Firms as Connected, Temporary Coalitions: Organisational Forms and the Exploitation of Intellectual Capital

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Abstract: The paper presents the case for conceptualising firms as 'connected temporary coalitions' that are able to respond to the challenges of and adapt to, changing environments: in particular, to build, exploit and determine the value of Intellectual Capital (human, structural and relational) enabling different trajectories of renewal and growth in the long term. The paper adopts the perspectives of theoretical pluralism to identify distinctive viewpoints regarding the theory of the firm and the dynamic nature of knowledge. The study draws on four areas of theory: (a) the institutionalist ideas of New Regionalism in economic geography – in particular the conceptualisation of firms as temporary, dynamic, place-based coalitions; (b) the structural contingency model of organisation theory coupled with ideas from the knowledge based theory of the firm in exploring changes over time in business activity; (c) evolutionary economics and the perspective it offers on emergent developments, change and time; and (d) knowledge management thinking, and the perspective it provides on intellectual capital and its contribution to firm dynamics, drawing on ideas on social interaction, social practices, social contexts, and the impacts of power and control.

The paper extends our understanding of the processes and dynamics operating in and around temporary coalitions, the shifting and reconfiguring of knowledge assets and the role of dynamic capabilities. In addition, the paper challenges earlier concepts of intellectual capital as being embedded in business clusters. The paper argues that, collectively, the coalitions of people that comprise firms deploy their knowledge assets through different forms of organisational arrangement to achieve temporary equilibrium in order to commercialise knowledge, achieve renewal and generate growth. This perspective on the firm has significant policy implications.

Keywords: temporary coalitions, intellectual capital, organisational form, enterprise renewal

1. Introduction

Intellectual Capital (IC) represents the capabilities that are required by organisations to establish, maintain or increase competitive advantage (Marr *et al* 2001). Building dynamic capabilities relates to the choice of organisational form and learning mechanisms which, in turn, shape firms' competencies and facilitate the development and reconfiguring of knowledge assets to achieve future growth (Ashok, 2004; Hong, *et al*, 2006; Sudarsanam *et al*, 2006; Zollo & Winter 2002). Successful organisations will, therefore, be those that create environments, when and where they are required, and where knowledge can flourish and become productive. The aim of the paper is to present the case for conceptualising firms as connected temporary coalitions, collections of both closely coupled and loosely coupled systems that configure, dissolve and re-configure over time, forming a distinct capability in leveraging knowledge assets. The paper argues that coalitions of people and organisations, deploy the knowledge assets of the coalition collectively, creating organisational arrangements and temporary states of equilibrium to generate growth.

This argument suggests that it is the fluidity of relationships and business activities over time and space that creates growth, raising serious questions about the nature and direction of current economic policies that have been adopted at the European, national and regional levels. In England, the Regional Development Agencies (RDAs) have been given the flexibility and the responsibility for "exploiting the indigenous strengths" of their regions (DTI, 2006: 10) by reinforcing the five drivers of productivity identified by the Government in 2001; investment in physical capital, skills (human capital), innovation, competition and enterprise. One of the UK Government's main spending priorities for 2007-2013, continues to be the promotion of innovation and knowledge transfer through the development of business clusters. This policy approach assumes that regional economies are bounded spatial entities, and neglects to take into consideration the dynamics of the connected temporary coalitions that comprise them. The 'temporary coalitions' perspective (Taylor, 1999; 2006) is an interactive model of the firm, containing diverse types of relationships, collections of both closely coupled and loosely coupled systems that configure, dissolve and reconfigure over time, forming a distinct capability in leveraging collective knowledge assets. We suggest that it is more appropriate to view regional economies as "open, discontinuous spaces of flows" (Bristow, 2005: 294) that are fluid and plastic, rather than being defined rigidly as bounded clusters.

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The paper is structured as follows: Section 2 outlines the methodology adopted for the review. The theoretical foundations of the study are discussed in Section 3 to explore and extend our understanding of the firm as a connected temporary coalition. Section 4 identifies the implications for building and exploiting IC from the perspective of the organisational form of these coalitions. The key limitations and challenges surrounding the theory on temporary coalitions and the implications for IC and policy development are identified in Section 5, and Section 6 presents the conclusions.

