INTRAPRENEURSHIP AND REGIONAL DEVELOPMENT IN THE SOUTH EAST OF IRELAND

Chris van Egeraat^ and Declan Curran*

^Maynooth University, Ireland

Email: chris.vanegeraat@mu.ie

***Dublin City University, Ireland**

Email: declan.curran@dcu.ie

Introduction

While the role of intrapreneurship in enhancing innovation and competitiveness within firms is now well recognised, the regional development implications of intrapreneurship have yet to be fully explored. Recent empirical studies on intrapreneurship such as Turro et al. (2016) have sought to identify and explain variation in intrapreneurship levels across regions, and the availability of regional-level intrapreneurship data via the *Global Entrepreneurship Monitor* has greatly assisted this endeavour. However, empirical findings of inter-regional variation in the incidence of intrapreneurship do not in themselves offer insights into the way intrapreneurship manifests itself in different contexts and the channels through which intrapreneurship impacts upon economic development at the regional level. As Audretsch et al. (2021) note in their study of intrapreneurship across 150 German regions, further conceptualisation of intrapreneurship is needed – particularly in relation to the role of contextual factors, such as heterogeneity across industries and firms. This lacuna in the intrapreneurship literature stands in stark contrast with entrepreneurship research more generally, which has afforded considerable attention to the impact of entrepreneurship on regional development (Acs, 2010; Malecki, 1993). In this paper, we undertake an empirical study from which we develop a deeper understanding of (i) how intrapreneurship operates in distinct corporate contexts, and (ii) the channels through which intrapreneurship impacts upon regional development.

In order to understand the emergence of intrapreneurship within distinct corporate contexts and the impact of firm-level initiatives for regional development, a targeted analysis is required that links firm-level intrapreneurship to regional conditions. By means of a case-study of the South East Region of Ireland we provide detailed insights into intrapreneurial processes within different corporate contexts. The South East Region is particularly well suited for such a case-study as it is home to distinct corporate contexts, ranging from indigenous family enterprises to subsidiaries of multinational companies.

In what follows we provide the results of a qualitative analysis of intrapreneurship processes and outcomes in the South East Region. The qualitative data for this study has been collected via a set of interviews undertaken with companies as well as local and regional institutions in the South East region. A total of 29 medium and large-sized companies cooperated in the study, including 13 subsidiaries of foreign multinationals.

This paper makes a number of contributions that further understandings of intrapreneurship at the regional level: (i) we problematize the concept of intrapreneurship and detail the manner in which intrapreneurship emerges in distinct corporate contexts, and in doing so we distinguish between intrapreneurship arising in the context of indigenous firms, intrapreneurship in the context of serial entrepreneurship, and intrapreneurship as undertaken by subsidiaries of multinational firms; (ii) we identify the main barriers and challenges to intrapreneurship in these different contexts and (iii) we provide evidence setting out the relative importance of the two key routes through which intrapreneurship stimulates regional development: firm growth and new firm formation.

The paper proceeds as follows: in the next section we provide an overview of the literature dealing with the concept of intrapreneurship, from which we establish our working definition of intrapreneurship. This is followed by an introduction to the South East Region and an explanation of the data and methods underpinning the analysis. The next four sections present the main findings of the study: a qualitative analysis of indigenous and subsidiary intrapreneurship, the barriers and challenges to intrapreneurship, and spin-off processes. The key findings to emerge from this case-study are then discussed, and the paper finishes with some concluding remarks and considerations for policy.

Intrapreneurship and regional development

In order to explore the regional dimensions of intrapreneurship, we firstly set out a brief overview of the development of the intrapreneurship concept since its inception in the 1980s. We identify both ongoing definitional ambiguity, as well as areas of consensus regarding the key features of intrapreneurship. Informed by this literature, we present our working definition of intrapreneurship which allows us to problematize intrapreneurship in the regional context. We then set out extant literature on regional dimensions of intrapreneurship. We then consider intrapreneurship in distinct corporate settings, notably those pertaining to indigenous firms and subsidiaries of multinational firms. We conclude this section by setting out the analytical framework which guides our case-study.

Intrapreneurship: definitional issues

The concept of intrapreneurship has emerged from the broader research area of entrepreneurship within organizations. The term *intrapreneur* can be traced back to Pinchot (1985) who observed that leading US corporations at that time were "beginning to foster their own intracompany entrepreneurs – or 'intrapreneurs' (p.74)." Subsequent understandings of intrapreneurship, however, have struggled to cohere around one fixed definition, as authors have sought to disentangle a host of concepts related to corporate entrepreneurship (Sharma and Chrisman, 1999). Neilson et al. (1985), for example, sought to distinguish between intra-firm intrapreneurship ["designed to create, internally test-market, and expand improved and/or innovative staff services, technologies or methods within the organization" (p. 181)] and formal corporate entrepreneurship units "whose purpose is to develop profitable positions in external markets" (ibid). In contrast, Antoncic and Hisrich (2003) set out a far broader understanding of intrapreneurship, characterising it as "a process that goes on inside an existing firm, regardless of its size, and leads not only to new business ventures but also to other innovative activities and orientations such as development of new products, services, technologies, administrative techniques, strategies, and competitive postures" (p.498). As Blanka (2019) notes, while there appears to be agreement on *who* the intrapreneur is (i.e. an entrepreneurial employee within an existing organisation), disagreement remains as to what exactly constitutes intrapreneurship.

Notwithstanding these definitional ambiguities, Molina and Callaghan (2009) identify a number of key features of intrapreneurship: (i) intrapreneurship takes place among employees from within an organization; (ii) intrapreneurs engage in innovative activities with uncertain outcomes through the deployment of the organisation's resources, rather than by using their own resources; and (iii) intrapreneurs operate within organizations that already have their own policies and bureaucracy in place.

Given this nexus of entrepreneurial employee and organisational setting, two streams of intrapreneurship literature have developed in parallel: one which approaches intrapreneurship from the individual employee's perspective and another which considers the intra-firm organizational structures necessary to support employee-level intrapreneurship. The former is well illustrated by de Jong and Wennekers (2008), who set out *activities* and *behaviours* of individual intrapreneurs. Intrapreneurial activities on the part of employees include: opportunity perception, idea generation, designing a new product or another recombination of resources, internal coalition building, persuading the management, resource acquisition, planning and organizing. The behavioural traits of intrapreneurial employees include: personal initiative, actively seeking information, out-of-the-box thinking, voicing, championing, taking charge, finding a way, and a degree of risk taking. However, it should be noted that not all behavioural aspects of intrapreneurship are necessarily positive. Globocnik and Salomo (2015) caution that intrapreneurship can give rise to unauthorised "bootlegging" behaviour that undermines management structures, as employees seek to develop their own ideas without formal mandate or supervisory control.

The organizational-level factors thought to be conducive to intrapreneurship are outlined by Blanka (2019). These include management supports, such as: commitment of management to supporting employee intrapreneurship, access for employees to resources necessary for intrapreneurship, and a reward system for intrapreneurial endeavour; organizational features, such as employee autonomy and empowerment within the organizational structure; and cultural aspects, such as an organization-wide openness to intrapreneurship that encourages employees to generate new ideas and to proactively engage in experimentation that goes beyond their day-to-day duties.

Definitional and conceptual overviews have tended to problematize the definition by dealing with the different dimensions of intrapreneurship, including entrepreneurship, venturing, innovation, nature of sponsorship and so forth (De Jong and Wennekers, 2008; Sharma and Chrisman, 1999). Based on this work, in this article intrapreneurship is defined as activities that include the following features.

