US banks such as Wells Fargo to the United Kingdom. While their actor-network approach encourages Leyshon and Pollard to focus on the important role of particular individuals (such as the influence of an American executive appointed by Midland who brought first-hand knowledge of the new practices with him), it must also be pointed out that the US and the UK share a fundamentally similar structure in the organization and regulation of capital markets. And while the size-structure of retail banking was for many years considerably more concentrated in the UK than the US, in recent years even this difference has diminished. Moreover, Leyshon and Pollard document

four additional dimensions of convergence between British and American retail banking which point to an ever more similar organizational and institutional framework emerging over time. In the presence of this macroregulatory congruence, it should hardly be surprising that Midland succeeded so well in its efforts to institute characteristically American practices in the UK. Nor should it be surprising that this case stands in stark contrast to all of those reviewed earlier, in which the kind of macroregulatory congruence documented above was not present.

## **CONCLUSION: REQUIREMENTS OF A NEW THEORY OF FIRM PRACTICES**

Returning to the central question of this paper – how are firm practices determined, and what does this tell us about the likelihood of convergence being achieved – we are now in a better position to evaluate the competing arguments and theoretical perspectives. It seems clear from the foregoing analysis that each of the major contenders does not, on its own, provide an adequate explanatory framework. The learning region and embeddedness thesis, the actor-network approach, absorptive capacity, and resource/capability/competence based theories of the firm have each been shown to be less than equal to the task at hand. Nor is the learning paradigm, whether applied to regions, firms or communities of practice, sufficiently well developed at present, for it fails to account for the national-institutional impediments to learning. These limits to learning are apparently of such scope and durability that management theorists have recently acknowledged the problem of a “knowing-doing gap” (Pfeffer and Sutton, 2000) in which firms are unable to act on the knowledge they have acquired through learning.

If one accepts the central insight of Polanyi (1944) that the market is socially constructed and governed – and *not* a ‘natural,’ given, inevitable form – then it makes perfect sense that firms in market economies should also be ‘constructed’ to some extent by their social-institutional environment. The analysis presented above suggests strongly that firms’ choice of practices is constrained by more than the limits of their internal resources (financial, organizational, technological, creative) and strategic vision. However, this view is still not sophisticated enough to help us understand how firm practices arise and change over time.

Among other things, a revised approach must give greater credence to the path-dependent nature of geo-corporate change. For example, when a firm ‘arrives’ in a new location inside a new national-institutional space (via FDI), it is not a blank slate – that is, it continues to bear many strong

markings and influences from its origins (Doremus et al., 1998). These characteristics are bound to interact with local institutional signals, influences and characteristics in dialectical ways to produce a new set of practices which conform to neither 'original' model – Abo's (1996) 'hybrid factories' and the German variant of 'lean production' (Streeck, 1996) come to mind here.

Second, it is important to re-emphasize the undeniable reality that not all firms or managers are created equal: the agency of these actors does matter. They respond in different ways to the same challenges, based on their own histories, education, experience, temperament, corporate cultures, distinctive capabilities, intangible assets, and so on. Any revised theory of firm practices must make adequate room for individual, collective and corporate agency within the firm. But at the same time, it is clearly misguided to argue that firms shape their own practices independently of wider, systemic influences (even though these may remain unrecognized by the firms themselves).

Third, a revised theory of firm practices should also be supple enough to accommodate a role for regional institutions. For example, in the case of German firms bringing industrial practices to their newly established production operations in the United States, we might expect such influences to be exerted at both ends of the process, especially for small and medium-sized (*Mittelstand*) firms, which typically take on a characteristic set of practices that are strongly shaped by the distinctive institutional contours of many of Germany's *Länder* (states) and substate regions (Sabel, 1989; Cooke et al., 1993; Herrigel, 1994; Cooke and Morgan, 1998; Braczyk et al., 1998). These analysts stress the dense concentration of institutions at the *Land* level which shape labour markets, industrial relations, training, investment, and industrial organization, forging important horizontal linkages across firms in the same industry. These institutions include not only government agencies and educational institutions, but also private producers' associations and chambers of commerce. There is also a need

to consider the influence of key institutions and characteristics at the regional scale on the ‘receiving end,’ as an important intervening force helping to shape the process by which firms transpose industrial practices and strategies from one national space (and continent) to another. How important are regional features such as state- or provincially-regulated industrial relations regimes, education and training systems, research, development and (more broadly defined) innovation policies? What role does local history play in this process? These questions have received surprisingly little attention thus far. The attention they have received has tended to focus mostly on the impact that state or provincial incentives and policy packages might have on the initial locational decisions of foreign-owned branchplants (Kanter, 1995), with very little consideration given to the longer-term, detailed impact of such institutional features on the evolving internal and inter-firm practices of these firms.

Coming back to our original question – about the true prevalence of convergence and prospects for future industrial and institutional evolution – it is important to keep in mind that true ‘strong’ convergence requires best practices learned abroad to be transposed (with minimal modification) back home. This is a considerably more stringent test than that which is normally taken as evidence of convergence (such as the diffusion of ‘Japanese’ production methods throughout the North American or German automotive industries). If the arguments presented in this paper are close to the mark, they would suggest that the prospects for strong convergence are limited at best, and will remain so as long as national institutional frameworks retain their distinctive character. They also suggest that the idea of a single, universal, boundary-transcending ‘best practice’ is utterly unattainable, even though it may well be in management’s interest to perpetuate the myth of a single standard against which all local practices must be measured.

This analysis also reminds us that while *firms’* practices may converge, this does not

necessarily translate into convergence of national systems, especially when the firms in question are multinational ones. For example, it will be considerably easier for a German firm to adopt Anglo-American practices by implementing these at production sites in the US or the UK than in its domestic operations. While there are undeniable pressures for change at home – supported, as Clark et al. (2000a, 2000b) point out, by the adoption of Anglo-American accounting practices amongst large German firms whose shares are publicly traded – fundamental questions remain. Are these sufficient conditions to bring about *system-wide* change (i.e. strong convergence) in a country such as Germany? How do the interests of internationally mobile managers within these large firms interact with those of other stakeholders (labour, consumers, small business, governments) to determine the path of change? Given that the large majority of *Mittelstand* firms remain privately held and controlled, how pervasive might such influences actually be?

In addition to advancing the state of our theoretical understanding of how practices are shaped, the accompanying empirical study of how convergence actually works (or doesn't) is also sorely underdeveloped. The multi-channel approach presented in this paper may offer one promising avenue to explore in this regard. Moreover, acknowledging the idea that pressures for convergence are unlikely to be continuous but instead will hold sway during times of crisis for the firm, the industry or the economy as a whole, it would be important to situate this empirical analysis within a specific historical context. For it is only through detailed, systematic, historically grounded case studies that we will once and for all be able to distinguish between the rhetoric and the reality of convergence.

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**Figure 1.****Channels of convergence: a continuum of opportunities for learning-through-interacting****Passive/shallow**

- ◆ Media/education
- ◆ Travel
- ◆ Management consultants
- ◆ Trade ('simple market')
- ◆ Trade ('organized market')
- ◆ Alliances
- ◆ Mergers/acquisitions
- ◆ Foreign direct investment

**Active/deep**