2. Methodology

A substantial body of literature is used to frame the review developed in this paper. To ensure rigour in the review, a transparent process has been adopted, the 'systematic review' (Tranfield *et al*, 2003). The systematic approach ensures a synthesis is achieved in accordance with scientific principles. In particular, relevance criteria are specified and an audit trail of abstracts, papers and review decisions is maintained. However, a wide range of research designs have been included and only peer-reviewed material has been used. So-called 'fugitive literature' (Slavin 1995:10) has been excluded, following Foster & Hammersley (1998) who argue that if "reviews are seen as presenting conclusions which have been validated by the relevant research community, then work that has not been submitted to public scrutiny should not be included" (Hammersley, 2001: 552). An exhaustive 'inclusion strategy' has not been adopted. Therefore, the research design establishes priori criteria and exclusions for filtering for, methodological adequacy, applicability, development of concepts and credibility and viability. Typically, qualitative, quantitative and mixed/multiple research methods are included to reflect a range of methodological studies. Studies where the research design and process is not described adequately, concepts that are not conceptualised, clearly formulated and validated are excluded.

Keyword strings, based on the experience and knowledge of the authors, were used to examine academic papers published in English from a range of databases including; JSTOR (an archive of key scholarly journals), EBSCO – Business Source Premier, ProQuest, Wiley Interscience and INTUTE resources. Challenges specific to the review of the literature in this work include the multiple levels of analysis that requires categorisation of general concepts and the further identification of their variables or properties and dimensions and decisions over which levels of units should be maximised at the expense of others. During the initial analysis open and axial coding was adopted. However, due to the complexity involved, a semiotic approach was introduced and supported by the use of qualitative data analysis software to assist in clarifying the various levels, properties and dimensions. This will assist in validating generalisations extracted from the literature, and in developing strong theoretical inferences (Gomm *et al*, 2000), providing an opportunity to deepen understanding of the phenomenon of firm dynamics, in particular the role of coalitions in building and exploiting intellectual capital.

3. Theoretical foundations and discussion

A multi-disciplinary approach, which emanates from the academic and industrial experiences of the authors, underpins this study. The scope of the review developed in this paper reflects a range of domains of study; the two mature fields of Industrial and Economic Geography, and Organisation Theory and two emerging fields Evolutionary Economics and Intellectual Capital.

3.1 Coalition theory

Coalition theory has its origins in diverse literatures: typically in Social Anthropology and the analysis of social collectivities (Ginsberg, 1934); Sociology and the examination of coalitions in triads (Caplow 1956); Social psychology and work on configurations of social relations and payoffs (Heider, 1946); political science coalitions (Riker, 1962); and the Human and Social Ecological approach of Astley & Fombun (1983) who argue for the role of organisations as "constituent members of an overarching interorganisational collectivity" (p.577).

The development of coalition theory in the management literature is rooted in Classical Management Theory and the Theory of Bureaucracy, (Merton, 1940; Fayol, 1949), theories of power, as the underlying impetus of social dynamics (Weber, 1947) and the Contingency theorists Thompson (1967) and Lawrence and Lorsch (1967) who presented an organisational structural strategy grounded in direct linkages and cohesiveness. Theoretical linkages appear in the management and organisational design literatures as Thompson (1967) adopted the behavioural conceptualisation of the firm of Cyert and March (1963), who were the first to focus on coalitions within organisations as a "collectivity with an interest or stake in some organisational setting" (p.27). In the 1970s there is a return to the anthropological literature (Boissevain, 1971) and an examination of coalitions as “a temporary alliance of distinct parties for a limited purpose” (p.470). This work explicitly refers to the temporal nature of coalitions.

Pfeffer and Salancik, (1978) extend the behavioural theory of the firm by introducing issues of resource dependence, based on exchange theory concepts. By this interpretation, the key to maximising power and avoiding resource dependence is maintaining autonomy. In addition, they identified a particular feature of coalitions as the flexibility of contract: “participants enter and leave the organisation depending upon both their assessment of the relative value to be gained by continuing the exchange” (p.25).

A variety of socio-economic perspectives have been developed since the 1980s, linking economic and organisation theory: social construction, the firms within networks perspective, including social network analysis and the implications of power and relationships; the learning firm; the competencies perspective; the discursive view; and, more recently, the conceptualisation of the firm as a temporary coalition, an agency of groups, rather than individuals (Taylor 2005; Taylor and Oinas, 2006). In this range of perspectives, there is no explicit link to the firm’s capabilities to integrate, build, re-configure and exploit IC from the perspective of the firm as a temporary connected coalition, in and over time.