- Entrepreneurial behaviour of employees and the development of new ventures within the existing structure of an organisation.
- A bottom-up approach to creating and developing ideas that can enhance the competitiveness or productivity of the company from within the company.
- New products or services for the employer in a new business entity.
- A system or culture that allows an employee to act like an entrepreneur within a company.

As such, intrapreneurship is clearly distinguished from continuous improvement programmes. Continuous improvement involves management strategies implemented by firms for bringing about incremental efficiency-enhancing changes. Such programmes, typified by Lean management techniques, are participative, in that the proposed changes emanate from employees within an organisational culture that stimulates and supports such improvements (Charron et al., 2014). Continuous improvement programmes are change management strategies for implementing incremental process refinements in an orderly manner within the organisation. Intrapreneurship, on the other hand, is an ideational process in which employees seek to bring about a disruptive departure from existing organisational routines, leading to new products/services and ventures. Although intrapreneurship is distinct from continuous improvement programmes, intrapreneurial initiatives and ideational processes may leverage the analytical rigour and implementation strategies inherent in such programmes.

Intrapreneurship in distinct corporate contexts

The various contexts in which intrapreneurship can arise has also received a detailed treatment in extant empirical studies. Context-specific studies have explored intrapreneurship within SME and large-firm organizational structures (Carrier, 2004; Bouchard and Basso, 2011); intrapreneurship experiences within specific industries, such as knowledge intensive industries (Christensen, 2005) and creative industries (Camelo-Ordaz et al., 2011); intrapreneurship within universities (Bicknell et al.,2010; Hagedorn and Jamieson, 2014), intrapreneurship within specific technical occupations, such as engineering; (Menzel et al. 2007); and, more generally, the role of intrapreneurship in the process of developing new technologies (Baruah and Ward, 2014).

Audretsch et al. (2021) have recently highlighted the need for a greater understanding of how specific 'contextual parameters' contribute to the development of intrapreneurship as an innovative capability within firms. Positing that the interaction of firm-level and regional labour mobility stimulate the absorptive capacities necessary for enhanced intrapreneurship, Audretsch et al. call for a clearer conceptualisation of how these 'contextual parameters' – including inter-firm factors such as industry heterogeneity, knowledge networks, and research collaboration and intra-firm factors such as firm size and firm performance - influence intrapreneurship as an innovative capability.

In this paper we hypothesise that the way intrapreneurship operates in indigenous enterprises differs from the way it operate in subsidiaries of multinational enterprises. Subsidiaries of multinational enterprises have a number of characteristics that potentially affect the way intrapreneurship operates.

Since the 1990s, the extant literature has given evidence of the truncated nature of subsidiaries of many multinational enterprises, notably in peripheral regions (Amin and Tomaney, 1995; Clarke and Beany (1993); Grabher, 1992; Phelps, 1993; Young et al. 1994). Most subsidiaries had a strong operational nature, lacked R&D, marketing, and sales departments. In terms of organisation, the prototypical American corporation had, what Bartlett and Ghoshal (1989) refer to as, a global organisation structure, characterised by a high degree hierarchy and centralised control from parent headquarters over the subsidiaries. Subsidiaries were characterised by a limited range of corporate management functions and constrained management autonomy. Other corporations, including many continental European ones, had more decentralised organisation structures, akin to the multinational organisational form. Here, subsidiaries had significant authority and autonomy, although this was often limited to the host country in which the subsidiary operated (Young et al., 1994).

There has been evidence of subsidiary upgrading, characterised by the addition of functions to foreign subsidiaries, including engineering and development (Amin et al. (1994). And some multinational enterprises have adopted, new organisational structures. Some multinationals adopt elements of, what Bartlett and Ghoshal (1989) refer to as, an integrated network organisations (Hedlund and Rolander, 1990). Such organisations are characterised by a distributed network of specialised resources and capabilities, a more complex co-ordination and shared decision making. Overseas subsidiaries have a differentiated contribution to the company and the heterarchical structures provide for enhanced, multi-directional, informational flow and worldwide learning. However, in general, the level of functional upgrading and subsidiary autonomy remains limited and restricted to a minority of companies. (Dicken, 2015).

The specifics of the subsidiary context - the designated functions of subsidiaries within the overarching corporate structure, and the desire of subsidiaries to attract higher-value functions in order to safeguard their position within the organisation, such as competition among subsidiaries for group resources – provide support for the view articulated by Audretsch et al. (2021) that a more detailed depiction of distinct intrapreneurial contexts needs to be developed in order fully understand how they shape the process of intrapreneurship.

Even within the group of indigenous enterprises, corporate contexts differ, with potential implications for the operation of intrapreneurship. For example, firms formed as a result of serial entrepreneurship exhibit a number of distinct characteristics that would appear to be particularly well suited to intrapreneurship. These characteristics emanate from the experiential learning accumulated by the serial entrepreneur in previous ventures: an enhanced ability to identify entrepreneurial opportunities (Taplin, 2008); an ability to create new ventures at a faster pace than other industry actors (Stam et al., 2008); and an existing set of social connections suitable for establishing more effective diverse business teams (Zhang, 2011).

However, the relationship between serial entrepreneurship and innovation remains unclear (Hyytinen et al., 2015). For example, recent research finds that successful serial entrepreneurs typically remain within their industry and obtain economic success through less innovative performance (Lahiri and Wadhwa, 2020). However, Dabić et al. (2021) argue that studies on innovation in the context of serial entrepreneurship have focussed unduly on the outputs of the innovative process, such as patents. Research into the innovative business models through which serial entrepreneurs create value via the formation of new ventures has been scant.

Intrapreneurship and regional development

The link between intrapreneurship and regional economic development is still unclear, and measuring its size and contribution remains one of the main research challenges (Bosma, 2009). Conceptually, it is possible to distinguish two main ways in which intrapreneurship can contribute to regional economic growth, firm growth and new firm formation. Aparichio (2020) and Antoncic and Antoncic (2011) consider company performance and firm growth to be the most important consequence of intrapreneurship and the latter provide empirical evidence for this positive relation. Regional economies will benefit from, amongst others, employment growth, new (internal) ventures, higher levels of innovation and export growth.

Secondly, intrapreneurship may lead to external entrepreneurship and new firm formation via company spin-out processes. Bosma (2009) for example argues that it is more than likely that intrapreneurs will have the required skills to start a business and see opportunities for doing so in the region. Intrapreneurs may also use what they have learned as part of an organisation's team to create their own company. Such spin-out processes can instigate processes of agglomeration and industrial clustering (Klepper, 2010). However, as yet, there is no evidence suggesting that intrapreneurship leads to entrepreneurship. In fact, local legislation in relation to entrepreneurship and the degree or employment protection may lead workers preferring intrapreneurship over external entrepreneurship. And the question whether individuals would contribute more to the regional economy as employees or self-employed is not convincingly addressed (Bosma, 2009). This article will provide new empirical evidence about this second link with regional economic development, the link between intrapreneurship and spin-out processes.

