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Acknowledging Organisational Innovation

A need to study organisational innovation

Recent decades have seen a remarkable increase in the attention devoted to innovation by interdisciplinary scholars (see Fagerberg, 2004; Fagerberg and Verspagen, 2008). Despite the great importance of organisational innovation, e.g. in economic 'forging ahead' and 'catching up' at different points in time (Bruland and Mowery, 2004), thus far, technological innovation in the sense of new or significantly changed products and processes has received more attention and been taken into account in a far greater number of analyses.

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Actually, the organisational aspect of innovation started to receive conceptual attention at the very beginning of research in this area. Back in the early 19th century, Schumpeter (1934, 1950), a pioneer in innovation studies, presented a broad notion of innovation as the introduction of new products, new processes, new sources of supply, the exploitation of new markets and new ways of organising business (for a discussion, see e.g. Fagerberg, 2003, 2004). This remains valid today, especially in a majority of industrialised countries whose 'national systems of innovation' are composed of and significantly fostered by all these essential innovative changes (Freeman, 1987, 1995). At the micro level, Lazonick (2004) points out that innovative forms of organisation differ greatly across time, industrial and institutional contexts. Moreover, in constituting an innovative firm, the technological and non-technological aspects of innovation are both of importance (Chandler, 1962; Nelson 1991). The effort to implement technological innovation will meet only limited success unless accompanied by organisational change and vice versa, as they are, in fact, interdependent (Freeman, 1995). Thus 'organisational' innovation should never be neglected. It is the sort of innovation that, together with certain key technological innovations, has helped to improve firms' performance and growth in many leading and catching-up countries (e.g. the US, Germany and Japan) from the first industrialisation through different 'business cycles' (Schumpeter, 1939) or, to use Freeman and Louca's (2001) label, 'techno-economic paradigms' (see a discussion, especially in Bruland and Mowery, 2004). More recent evidence confirms that organisational innovation is also crucial in our times as it complements a key technological driver like Information and Communication Technology (ICT) in elevating a firm's performance and growth (Brynjolfsson and Hitt, 2000; Brynjolfsson *et al.*, 2002; Sapprasert, 2007). As Bresnahan *et al.* (2002) argue, firms cannot simply plug in computers

and achieve product/service quality or efficiency gains. On the contrary, they must go through a process of reorganisation in combination with making considerable changes to their products and processes, i.e., it is not ICT alone, but a joint effort between ICT and organisational change that is the compulsory recipe for true success in our modern era (Brynjolfsson *et al.*, 1997).

A brief note on organisational innovation

Different lines of research apply the term 'organisational innovation' in different ways (see a review in e.g. Lam, 2004). Thus it is important to flag that organisational innovation in this sense does not refer broadly to the adoption of 'any' novelty in the organisation such as that defined in, for instance, Damanpour (1991) and Sorensen and Stuart (2000). 'Organisational innovation' is defined more narrowly in this respect as a new or significant change in the firm structure and management methods often termed by researchers in management/organisational studies (Daft, 1978; Damanpour, 1987, 1991; Kimberly and Evanisko, 1981; Teece, 1980) as 'administrative innovation', as opposed to 'technical innovation' (both are referred to as organisational innovation), or what Edquist et al. (2001) called 'organisational process innovation' (*vis-à-vis* 'technological process innovation', leaving aside product innovation). Put another way, 'organisational innovation', as discussed here, denotes innovative change in the organisation in a customary and institutional manner that is related more to organisational nature, structure, arrangements, practices, beliefs, rules and norms, than to its technical facets (see, e.g. Pettigrew and Fenton, 2000).

Routine organisational innovation and structural inertia

While technological innovation is deemed to refer more to innovative change in products and processes, organisational innovation seems to be related relatively more closely to change in the way of doing things in the firm or what so called 'organisational routine' (Nelson and Winter, 1982). This type of change is no less crucial since, as time goes by, some of the best practices or prevailing routines in the firm may become less effective or even no longer acceptable, especially by comparison with that of competitors (Dosi and Nelson, 1994). Organisational transformation is thus crucial (Romanelli and Tushman, 1994), i.e. old routines need to be replaced by new ones if the firm is not to be driven out of business. Following the adaptation perspective (e.g. Nelson and Winter, 1982; Teece and Pisano, 1998), to survive or co-evolve with industrial dynamics, the firm has to search for better solutions and make changes, especially if its performance falls below its 'aspiration level' or a new window of opportunity opens up (Cyert and March, 1963; Greve, 2003). Although changes in routines are clearly important to all firms, there is considerable 'heterogeneity' among them (Nelson and Winter, 1982). Firms have a wide variety of characteristics that make them different in how they decide to approach routine change and to benefit from such an attempt.