Extending insights on the permeability of organisational boundaries and the conceptualisation of the firm, Taylor (1999) defines the small firm as a “social artefact of collective agency… as a networked temporary coalition” (p.1) and as a “temporary expression of the processes of enterprise” (p.7). Taylor (1999) draws on his study of city based service enterprises, to the firm’s capabilities to integrate, build, re-configure and exploit expertise (knowledge assets), from the perspective of the firm as a “shifting, temporary coalitions of expertise (with expertise, divorced from ownership) that develop, extend and elaborate service niches to generate income and profits.” (p.13). Therefore, a duality exists between formal networked structures and social relationship networks. Intertwined both have permanence and temporality, depending on the conditions existing at that time, the perceived payoffs and risks, in the short and long term, from the individual and organisational perspectives. *Over* time structures may appear fluid. However, *in* time the coalition structures are grounded in organisational and social norms, rules and behaviour.

More recently a number of studies have examined the conceptualisation of the firm as a temporary coalition, an agency of groups, rather than individuals, who deploy bundles of assets to the best of their collective ability (Taylor and Asheim, 2001; Taylor 2005, 2006; Taylor and Oinas, 2006; Begley, *et al*, 2008a). It is evident that a partial understanding of the processes operating in, on and around temporary coalitions exists. Temporary forms, (coalitions) do not reflect the traditional forms of organising, they may lack formal structures and often have a high degree of complexity, being comprised of individuals with specialised competencies (Meyerson, *et al*, 1996). It is precisely the distinct nature of their specialised competencies and experiences, which provide the base for a new shared understanding, an increase in the knowledge base.

Here we would argue that to understand firms as temporary coalitions it is important to disentangle processes of enterprise (of people being enterprising to create personal wealth) from the operations of the enterprise (the firm as a disconnected, legally defined object). To understand how IC is created and exploited we need to better understand the processes of collective agency that operate within the temporary coalitions that comprise firms – how people come together in the purposive situation of the firm to make decisions on the deployment of resources and assets (including IC). As yet these processes are poorly understood. They refer to the collective actions of owner and managers who wield their technical and positional power to generate wealth creation. They wield that power internally, to generate cost-effective products and services to market, and externally, to secure resources and markets in any way possible.

3.2 Coalitions and clusters: The industrial and economic geography perspectives

During the past two decades New Regionalist ideas have impacted upon the competitiveness of firms through the implementation of regional policies that have focused on ‘clustering’ (Porter, 1998, 1990) and which assume firms are embedded within place-based, socially constructed, local knowledge networks (Bristow 2005). Clusters are defined as a “system of interconnected firms” (Porter, 1998: 213). The development and functioning of clusters is dependent upon value-added exchanges within relationships and networks. Clustering policy has been reinforced through several recent initiatives in the UK, for example, regional innovation systems and learning regions that rely on co-operation and collaborative equality between firms within an industrial district. These place-based environments are supported by local institutions, for example, Regional Development Agencies (RDAs) in England, to facilitate knowledge exchange and promote innovation. It is perceived that a social structure of network relationships within the geographic location of a cluster is important in producing social capital from which firms benefit. This view has fostered the growth of policy to enhance regional institutional thickness, with the region becoming the focus of policy development (Lovering, 1999).

The Evolutionary Economics perspective (complementary to the resource based view of the firm) recognises firms as repositories of competencies and resources, with the potential of emergent developments. By examining interdependencies and relationships for growth, renewal and transitions over time researchers adopting this perspective seek to identify the catalyst for long-term competitiveness and to identify implications for policy makers in stimulating innovation (Boschma & Sotarauta, 2007). This should facilitate a move away from the rigidities of regions to the flexibility of knowledge-based growth and development, increasing firms' capabilities to acquire and develop IC.

But, the competitiveness and growth of firms is not necessarily place-based and place dependent. For some firms competitiveness may be unconnected with the regional economy within which they are located. In the early 1980s, Taylor and Thrift (1982b) showed that West Midlands foundry firms (at the core of the metals and engineering complex of the region) that survived and grew were those that *disengaged* from local transaction networks, seeking wider and more diversified markets and sources of supplies. This contention is further supported by recent empirical evidence on the West Midlands manufacturing sector in the UK (Bryson & Taylor 2006) which highlights the continued restructuring of this sector, involving closure and the relocation of manufacturing plants. This restructuring has seen a shift towards niche-based, high-added value goods and changes in the spatial configuration of the region towards an increasingly polycentric structure (the central district becomes less influential through processes of inversion), previously recognised in the 1980s by Taylor & Thrift (1982a, 1982b). The resultant changes in territorial patterns, implies that some surviving firms are disengaging from the local economy, adapting to the changing environment, transferring knowledge and exploiting IC through the development of temporary coalitions to enable long term growth (Begley *et al*, 2008a, 2008b).