The extent to which external conditions - such as the regulatory or institutional environment at national or regional level - influence intrapreneurship has only recently begun to receive attention in the intrapreneurship literature. Turro et al. (2016), for example, explore the impact of two external factors (fear of failure among employees and employee education levels) as well as internal factors, such as opportunity recognition and social capital, on intrapreneurship among employees across Spanish regions in 2011. Based on a quantitative analysis of the Global Entrepreneurship Monitor (GEM) dataset, the authors find that both external and internal factors can be seen to exert a significant impact upon the incidence of intrapreneurship. What is more, fear of failure among employees is found to be particularly significant barrier to intrapreneurship in lower income regions. Indeed, this echoes the findings of Bosma, Stam, and Wennekers (2010) who find a significantly higher prevalence of intrapreneurship in high income countries than in low income countries.

As Turro et al. (2016) note, regional disparities in intrapreneurship rates arising from formal or informal institutional factors may necessitate policy intervention on the part of regional or national government. However, to date, intrapreneurship literature has focussed on firms themselves being the appropriate champions or promotors of intrapreneurial behaviour among employees via the development of an organizational culture conducive to intrapreneurial endeavour and the provision of requisite management support. While Turro et al. advocate greater discussion regarding policy interventions that might foster intrapreneurship - and indeed they raise the possibility that such policies may need to be region-specific, intrapreneurship literature has yet to fully explore the potential for policymakers to fulfil the role of intrapreneurship promotors or champions at a regional or national level.

The analytical framework guiding our study is depicted in Figure 1: We conceptualise two special contexts of intrapreneurship: *(i) intrapreneurship in the context of indigenous firms and (ii) intrapreneurship in the context of subsidiaries of foreign-owned multinational firms.* The framework identifies the two key routes through which intrapreneurship stimulates regional development: enhanced firm performance and new firm formation.

[Insert Figure 1]

The South East Region

The South East Region of Ireland combines the five counties of Carlow, Kilkenny, Tipperary, Waterford, and Wexford, with a population of over 580,000 in 2019. Agriculture and manufacturing industries have traditionally been the biggest sectors. Between the 1930s and 1960s an indigenous manufacturing base developed behind protectionist barriers. With the opening-up of the Irish economy in the 1960s the region attracted investment from foreign companies, initially in relatively low value-added activities. Both indigenous and foreign-owned segments endured an economic decline between 2001 and 2011 (see Table 1), leading to relatively high levels of unemployment.

[Insert Table 1]

However, the regional economy is slowly restructuring with a shift to more modern manufacturing and technology sectors as well as a growth in employment in foreign and indigenous companies, including in a number of competitive enterprises established by serial entrepreneurs. The region is now cultivating economic clusters in Engineering, Medical Devices, Pharmaceutical, Financial Services, ICT and the Agri-food sectors (see Table 2 and Morgenroth et al., 2015)

Still, by 2019, the South East Region continued to have the highest unemployment rate in the country. The Central Statistics Office Quarterly Labour Force Survey recorded an unemployment rate of 6.8% in 2019: Q4 for the South East Region, more than 2 percentage points above the national average.

[Insert Table 2]

Data and Methods

For the purposes of this study, the unit of analysis is the company rather than the intrapreneurial employee. The qualitative data for this study has been collected via a set of interviews undertaken with companies as well as with local and regional institutions in the South East region. In order for inferences to be drawn regarding intrapreneurship and regional development, the qualitative study was underpinned by a careful selection procedure. Resource constraints make the selection of firms and key informants critical to the success of the qualitative research (Markusen, 1994).

The set of institutions interviewed has been selected with a view to representing the full range of institutions in the South East region that potentially support intrapreneurship or have encountered intrapreneurial activities within their client companies. All 16 relevant local and regional institutions have been interviewed for the purposes of this study.

In relation to the company interviews, an inventory of companies has been compiled from the Annual Employment Survey of the Department of Enterprise, Trade and Employment as well as from client data made available by the regional Enterprise Agencies. Resource constraints meant that only a selection of regional companies could be considered for interview. Random selection of companies for interview was ruled out, because this can result in less than optimal information (Markusen,1994). Companies for interview were selected from the inventory by a process of purposive sampling. Sampling criteria have been designed in order to attain a comprehensive insight into the manifestation of intrapreneurship in indigenous companies and intrapreneurship as undertaken by subsidiaries of multinational firms. The sample included all multinational enterprises in the inventory. The study also aimed for the inclusion of all large-sized companies, and a selection of medium-sized. Following Markusen (1994), the selection of medium-sized companies that were deemed most suitable for the study was based on the informal surveying of industry leaders and recommendations of institutional interviewees.

A final sampling criterion has sought to ensure that the sample reflects the industrial structure of the South East region. With this in mind, the company sample includes companies active in the following sectors: agri-foods, engineering, financial services, ICT, medical technology, and pharmaceuticals (see Table 2). A total of 29 companies participated in the study: 16 Irish companies (3% of Irish client companies) and 13 subsidiaries of foreign multinationals (16% of foreign client companies). Subsidiaries of multinational companies are therefore over-represented. (See Table 3). All sectors, except agri-food, are over-represented in the set of respondent companies. (See Table 2)

[Insert table 3]

The full set of interviews were completed over the period October to December 2020. Given the nature of the questions, we identified company or site directors as the appropriate respondents. Where possible, multiple staff members in a company (between one and three), with relevant functions to the topic of intrapreneurship, were interviewed. In two cases, following Markusen (1994), the researchers interviewed retired staff members who have played key roles in company. In two other cases we interviewed staff at both the source company and the related spin-out company.

Interviews lasted on average 75 minutes and took a semi-structured format. Institutional interviews sought to ascertain the extent to which the interviewees have encountered and supported intrapreneurship within their client companies, as well as seeking to identify barriers and challenges to the emergence of intrapreneurship and intrapreneurship-related gaps in the existing enterprise support system. Company interviews sought to establish how intrapreneurship operates in distinct corporate contexts, any barriers and challenges companies encountered in relation to intrapreneurship, and the channels through which intrapreneurship impacts upon regional development.

Individual interviews were transcribed and coded. The process involved a hybrid coding approach, combining deductive and inductive methods (Fereday and Muir, 2006). The initial coding stage involved deductive coding, with a set of pre-established codes applied to the interview transcripts. A combination of structural coding, descriptive coding and process coding was applied[1]. Derived from the research topic and literature review, the broad codes included terms such as: Irish company, multinational subsidiary, intrapreneurship process, example of new venture, bottom-up, top-down, continuous improvement, company policies and actions, barrier; challenge, spin-off process, impact on company performance. and agency support.

This initial coding exercise formed the basis for analysis and a more detailed inductive coding stage where a set of codes was created based on the data itself. This allowed for the

[1] Structural coding involves describing structural attributes of the data. Descriptive coding summarizes extracts by using a single word or noun that encapsulates the general idea of the data. Process coding makes use of action-based codes that indicate a movement or procedure.

identification of, amongst other, additional sub-categories of companies, activities closely related to intrapreneurship, types of barriers and types of challenges. Examples of deductive codes include: serial entrepreneur, family business, continuous improvement plus, guerrilla intrapreneurship, spin-off in related activity, spin-off in unrelated activity, subsidiary functionality, and so forth.

Intrapreneurship in the Context of Indigenous Firms in the South East Region

The working definition of intrapreneurship utilised in this analysis includes the following four features:

- The entrepreneurial behaviour of employees and the development of new ventures within the existing structure of an organisation.
- A bottom-up approach to creating and developing ideas that can enhance the competitiveness or productivity of the company from within the company.
- It can involve new products/services, or the setting up a new business entity, for the employer.
- A system that allows an employee to act like an entrepreneur within a company.
- A bottom-up approach to creating and developing ideas that can enhance the competitiveness or productivity of the company from within the company.