Another research community, on the other side of the road, emphasises the importance of environmental selection (e.g. Stinchcombe, 1965; Aldrich, 1979; Hannan and Freeman, 1984). In particular, inertia theory (Hannan and Freeman, 1984) indicates *inter alia* that age and size are associated with strong structural inertia, i.e. the force that hinders organi-

sational change. Inertia increases monotonically with age as the firm's working relationships become more formalised, routines become more standardised and structure becomes more stabilised (Kelly and Amburgey, 1991). Size increases inertia because being larger makes the firm more rigid and inflexible (Downs, 1967). Inertia arisen from these attributes in turn makes the firm resistant to change (Carroll and Hannan, 2000).

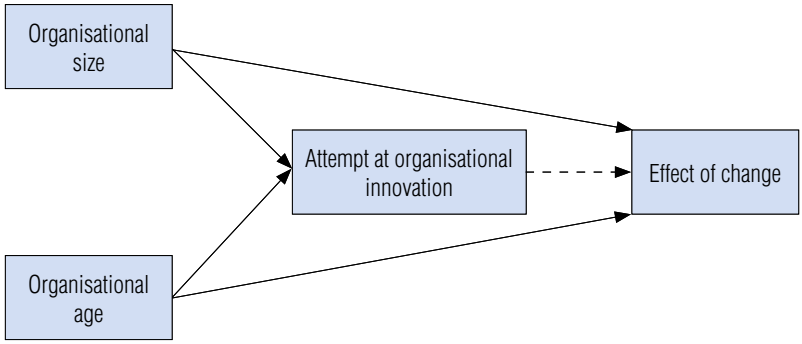

Figure 1: The relationships between organisational age, size, innovation and outcome

Although firm age and size may increase inertia as the theory suggests, when looking separately at their relationships with: (i) the firm's tendency to attempt organisational innovation; and (ii) the effects of this attempt on firm performance, these two organisational factors may count differently due their other properties (see Figure 1). Kimberly and Evanisko (1981) argue that firm size can necessitate and facilitate the firm's innovative behaviour. Larger firms might be more inclined to undertake organisational change because of their 'deep pockets', i.e. higher level of financial and other resources. In other words, since larger firms generally have a greater capability to innovate (Schumpeter, 1950), they are probably more ready and likely to do so, not only technologically but also organisationally (Kimberly and Evanisko, 1981; Damanpour, 1987). Further, it is also possible that the age of a firm supports organisational innovation because, as compared with immature or undefined routines possessed by younger firms, the greater maturity of routines in older firms may serve as a more powerful impetus to innovation. While younger firms are busy dealing with many basic operational issues (e.g. cash flow, formalising relationships and so on) or paying more attention to innovating new products or processes to enter the market, older firms can be expected to be relatively less occupied and ready for reorganisation.

On the other hand, the inertial properties that limit organisational change, which Hannan and Freeman (1984) point out are more prevalent in large, old firms, may in fact have greater influence on the outcomes of efforts at organisational innovation (Sapprasert, 2008). Put differently, firm age and size are more likely to impede the effects of organisational innovation on firm performance. Older firms are purported to have more standardised routines and rigid internal structures (Stinchcombe, 1965, Hannan and Freeman 1984). Accordingly, they may be more reluctant to unlearn past routines and less able to transform their structure and, as a result, be more likely to get stuck in a 'competency trap' (Levinthal and March, 1993) or to remain path dependent (Arthur, 1994; David, 1994). Although it is managerial authority that leads to most undertakings in the

firm (Witt, 1998; Knott, 2001), this authority is often subject to limits in practice when it comes to organisational change (Leibenstein, 1987). This implies that, unlike youngsters that usually are more adaptive, older firms that usually stay committed to the past would not substantially benefit from reorganisation that has been strategically implemented. Likewise, the effects of organisational change might decrease with size, since that typically increases the distance between decision makers and practitioners. And increasing distance through a hierarchy is likely to vary commands or plans set out by the former (Beckmann, 1977), hindering the organisational change required. In a large but lean organisational structure, however, there are typically a number of links within each unit, i.e. complexity (Simon, 1962), which can also hamper organisational innovation. In addition, since organisational members usually prefer the *status quo* and thus oppose change, efforts at organisational innovation in larger firms with more people frequently encounter internal opposition or 'political force' (Pfeffer, 1992). These conditions result in greater ossification and inflexibility which may cause larger firms to benefit less from attempts at organisational change.

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