3.3 Coalitions: The organisation theory perspective

Early theories of the institutionalist school focused on the resource based view of the firm and its internal structure (Barney 2001; Penrose, 1959) in achieving and sustaining competitive advantage. From this perspective, the firm utilises resources and capabilities to create isolating mechanisms, for example patents, and by switching costs through combinations of resources that cannot easily be substituted (Hoopes *et al*, 2003).

The knowledge based view (KBV) of the firm, in which competition is based on exploiting a firm's capabilities and competencies, developed from the work of Ryle (1949) and Polanyi (1967) on individual knowledge, of Levitt and March (1988) on organisational learning, and of Nonaka and Takeuchi (1995) on the capabilities of firms in using and developing knowledge. From this perspective, it is the exploitation of resource combinations in conjunction with the people who access, exchange and deploy these resources that creates value. Moran and Ghoshall (1999) imply that managerial competence emanating from entrepreneurial judgement and organisational capabilities developed and retained within their organisational boundaries, makes firms agents of discovery and progress. This reinforces Porter's perspective of competitive advantage and neglects the role of firms as agents within potentially multiple coalitions, harnessing capabilities external to the organisation, outside their organisational boundaries which would suggest a more adaptable structure.

Through these approaches, the organisation came to be viewed as a dynamic socio-technical and self-regulating system. The role of the firm focused on integrating and coordinating the process of knowledge sharing as a potential source of competitive advantage (Spender 1996), and it was realised that organisations may configure and re-configure over time until a coherent form is established (Zilber, 2002). Poyhonen and Blomqvist (2006) identified the discontinuities of the institutionalist perspective of organisation theory in forming opportunities for self renewal, innovation and the diversification of capabilities based on the assumptions of constructionsim. Principally, the intangible resources of the firm are the competence of its people. Firms are social communities that create and transform knowledge. The focus is on internal processes and learning. The external contingencies of demand and market pressures figure weakly in these theories.

The fundamental premise of the Structural Contingency model from Organisation Theory (derived from systems theory) is that firms will perform better when their structure matches the contingencies of a number of external variables, as different industry environments present organisations with different sources of critical uncertainty, which include forming coalitions and the co-opting of external elements (Lawrence &

Lorsch 1967; Thompson, 1967; McDermott & Taylor, 1982). The more sources of uncertainty or contingency generated, the more the number of power bases and levels of dependence that exist (Pfeffer, 1981; Pfeffer & Salancik, 1978).

The relational network perspective places emphasis on the external environment of the firm, its social relations involving competing, controlling and complementary organisations, and shifting power relations that may offer opportunities and impose constraints in the development of IC. This development has been complemented by the linkages between organisation theory, complexity theory and systems theory since the 1960s, typically the 'Open Systems' view of organisations. Organisations exchange resources with the environment in the sense that they consist of interconnected components that work together. This is reminiscent of General Systems Theory and Cybernetics and later the Complex Adaptive System (CAS) models of organisations (Anderson, 1999).

The characteristics and processes of temporary coalitions are exhibited in the CAS model. Anderson (1999) identified coalitions as 'agents' in self-organising networks that adapt to their environment (co-evolve) through the entry, exit and transformation of previously successful agents. In this perspective internal and external coalitions are explicit and the notion of the historical sequence of coalitions is implied. This later element of historical sequence is important in harnessing and determining the value of knowledge assets (IC), the temporal changes in business activities over time and the contribution of learning and uncertainty to growth and renewal. This leads towards the effective use of knowledge (intellectual assets) in the long term to complement short term performance measures (that are typical of the IC literature), for long term firm survival.