Although the above definition is relatively detailed, the categorization of businesses proved not to be clear-cut and included grey areas. In relation to the first component of the definition, one ambiguity is related to the term ‘new venture’. Some interviewees pointed to staff coming up with ideas for new customers or market opportunities for products or services. Not all of these were considered new ventures in the context of intrapreneurship. In this context a new venture should involve its own specialist people to develop and run it, its own budget, its own finance stream, and its own manager. A number of companies were excluded from the intrapreneurship category (partly) on these grounds. For example, staff in one financial services company developed new fund types for the Irish market. This was not considered a new venture. Similarly, a number of engineering companies involved in one-off projects were excluded. In principle, in these companies every new project could be considered a new venture, but not in the context of intrapreneurship.

Another ambiguity is related to the term ‘bottom-up approach’. Not all ideas for a new product or service, developed by middle-level management or below, should be considered ‘bottom-up’ in the context of intrapreneurship. A substantial number of companies have a dedicated R&D group. In many instances it is the job of the scientists and engineers in these groups to come up with innovative ideas. In some cases, these ideas may even lead to new ventures. But in many cases, these ideas are not part of a bottom-up approach. The crucial differentiating factor is whether or not the researchers are *instructed* to develop specific ideas. One interviewee at an intrapreneurial company explained it as follows:

> *In most companies [senior management] dictates - this is what you work on. [With intrapreneurship] what you actually have is that the researchers arrogantly dictate to [senior management], these are the products that we want to work on, instead of the other way around. So, it reverses the mindset. It reverses the whole synergy of the business.* (Interview C2).

Similarly, in a number of engineering companies, the engineers and operatives were not involved in a truly bottom-up fashion. For example, in one engineering company every engineering project is new. "*We would sit down as a team to discuss how we would approach the manufacturing. […] If we are starting to manufacture items, people do suggest that certain types of machinery might help. We always listen to our people on the shop floor."* (Interview C17). Although lower-level employees are involved in creating and developing ideas, this involvement should not be considered bottom-up in the context of intrapreneurship.

Finally, in some cases continuous improvement programmes can become very advanced, thereby crossing the boundary between continuous improvement and intrapreneurship. Such cases can be referred to as "Continuous Improvement Plus". Bottom-up ideas, evolving from the standard continuous improvement programmes can be selected for inclusion into more advanced programmes that can draw greater resources and involve a range of departments, including research and development. These programmes can result in substantial technological innovations. However, the focus remains predominantly on the processes as opposed to new products or services. Continuous Improvement Plus programmes generally do not lead to new ventures, although we have identified two companies in which new ventures did arise. We refer to these as 'accidental ventures' because new ventures are not the objective of the programmes. Five companies were excluded from the intrapreneurship category (partly) on this ground.

One particular form of intrapreneurship in the context of indigenous firms occurs in the context of serial entrepreneurship. In these cases an employee is supported by his/her employer (the business founder) to develop an idea for a new venture which subsequently becomes an enterprise that resides within the serial entrepreneur's corporate group structure. The serial entrepreneur remains the dominant figure in the group – for example, as majority shareholder. This development processes can, to an extent, be perceived as bottom-up. But, the resultant organisational entities reside outside the existing organisational domain of the initial business (although within the group structure of the serial entrepreneur).

This phenomenon of intrapreneurship within a serial entrepreneurship context was evident in four cases. One respondent - a serial entrepreneur with six businesses within one group structure – exemplified this type of intrapreneurship:

> *Each of the businesses in the group have been developed via internal intrapreneurship [...] They are subsidiaries within the group. They all have their own independent management structure. I am the majority shareholder in each and I am the chairman of the group*. (Interview C11)

The respondent provided an example of how new companies emerged within the group structure:

> *One of our heads of payroll experienced a problem managing payroll so we developed a solution […]. Internally we had the willingness to support the idea generation for the benefit of the business. The issue was identified by the individual and together we devised the solution and developed it into a separate business. The individual would have been involved in the process of setting up.* (Interview C11)

In this instance, the new company did not emerge via a formal intrapreneurship programme: "*We don't have a formal structure in place, but we are very open to new ideas in this company*" (Interview C11). Similarly, another respondent – a serial entrepreneur with three companies – detailed the role of informal intrapreneurship in developing a new venture:

> *In company [X], the key researcher is [employee A]. The innovation partnership was funded by [the parent company] and allowed her to work on this within [the parent company]. Employee A had been working with me on the development of these products and we recognized that a more efficient product could be developed. Early on we decided that he/she would be a partner when it spun-out into a company. [...] I'm the main shareholder of each company. I am setting up a holding company. [...] We have a formal structure [for managing intrapreneurship] now. Initially we just had ideas and tried to the develop them.* (Interview C3).

Where serial entrepreneurship occurs in family businesses, the development of new ventures tends to involve intrapreneurial processes. Family members are encouraged to develop new ideas into new ventures within the family group. The new ventures reside within in a group structure and the founding family members tend to remain dominant within the family business group – notwithstanding eventual succession planning considerations: "*They [the founding family members] were very hands on – they wanted to work at floor level. They are doers. There was always an open relationship with employees and [the company is] always open to new ideas*." (Interview C29). The development of new ventures is, however, not reserved to family members only. A number of instances of intrapreneurship within family groups involved non-family employees.

> *Company X was driven by a person outside of the family. He's been there since nearly the start. He was an employee initially. He came in on the finance side and has developed the company. [..] We had the business before he came to it. It was always the case that partners came in and we worked with people. A lot of this is relationship driven.* (Interview C29)

This research identified eight indigenous companies (28% of respondent companies) in the South East region that fit the definition of intrapreneurship, including four cases in the context of serial entrepreneurship.

Intrapreneurship in the Context of Foreign-owned Subsidiaries in the South East Region

A number of respondent subsidiaries of multinational companies presented practices that, although not fitting the definition of intrapreneurship, are related to the concept. These practices are here referred to as subsidiary intrapreneurship. The concept can be linked to that of subsidiary upgrading. Birkinshaw and Hood (1998) provided an influential model of subsidiary evolution and upgrading, emphasising three drivers: the parent company (decisions made by head office managers regarding the allocation of activities); subsidiary choice; and the host country environment (including support of the host government and inward investment agencies and the strategic importance of the country). Based on this model, Paterson and Brock (2002) present a more elaborate model that more specifically includes the idea of interaction amongst the drivers. This framework proved productive in empirical studies of subsidiary upgrading processes in Ireland (Van Egeraat and Breathnach, 2012).

The model emphasises the fact that many subsidiary upgrading processes are not primarily driven by a top-down corporate process of idea generation and decision making. In fact, many instances of subsidiary upgrading are driven by local site management. In the context of intrapreneurship, this can be interpreted as bottom-up from a corporate perspective. The actions can be perceived as bottom-up and lead to new ventures within the existing structure of the organisation. They do, however, generally not involve a formal corporate culture or programme.

We define subsidiary intrapreneurship as bottom-up actions by the site management of a subsidiary to upgrade the functionality of the subsidiary in the global corporate context, leading to the development of new ventures. The ideas are generated and developed primarily by the local site management. In that sense the actions cannot be considered bottom-up from a subsidiary perspective. But they can be considered bottom-up from a global corporate perspective. The actions do generally not involve a corporate culture or programme for subsidiary intrapreneurship.

Six of the respondent subsidiaries of multinational companies (46% of the multinational respondents) presented elements of subsidiary intrapreneurship. In three of these cases the actions had led to new ventures, notably the addition of R&D units. In the other three cases, local management undertook intrapreneurial actions, but no new ventures (narrowly defined) had been established. In one case this can be linked to the young age of the facility.

In most cases subsidiary intrapreneurial action was driven by a desire to secure the development or survival of the local site.

> *As a manufacturing site, you want to get your roots in deeper. You want to develop back into the product development side, so that it is not easy to move site to somewhere else.* (Interview C4)

The intrapreneurial actions were generally not taken in the context of a specific corporate programme to drive subsidiary intrapreneurship. On the contrary, although the ventures were eventually approved by corporate headquarters, the initial development, and even financing, often happened under the radar of corporate headquarters. The process is referred to as ‘guerilla intrapreneurship’.

> *We used grants and credits to gain a foothold in R&D here. No one asked us to do it – we would have been told no. It is like … we have arrived, and we did not tell anybody we were coming.* (Interview C6)

> *We try to do these 'skunk works'. We do stuff under the radar. If we make an efficiency gain, we do take resources and put them to things that will make further developments. In the corporate structure it is not always easy to get inside the tent. Once we were able to develop an idea, but now we have to put ideas in the corporate bucket. So, we try to work within site, using 'skunk works'.* (Interview C9)

Barriers and Challenges to Intrapreneurship

One general challenge that was identified by several interviewees was that ideation can lead to too many, often poor, ideas. This can potentially lead to a serious draw on time and capital resources.

> *We probably have too many ideas. We are not trying to qualify the ideas so that we don't have too many ideas in play at one time.* (Interview C3)

> *Time is the biggest enemy. And the usual resources in the communal areas are on a lot of the projects. It is just the demand of trying to keep more plates spinning.* (Interview C24)

The weakness of the ideas is in some cases related to the fact that ideas were generated and developed by individuals with bounded skill sets.

> *In the past we employed an [ideation] manager. But we stopped. We did not get many good ideas. Engineering had some good ideas, but they can lack the commercial reality of expertise. So, it is not possible to manufacture, or there is no market for it. It is hard for us to find the all-rounder scenario, which brings together, engineering, IP and a knowledge of market demand and price points* (Interview C23)

The problem often lies in the company structure, the lack of a suitable ideation programme and the absence of appropriate tools.

> *We used to have think tanks, ideas boxes, brain storming and so forth. But it used to become a source of frustration for employees. We couldn't manage it*. (Interview C18)

Successful intrapreneurial companies adopt a variety of structures and programmes, partly driven by the type of business and sector. Most intrapreneurial companies have an organisational structure that facilitates bottom-up idea generation and intrapreneurship and a set of bespoke tools that suit the business of the company. It generally involves a tool for suggesting and processing ideas as well as a committee to evaluate ideas at an early stage. Ideas with a poor chance of success need to be turned off at an early stage. But the ones with the best chance of success need be supported, notably by developing a team that is sufficiently resourced and that contains all the relevant skill sets at an early stage.

> *You need to have a structure around it. How do you bring it in? [And you need to] have a closing date. Projects can either evaporate or just keep going on and on. You need to have the discipline around it in terms of timeline and budget.* (Interview C22)

This relates to the challenge of motivating staff, including those whose ideas have been rejected. Important here is that all ideas receive formal and constructive feedback.

> *I liken it to a chocolate bar vending machine. It is annoying for staff if they don't hear back. Even hearing that idea is good, but we're not pursuing it now, is still okay. It is very important that they get some feedback.* (Interview C12)

Another element of the solution lies in the reward system. Most intrapreneurial companies operate some kind a reward system, often involving a cash bonus. But here to, it is important that ideas that are not pursued are recognized.

> *We are creating a culture and environment in which it is okay to fail. So, as to rewards, we have celebrations for the failures as well as the successes. We treat both equally because if we don't, nobody is going to try.* (Interview C2)

More generally, developing an intrapreneurial enterprise involves change. This change brings challenges than need to be managed. Key pitfalls include a lack of buy-in and communication. Staff need to understand that the company wants them to be intrapreneurial, what this entails, that the structures and tools are in place and that the resources are there. Employees need to feel that the programme starts from the top in terms of commitment. For this reason, in some in companies, the company founder played an important and visible role in the programme. "I was the intrapreneurship manager. I dealt with all ideas. This was important so that the ideas were respected." (Interview C22)

Finally, two interviewees mentioned the challenge of securing the benefits of the intrapreneurial activities for the company. In many companies this challenge is partly solved by protecting the resultant intellectual property.

> *We gave specific projects to individuals to develop under [the company's] banner. They all sign contracts ensuring that the intellectual property belongs to [the company]. We created incredible products by using this model. But these initiatives were all in-house and intellectual property was held by the company.* (Interview C22)

Intrapreneurship within the context of serial entrepreneurship involves a number of additional barriers and challenges. One is the possible perception at group level that intrapreneurial initiatives are outside the remit of the individual group companies and their employees:

> *[Holding Company X] is the 100% owner of each company, and each company has a management team. […] We have a management structure in each division and an [group] executive team. Subsidiaries need authority and financial support of the executive team in order to develop new ideas* (Interview C31).

In such a scenario, there is scope for support agencies to inform serial entrepreneurs of the benefits that formal intrapreneurship programmes can deliver to their business groups.

Another challenge is related to a potentially dominant role of the serial entrepreneur. In the instances of serial entrepreneurship encountered in the research, it is often the serial entrepreneur who ultimately decides which ideas and new ventures within the group should be allocated resources. This can create tensions with employees within the subsidiaries when those employees bring forward ideas that are not supported by the serial entrepreneur:

> *Sometimes people can get offended if their idea isn't supported. It can lead to people quitting – often to pursue their own idea. Or people thinking that their idea is so valuable that they should receive a bigger compensation. I and the management team are the decision makers as to whether we should develop an idea. Others mightn't agree with our decisions.* (Interview C11).

One possible solution in such an instance may be to ensure that employees are aware of the aims and objectives of the business group, in order to ensure that intrapreneurial proposals align with organisational strategies at the group level.

Where serial entrepreneurship occurs in family businesses, intrapreneurship can bring with it organisational features particular to familial relations. As one interviewee noted, "In a family, you've got strong personalities. It was not just about succession planning – it was about everyone's expectations of the business, vision, values" (Interview C29). While the founders of the family business play an entrepreneurial role, the second generation may be inclined to assume the role of guardians of the family business. As such, ideational processes and intrapreneurial initiatives may become more significant for when business activities mature and new ventures are needed to reinvigorate the business group.

> *First generation family businesses are not so much into this kind of [formal ideational] structure. You have to have that culture – and we're aware that we could lose this, and that we may have to replace this with a formal structure.* (Interview C29)

Developing formal intrapreneurship structures may offer a means for family businesses to discover new market opportunities and add new ventures to the existing family business group.

The main barriers and challenges to subsidiary intrapreneurship are related to the fact that many companies in the South East region operate as subsidiaries in a broader corporate structure. In those cases, depending on the corporate organisation, the limited functionality of the subsidiary and/or the level of the staff can work against intrapreneurship.

Quite a number of subsidiaries are mainly production facilities with limited research, development, sales and marketing functions. These latter functions are often located overseas. Depending on the organizational structure, this can be a barrier to the generation and actual development of bottom-up ideas at the local site. Most subsidiaries have some freedom, and a limited discretionary budget, to develop small-scale ideas. But more substantial ideas are handed over to other units or corporate headquarters.