4. Building and exploiting intellectual capital: Organisational form

One of the key focuses of the literature in the intellectual capital (IC) field is the recognition of the value of intangible assets, their evaluation and financial measurement (Edvinsson and Malone, 1997; Kaplan and Norton, 1996; Sudarsanam *et al*, 2006). IC is dynamic and is a consequence of elements of collectivity. Typically, the IC assets which contribute to the firm's capabilities to handle situations, consist of "Human Capital (employee attitude, employee capabilities, management experience and innovativeness), Structural Capital (Hardware, software, processes, intellectual property, management style, organisational structure) and Relationship Capital (Customer relationships, supplier relationships, stakeholder relationships and image)" (White and Begley, 2006: 14).

From a dynamic perspective, the IC assets are important in understanding the capabilities the firm has and will have in meeting and addressing the challenges and changes in its environment. Firms rely on structural reference models, for example repeating best practice, culturally embedded practices and stories and its own structural intellectual capital (practices, systems, procedures, norms, policies). Building dynamic capabilities also relates to the choice of organisational form. Wiig (2004) views the firm as a "collection of closely coupled systems" and numerous nano (individual) actions and micro (functional or departmental) actions consolidated as enterprise behaviour that overcome challenges and create opportunities despite the range of internal dilemmas that may exist. Successful performance is achieved through management that is systematic, deliberate and co-ordinated, of knowledge and other Intellectual Capital (IC) assets, by seeking collaborations.

Wigg (2004) and de Geus (1997) highlight that durable successful performance depends on consistent and competitive behaviour that relies on the firms ability to learn and adapt, building and exploiting IC assets by seeking collaborations, building upon their own ideas or the ideas of others. This moves the firm in the required direction, towards efficiency or innovation, responding to market conditions over time. Firms in their view are tolerant of new ideas, are prepared to experiment and adapt. This is conducted typically through the deliberate management of IC assets and a conservative approach to managing capital.

This view is in contrast to perspectives on firms as: loosely-coupled (Astley & Zajac, 1991; Glassman, 1973; Orrok and Weick, 1990); self-organising networks and complex adaptive systems with emergent properties (Anderson, 1999); and interactive systems as proposed by Molina-Morales, and Martinez-Fernando (2008). These are evolutionary perspectives that propose adaptation to shifting patterns of connections that are created or recombined over time. They allow for the diffusion of knowledge assets through varied contexts and over broader boundaries, typically through socialisation activities (Tomer, 1998), that generate the capability to cope with potentially conflicting states that may arise when a firm is engaged in a highly turbulent environment. This has implications for spillovers, examining the density and hierarchy of networks and interactions, the value of exploratory investments on the value of IC and how a firm is managed in terms of its strategic development.

In between the two perspectives, closely-coupled and loosely coupled, Peled (2001) and Taylor (1999, 2001, 2005) view coalitions as transforming work into new dominant, but temporary organisational designs to meet and deliver the needs of the members, who align their interests into a dominant design. The connected temporary coalition approach reflects elements of both the closely and loosely coupled forms of organisation. Over time, knowledge becomes codified, eroding its uniqueness. In the long term, it is the ability to create uniqueness and variety, coping with the process of creative destruction (Schumpeter, 1950) through coalition development, collectively, creating organisational arrangements and temporary equilibrium states, when and where they are required, that will provide the continuous development of knowledge assets.

5. Limitations and challenges

The key limitations and challenges identified from this review of the theories and conceptualisations that lie behind the ideas on firms and temporary coalitions are highlighted in Table 1. As with many concepts, including 'Intellectual Capital' and 'the firm' there is no commonly agreed definition of coalitions in the context of the theory of the firm, with numerous fragments of perspectives presented and a lack of empirical evidence, specifically linking historical and contemporary factors.