> *We have a global engineering function based on this site. Some projects can be run within [our local] resources but some projects extend beyond just one site. These areas are run by our global engineering functions. We review projects as they come up. Some go to local engineering and some go to our global engineering arm […]. Our business is quite capital intensive and some of the ideas would require spending a sum of money. That won't happen within the context of a work group. The resources wouldn't be within the group.* (Interview C8)

> *We have discretion and a certain budget. We may be able to finance [small ideas] regionally. But if the idea had global implication, we could go to headquarters for support. […] I guess there's a balance to it. If it is research on product development, we would centralize this. Process and service development is encouraged in all sites. Innovations regarding product would be taken to the centre.* (Interview C19)

The absence of a product development and sales and marketing function is an important barrier.

> *The local development of new ventures] wouldn't happen often. New ventures come from those in the global organization, who have a better line of sight of these opportunities, for example the director of consumers. When we talk about involving our people in new ideas, it is on a much smaller level.* (Interview C9)

Ideas that relate to changes to the manufacturing process can have significant implications for the end-product, the customer and corporate intellectual property, and functions related to these areas reside in other locations.

> *With some of [the ideas] we can't stray from a particular way of doing things because it impacts upon the master file and what the customers have requested. Proposed changes have to go through Global Change Control. This is probably the same for all regulated processes.* (Interview C4)

Subsidiaries in the South East Region are often part of an integrated global production network where the functions of sites are clearly set by corporate management. The related lack of autonomy can pose an important barrier to subsidiary intrapreneurship.

> *I don't think [subsidiary intrapreneurship] happens here. Our bank is like a very big oil tanker. We keep taking on assets and that is what drives revenue. So, locally there haven't been innovations or ideas that change the structure of what we do. There are local structural changes, but they are driven by global rationalizations.* (Interview C10)

The initiatives of local management should certainly not go against the overarching strategy of corporation.

> *You cannot bring forward an idea not aligned with the corporate organisation because it would never be accepted. It would look bad if the site manager focused solely on the site. It has to be good for the full organisation. If the new development meets all the objectives, people are far more open to this. If the plant manager was going off on a development away from the strategy, you won't survive.* (Interview C7)

Another barrier lies in the limited discretionary resources at subsidiary level. This limits the size of the initiative before the involvement of corporate. Some of the local sites have overcome this by drawing resources from a range of sources and projects. In general, having a track record as a performance site helps. "*It is a competitive situation and other sites have woken up to this.*" (Interview C8)

The solution to these barriers lies, to an extent, in the global corporate organizational structure. Multi-locational corporations can adopt heterarchical structures that are conducive to bottom up idea generations and the development of these ideas in multi-locational, multi-functional, multi-level, project teams.

Intrapreneurship and Spin-out Processes

The extant literature suggests that intrapreneurship may lead to external entrepreneurship and new firm formation via company spin-out processes. Bosma (2009), for example, argues that it is more than likely that intrapreneurs will have the required skills to start a business and see opportunities for doing so in the region. Intrapreneurs may also use what they have learned as part of an organisation's team to create their own company.

Our research has explored the relevance of such processes in the context of the respondent companies in the South East region. The findings are somewhat sobering. Over the last ten years, nine of the 29 interviewed companies have experienced employees leaving the company to set up their own business (not counting the internal ventures established by serial entrepreneurs). However, only two of these cases could be considered as spin-outs resulting from intrapreneurial projects.

Many of the cases involved very small enterprises, unrelated to the activities of their source companies. It is questionable whether these should be perceived as spin-outs.

> *There are no examples of spin-outs in [our company]. Certain staff have gone on to set up their own business, but we never invested in the ideas. People set up a*

> *training company. Somebody from the cafeteria set up a food company … marketing. Nobody has set up a company in [our line of business].* (Interview C14)

In other cases, employees set up businesses related to the source company's business, but the spin-out was not related to intrapreneurial activities undertaken within the source company. Employees may have developed important skills while working in the source company, but the ideas for the spin-out were not developed in the context of an intrapreneurial program or culture. "Individual consultants have set up their own businesses around a given service. But that service is not something unique to what we developed." (Interview C12). In most cases the entrepreneurs received no, or very limited, support from the source company in establishing the spin-out. "No, we did not stimulate or support them. We just accepted that they wanted to do their own thing. We didn't stand in their way." (Interview C31).

A substantial number of interviewees were quite negative towards the idea of staff spinning out companies or, at least, did not see why their company would operate an intrapreneurial programme that may lead to spin-outs and valuable staff leaving the company

> *Spin-offs don't benefit the company. We want people to stay and invest in the ideas here and reap the rewards here.* (Interview C2)

> *Nobody approached me to spin out and I did not suggest that idea to anyone because I could not see the benefits of the idea for the company.* (Interview C22)

It is important to note that this research analysed intrapreneurship at the level of the organisation, as opposed to the level of the individual employee. Some of the cases described above could have involved intrapreneurial behaviour of individual employees in the context of a non-intrapreneurial company. In one case, employees tried developing their ideas within the organisational structure of the source company but were not supported. This resulted in a spin-out. Such cases could lead to the conclusion that an intrapreneurial culture could, to an extent, work against spin-outs, rather than stimulating them. These ideas are illustrated by the experience of a spin-out entrepreneur:

> *To some extend we did [try to develop the idea in the source company]. We sought to make the local site relevant within the corporation. So, we pitched our idea of a more sophisticated product. The idea did not gain traction. It never got to a stage of development within the company. On reflection it could have been very good for the company. In a more stable situation, our pitch might have been more successful.* (Interview C28)

Again, few of the cases fully fit the scenario of intrapreneurial projects leading to spin-outs, although some cases came close. One intrapreneurial company did spawn three companies in related businesses. The ideas for the spin-out were, to an extent, developed by employees while working in the source company. But the source company did not support the idea of the spin-out. Two other cases involved source companies without an intrapreneurial culture. In both cases, the employees' work on the idea prior to the companies spinning off was 'condoned' by the source company, with (limited) support of the source company.

We only found two examples of spin-offs arising from intrapreneurship in the context family enterprises. In these instances, the family business can be seen to support employees develop ideas into independent companies that remain external to the family business group.

> *Mr. X worked in our company for a good number of years. He had an entrepreneurial idea at the same time that we needed a specific component. Between his forward thinking and our need, discussions developed. But there was a lack of capital and support. We provided this support.* (Interview C30)

It seems that, in the South East region at least, the regional development benefits of intrapreneurship do not manifest themselves via spin-out processes.

Discussion

Based on the extant literature, in this article intrapreneurship is defined as activities that include the following features.

- Entrepreneurial behaviour of employees and the development of new ventures within the existing structure of an organisation.
- A bottom-up approach to creating and developing ideas that can enhance the competitiveness or productivity of the company from within the company.
- New products or services for the employer in a new business entity.
- A system or culture that allows an employee to act like an entrepreneur within a company.

Although this definition of intrapreneurship is relatively detailed, the categorization of businesses has proven to be ambiguous, mainly in relation to the interpretation of the concepts 'new venture' and 'bottom-up'. This paper shows that it is important to precisely define the term 'new venture' in relation to intrapreneurship, so as to only include those ventures which involve their own specialist people to develop and run such ventures, their own budget, their own finance stream, and their own manager. In relation to the second term, not all innovative ideas developed by lower tiers of the organisation should be considered bottom-up. The crucial differentiating factor is whether or not the researchers are *instructed* to develop specific ideas.

The findings of this paper develop a deeper understanding of how intrapreneurship operates in distinct corporate contexts and how these different contexts involve specific processes, barriers and challenges. Based on the extant literature we deduced two distinct corporate contexts: intrapreneurship arising in the context of indigenous firms and intrapreneurship as undertaken by subsidiaries of multinational firms. Inductively, the research separates out the context of serial entrepreneurship from the context of indigenous firms. Here, intrapreneurship operates differently. In this context, the new venture becomes an enterprise outside the existing structure of the initial company, but still resides within the serial entrepreneur's corporate group structure. The research findings identify intrapreneurship as a common business model in the context of serial entrepreneurship, thereby addressing the lack of research on business models in the context of serial entrepreneurship identified by Dabić *et al.* (2021).

In the context of subsidiaries of multinational companies, we identified practices that, although not perfectly fitting the definition of intrapreneurship, are closely related to the concept. These practices are referred to as subsidiary intrapreneurship. The practices are bottom-up (from a subsidiary perspective) and lead to new ventures within the existing structure of the organisation. However, in many cases they do not involve a formal corporate culture or programme. The operation of intrapreneurship in this context is influenced by the global organisation of many multinational companies as discussed in Section 2. The remaining high degree of hierarchy and centralised control from parent headquarters identified in many corporations (Dicken, 2015) means that intrapreneurship often happens under the radar of corporate headquarters and in the absence of a formal corporate program for intrapreneurship.

In addition to general barriers and challenges to intrapreneurship, different contexts lead to specific barriers and challenges. One of the challenges to intrapreneurship in the context of serial entrepreneurship is related to a potentially dominant role of the serial entrepreneur. The barriers appear to be greatest in the context of subsidiaries of multinational companies. Here, depending on the corporate organisation, the limited functionality of the subsidiary, the limited seniority of the staff and the low level of autonomy can all work against intrapreneurship. However, this does not mean that intrapreneurship is impossible. The solution to these barriers lies, to an extent, in the global corporate organizational structure. Indeed, this research has identified multi-locational corporations that have adopted the kind of heterarchical structures described by Bartlett and Ghoshal (1989) and Hedlund and Rolander (1990). These prove conducive to bottom-up idea generation and the development of these ideas in multi-locational, multi-functional, multi-level, project teams.

In relation to the channels through which intrapreneurship impacts upon regional development, this study has focused on the idea that intrapreneurship may increase the pool of potential entrepreneurs in the region, resulting in new firm formation via spin-out processes (Bosma, 2009; Klepper, 2010). The findings are somewhat sobering. Over the last ten years, nine of the 29 interviewed companies have experienced employees leaving the company to set up their own business. However, only two of these cases fully fit the idea of spin-outs resulting from intrapreneurial projects. The findings in this study support Bosma's (2009) sense that the regional development benefits of intrapreneurship may not manifest themselves primarily in the form of new firm formation via spin-out processes.

Conclusion

Intrapreneurship can play an important role in enhancing innovation and competitiveness within firms. However, as highlighted by recent intrapreneurship research such as Turro et al. (2016) and Audretsch et al (2021), significant gaps still exist in our understanding of the intricacies of the intrapreneurship process. This paper, via a qualitative analysis of intrapreneurship in the South East Region of Ireland, focuses on two facets of the intrapreneurship process that warrant further research: (i) how intrapreneurship operates in distinct corporate contexts, and (ii) the channels through which intrapreneurship impacts upon regional development.

In relation to the former, this paper argues that the intrapreneurship process within foreign-owned multinational subsidiaries takes a different form from that observed within indigenous firm. As outlined in our case-study, a number of key aspects of the intrapreneurship process differ markedly across the two corporate contexts. Unlike indigenous firms, foreign-owned subsidiaries pursue intrapreneurship in the context of a complex organisational structure. For example, intrapreneurship has been observed to be the means through which subsidiaries showcase their innovative activity and thereby attract additional projects from the corporate centre. These corporate contexts also give rise to specific barriers and challenges to intrapreneurship. Subsidiary intrapreneurship may require a sponsor or "champion" at the corporate centre in order to develop their intrapreneurial proposals. Indeed, subsidiaries may be expected to use their resources solely for their designated function rather than for uncertain intrapreneurial initiatives – as is evident from the instances of *guerrilla* intrapreneurship observed in our case-study. Indigenous firms may face barriers and challenges of a different nature, in terms of generating and processing intrapreneurial proposals, allocating manpower and funding to exploring intrapreneurship proposals, and bringing together the requisite skillsets necessary to complete intrapreneurial projects.

In relation to the link with regional development, the extant literature suggests that intrapreneurship may stimulate regional development. Firstly, intrapreneurship could stimulate the performance and growth of existing enterprises in a region. Secondly, it has been suggested that intrapreneurship may increase the pool of potential entrepreneurs in the region, resulting in new firm formation via spin-out processes. It seems that, in the South East region at least, the regional development benefits of intrapreneurship manifest themselves mainly in the form of the performance and growth of existing companies, and less so in the form of new firm formation via spin-out processes. This indicates that intrapreneurship should not be viewed primarily as a route to new firm formation, but rather as a means of harnessing innovative capabilities within existing firms.

Of the companies in the South East region interviewed for the purposes of this study, the majority lack an intrapreneurial culture or practice. However, many companies interviewed have acknowledged the benefits of stimulating intrapreneurship among their employees, and have expressed an interest in adopting intrapreneurial practices. This presents policymakers with an opportunity to capitalise on the positive sentiment among firms towards intrapreneurship via the development of bespoke intrapreneurship policy approaches. With this in mind, our study yields a number of policy-relevant insights. Firstly, policy initiatives to stimulate intrapreneurship should particularly focus on serial entrepreneurship, as this corporate context appears to be particularly conducive to intrapreneurship. A dedicated intrapreneurship policy approach could usefully include both firm-level supports and collaborative academic-corporate employee training initiatives. Secondly, intrapreneurship policy should not be designed with a view to using intrapreneurship as a means to generate spin-off firms. Rather, intrapreneurship policy should seek to impact economic development via enhancing value creation and innovation within existing firms.

References

Acs, Z. (Ed.) (2010) *Entrepreneurship and Regional Development*. Northampton, MA: Edward Elgar.

Amin, A. and Tomaney, J. (1995). The regional development potential of inward investment in the less favoured regional of the European Community. In A. Amin and J. Tomaney (Eds.), *Beyond the Myth of European Union*. London: Routledge, pp. 201-220.

Antoncic, A. and Antoncic, B. (2011) Employee satisfaction, intrapreneurship and firm growth: a model. *Industrial Management & Data Systems*, Vol. 111(4): 589-607.

Antoncic, B. and R. Hisrich (2003) Clarifying the intrapreneurship concept. *Journal of Small Business and Enterprise Development* 10:7–24.

Aparicio, S., Turro, A. and Noguera, M. (2020) Entrepreneurship and intrapreneurship in social, sustainable, and economic development: opportunities and challenges for future research. *Sustainability* 12: 1-11.

Audretsch, D., Lehmann, E., Menter, M. and K. Wirsching (2021) Intrapreneurship and absorptive capacities: the dynamic effect of labor mobility. *Technovation* 99: 102-129.