Table 1: Firms as temporary coalitions: Theoretical limitations and challenges

Theoretical Perspective	Limitations	Challenges and Implications for Intellectual Capital
Coalition Theory	Inequalities of powerfulness and powerlessness in binding coalitions together.	Examine how firms use power within the contexts of co-operation and collaboration within temporary coalitions versus the opportunities to exclude and exploit relationships in developing and exploiting IC.
	No explicit link to the firm's capabilities to integrate, build, re-configure and exploit knowledge assets over time.	Examine to what extent successful enterprises, use temporary coalitions of people and organisations to provide the required mix of human, structural and relational assets when and where they are required.
Relational/Institutionalist Theory	Levels of embeddedness within networks of relationships are poorly defined.	Explore the proximity of alliances, to identify how knowledge assets are diffused over varied contexts and broader boundaries. The embedded nature of knowledge assets has implications for dynamic models in measuring the value of IC over and in time. In particular exploratory investments.
	Continued Focus on clustering policy "one size fits all" and the view of regions as bounded spatial entities.	Explore the feasibility of support for a differentiated policy framework to respond to: (a) Changing territorial patterns due to disengagement from local economies; (b) Facilitating coalitional development for knowledge based growth, increasing opportunities to acquire, build and exploit IC at the local, regional and inter-regional levels.
Organisation Theory	Conceptualisations of the boundaries of the firm are variable: fuzzy, distinct, multiple, co-opted, self-organising…	Identify to what extent temporary coalitions form a distinct capability in leveraging collective knowledge assets.
	Lack of empirical evidence into changing organisational forms.	Historical sequence of coalition behaviour will provide insights into harnessing the value of knowledge assets (IC) in the long term.
	The external contingencies of demand and market pressures figure weakly	Examine to what extent connected temporary coalitions enable the co-evolution of firms/markets/boundary dynamics and the co-ordination and allocation of dynamic capabilities.

With regard to coalition theory, specifically the inequalities of powerfulness and powerlessness, how firms use power in the context of collaboration and co-operation within coalitions, versus the opportunity to exclude and exploit relationships requires further exploration, particularly in the development and exploitation of knowledge assets for long term firm survival and innovation. This highlights a further weakness, there is no explicit link to the firm's capabilities to integrate, build, reconfigure and exploit knowledge assets over time. Therefore, the challenge is to examine to what extent successful enterprises use temporary coalitions of people and organisations to provide the required mix of human, structural and relational assets when and where they are required.

The external contingencies of demand and market pressures figure weakly across the organisation and knowledge management literature in particular. The challenge would be to explore to what extent connected temporary coalitions enable the co-evolution of firms, market and boundary dynamics and the co-ordination and allocation of dynamic capabilities. This highlights a fundamental issue, the variable conceptualisation of the boundaries of the firm and organisational forms, within the range of perspectives analysed. This ranged from boundaries being defined as fuzzy, multiple, self-organising and so on and was coupled with the lack of empirical evidence into changing organisational forms. In organisations, business relationships and business activities over time and space are fluid and this aspect is neglected in the literature. There is little empirical insight into historical sequences of changing organisational forms and the building of knowledge assets.

These limitations run through into the regional policy prescriptions that draw on sections of the same literatures. In particular, and most significantly, the strategy models of competition, especially Porter's (1998) cluster approach, exhibit several weaknesses, including a very limited appreciation and understanding of the workings of knowledge networks and the impact of power inequalities on business relationships that may generate uneven spatial development, create lock-ins and restrict opportunities (Taylor, 2005). What is needed to overcome these problems is a more nuanced examination of how firms use power within the contexts of co-operation and collaboration within temporary coalitions to foster the growth of IC compared with the opportunities power offers to exclude and exploit personal and commercial relationships (also see the debate in Christopherson and Clark, 2007). The resultant implications are for local economic development policies to be differentiated, rather than the 'one size fits all' approach of cluster policy that is currently adopted in this arena of policy making. This has significant implications for the development of local, regional and inter-regional knowledge capacities.

6. Conclusions

This paper presents an overview of the theory of the firm, from the alignment of disciplinary conventions in relation to temporary coalitions. Theories of the firm and research that addresses firm behaviour and local economic development, need to recognise the role of temporary coalitions within the processes of identifying and exploiting new resource combinations through the abilities of people working within and outside firms to access, deploy, exchange, combine, re-combine and exploit IC. The phenomenon of connected temporary coalitions suggests that an alternative exists in defining the firm and that this alterative poses new opportunities to explore the ways in which firms are formed and reformed to create wealth at different times and in different places.

Whilst aspects of IC and collective knowledge (routines and shared values) are culturally embedded within organisations, business relationships and business activities over time and space are fluid. It is this temporal aspect of business relationships and activities that is neglected in the literature on the firm. There is little empirical insight into historical sequences of changing organizational forms and the building of knowledge assets for long term firm survival. IC generates value that is unique to the firm and connected temporary coalitions are the form best suited to harness this unique value.

At the same time understanding of the workings of power and its impacts on IC and collective knowledge are equally neglected in research on the theory of the firm. In particular, thinking on the use of power to both include and exclude in coalitions, as in networks, needs to be further and more fully refined. This is an urgent task if appropriate and realistic regional economic policies that target firms are to be developed to counter the anticipated problems of looming economic recession.

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