Bartlett, C. and Ghoshal, S. (1989). *Managing Across Borders*. Boston, MA: Harvard Business School Press.

Baruah, B. and A. Ward (2015) Metamorphosis of intrapreneurship as an effective organizational strategy. *International Entrepreneurship and Management Journal* 11:811–822.

Bicknell, A., Francis-Smythe, J., and J. Arthur (2010) Knowledge transfer: de-constructing the entrepreneurial academic. *International Journal of Entrepreneurial Behaviour and Research* 16:485–501.

Birkinshaw, J. and Hood, N. (1998) Multinational subsidiary evolution: capability and charter change in foreign-owned subsidiary companies, *Academy of Management Review* 23 (4), 773-795.

Blanka, C. (2019) An individual-level perspective on intrapreneurship: a review and ways forward, *Review of Managerial Science*, 13:919–961.

Bouchard, V. and O. Basso (2011) Exploring the links between entrepreneurial orientation and intrapreneurship in SMEs. *Journal of Small Business and Enterprise Development* 18:219–231.

Bosma, N. (2009) *The geography of entrepreneurial activity and regional economic development*. Dissertation. Utrecht: Utrecht University

Bosma N., Wennekers, S. and E. Stam (2010). *Intrapreneurship - An international study*, Scales Research Reports H201005, EIM Business and Policy Research.

Camelo-Ordaz, C., Fernandez-Alles, M., Ruiz-Navarro, J. and E. Sousa-Ginel (2012) The intrapreneur and innovation in creative firms. *International Small Business Journal* 30:513–535.

Carrier, C. (2004) Intrapreneurship in large firms and SMEs: a comparative study. *International Small Business Journal* 12 (3):54-61.

Charron, R., Voehl, F., Wiggin, H., and H. Harrington (2014) *The Lean Management Systems Handbook*, Productivity Press.

Christensen, K.S. (2005) Enabling intrapreneurship: the case of a knowledge-intensive industrial company. *European Journal of Innovation Management* 8:305–322.

Clarke, T. and Beany, P. (1993). Between autonomy and dependence: corporate strategy, plant status and local agglomeration in the Scottish electronics industry. *Environment and Planning A*, 25(2), pp. 213-232.

Dabić, M., Vlačić, B., Kiessling, T., Caputo, A. and M. Pellegrini (2021). Serial entrepreneurs: A review of literature and guidance for future research, *Journal of Small Business Management*, DOI: 10.1080/00472778.2021.19.

De Jong, J. and S. Wennekers (2008). *Intrapreneurship; conceptualizing entrepreneurial employee behaviour*, Research Report H200802, Zoetermeer: EIM.

Dicken, P. *Global Shift. Mapping the Changing Contours of the World Economy*, London: Sage Publications.

Fereday, J. and Muir, E. (2006) Demonstrating rigor using thematic analysis: a hybrid approach of inductive and deductive coding and theme development. International Journal for Qualitative Methods, 5(1), pp. 1-11.

Fitzsimmons P. and C. O'Gorman (2019). *A Survey of Entrepreneurship in Ireland*. Global Entrepreneurship Monitor (GEM).

Globocnik, D. and S. Salomo (2015) Do formal management practices impact the emergence of bootlegging behavior? *Journal of Production Innovation Management* 32:505–521.

Grabher, G. (1992). Eastern Conquista: The truncated industrialisation of East European regions by large West-European corporations. In H. Ernste and V. Meier (Eds.), *Regional Development and Contemporary Industrial Restructuring*. London: Belhaven Press, pp. 219-232.

Hagedorn RA, Jamieson DW (2014) Intrapreneurial sense-making: the case of a re-envisioned school of professional studies. *International Journal of Entrepreneurship and Innovation Management* 18:425–437.

Hedlund, G. and Rolander, D. (1990). Actions in heterarchies: new approaches to managing the MNE. In C. Bartlett, Y. Doz and G. Hedlund (Eds.), *Managing the Global Firm*. London: Routledge, pp. 15-46.

Hyytinen, A., Pajarinen, M., and P. Rouvinen (2015). Does innovativeness reduce start-up survival rates? *Journal of Business Venturing*, 30(4), 564–581.

Klepper, S. (2010) The Origin and Growth of Industry Clusters: The Making of Silicon Valley and Detroit. *Journal of Urban Economics* 67:15-32.

Lahiri, A. and A. Wadhwa (2020). When do serial entrepreneurs found innovative ventures? Evidence from patent data. *Small Business Economics*. https://doi.org/10.1007/s11187-020-00390-4.

Malecki, E. (1993) Entrepreneurship in regional and local development, *International Regional Science Review*, 16 (1-2), 119-153.

Menzel, H.C., Aaltio, I., and J.M Ulijn (2007) On the way to creativity: engineers as intrapreneurs in organizations. *Technovation* 27:732–743.

Molina, C. and J.L. Callahan (2009) Fostering organizational performance. The role of learning and intrapreneurship. *Journal of European Industrial Training* 33(5): 388–400.

Markusen, A. (1994) Studying regions by studying firms, *The Professional Geographer*, 46(4): 477-90.

Morgenroth, E., van Egeraat, C., Curran, D., Gleeson, J., Hewitt-Dundas, N. and Kroes, R. (2015), *Mapping the Potential for All-Island Sectoral Ecosystems*, IntertradeIreland: Newry.

Nielson, R. P., Peters, M. P., and R.D. Hisrich (1985). Entrepreneurship strategy for internal markets - Corporate, non-profit, and government institution cases. *Strategic Management Journal* 6(2), 181-189.

Patterson, S. and Brock, D. (2002) The development of subsidiary-management research and theoretical analysis, *International Business Review* 11, 139-163.

Pinchot, G., III. (1985). Introducing the "intrapreneur." *IEEE Spectrum*, 22(4), 74-79.

Phelps, N. (1993a). Branch plants and the evolving spatial division of labour: A study of material linkage change in Northern England. *Regional Studies*, *27*(2), pp. 87-101.

Sharma, P. and J. J. Chrisman (1999) Toward a Reconciliation of the Definitional Issues in the Field of Corporate Entrepreneurship. *Entrepreneurship Theory and Practice*, 23(3):11-27.

Stam, E., Audretsch, D., and J. Meijaard (2008). Renascent entrepreneurship. In *Schumpeterian perspectives on innovation, competition and growth* (pp. 223–237). Springer.

Taplin, S. (2008). Serial entrepreneurship: An in-depth look at the phenomenon of habitual entrepreneurs. In U. Cantner, J.-L. Gaffard, & L. Nesta (Eds.), *Entrepreneurship-the way ahead* (Vol. 18, pp. 493–507). Routledge.

Turro, A., Alvarez, C. and D. Urbano (2016), Intrapreneurship in the Spanish context: a regional analysis. *Entrepreneurship & Regional Development* 28 (5–6): 380–402.

Van Egeraat, C. and Breathnacht, P. (2012) The Drivers of Transnational Subsidiary Evolution: The Upgrading of Process R&D in the Irish Pharmaceutical Industry, *Regional Studies*, 46(9), pp. 1153-1167.

Young, S., Hood, N. and Peters, E. (1994). Multinational enterprises and regional economic development. *Regional Studies, 28*(7), pp. 657-677.

Zhang, J. (2011). The advantage of experienced start-up founders in venture capital acquisition: Evidence from serial entrepreneurs. *Small Business Economics*, 36(2), 187–208.