Entrepreneurship in a Regional Context

Enterprise and entrepreneurship are of strong interest to policy-makers because new and small firms can be key contributors to job and wealth creation. However, this contribution varies spatially, with some areas in a country having new firm formation rates that are up to three or four times higher than others. The vast majority of these new firms begin in the geographical area in which the founder lives, works or was born, emphasising that entrepreneurship is a local event. The book documents a diversity of research approaches to examining the regional determinants of entrepreneurship in countries as contrasting as India and Sweden. The Editor’s call is for scholars to better understand the long run factors that influence enterprise at the local and regional level. For policy-makers the Editor’s challenge is for them to be much clearer about the targets for their policies. Is it new firms, new jobs, or productivity and does it matter where these targets are delivered?

This book was published as a special issue of Regional Studies.

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Entrepreneurship in a Regional Context

Edited by
Michael Fritsch and David J. Storey
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Entrepreneurship in a Regional Context: Historical Roots, Recent Developments and Future Challenges

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Fritsch M. and Storey D. J. Entrepreneurship in a regional context: historical roots, recent developments and future challenges. Regional Studies. This paper reviews research on regional new business formation published in four special issues of Regional Studies over a period of 30 years. It is observed that over those decades there has been a heightened recognition of the role of both formal institutions and ‘soft’ factors such as social capital and a culture of entrepreneurship. However, the core challenge is to explain why, in several high-income countries, despite these claimed cultural changes, the relative position of regions with regard to new business formation exhibits little or no variation over long periods of time.

Entrepreneurship  New business formation  Regional characteristics

Fritsch M. et Storey D. J. L’esprit d’entreprise dans un contexte régional: les racines historiques, les développements récents et les défis à venir, Regional Studies. Cet article examine les travaux de recherche sur la création de nouvelles entreprises sur le plan régional qui ont été publiés dans quatre numéros spéciaux de Regional Studies sur une période de 30 années. Il est à noter que sur ces décennies il y a eu une reconnaissance accrue du rôle des institutions officielles et des facteurs ‘doux’, tels le capital social et une culture d’entrepreneuriat. Cependant, le défi primordial consiste à expliquer pourquoi, dans plusieurs pays à revenu élevé, en dépit des prétendus changements culturels, la situation relative des régions quant à la création de nouvelles entreprises montre peu ou pas de variation au fil des années.

Esprit d’entreprise  Création de nouvelles entreprises  Traits régionaux


Entrepreneurship  Gründungsgeschehen  Regionale Gegebenheiten

Fritsch M. y Storey D. J. Espíritu empresarial en un contexto regional: raíces históricas, desarrollos recientes y retos futuros, Regional Studies. En este artículo presentamos un sinopsis de los estudios sobre la creación de nuevos negocios de ámbito regional publicados en cuatro números especiales de Regional Studies durante un periodo de 30 años. Observamos que durante estos decenios
ENTREPRENEURSHIP IN A REGIONAL CONTEXT

Following its inception in 1967, Regional Studies published several important articles on regional new business formation (FIRN and SWALES, 1978; JOHNSON and CATHCART, 1979b), but it was not until 1982 that a decision was taken to formulate a special issue devoted specifically to this topic. This special issue appeared in 1984 and became the forerunner of subsequent issues appearing in 1994 and 2004. The current special issue follows in that tradition.

This article begins by reviewing the history and evolution of research in the field of regional entrepreneurship, taking the three previous special issues of Regional Studies as well as this issue as cornerstones. It is acknowledged that interest in regional new business formation has three motivations. The first reflects an expectation that the creation of new businesses enhances job creation, raises productivity and incomes, and lowers unemployment (ACS and STOREY, 2004). The second is that, within the same country, there are wide variations in rates of new business formation and that in many, but not all, instances it is the more prosperous regions that have higher formation rates. The simple inference is that raising rates of new business formation in regions where these are low generates economic benefits. A third motivation is based on the observation that most new businesses are set up by local people so that they can be regarded as an element of a region’s endogenous economic potential (FIGUEIREDO et al., 2002; STAM, 2007; DAHL and SORENSON, 2009). Strengthening this endogenous potential by stimulating regional entrepreneurship can be regarded as a complementary strategy to the widespread mobility orientation of regional policy that tries to attract businesses from outside the region (EWERS and WETTMANN, 1980).

In practice, many of the papers included in the special issues of 1984, 1994 and 2004 have questioned these simple inferences. The last decade has seen scholarly understanding of entrepreneurship develop considerably, partly because of the availability of better data but also because of the greater diversity of disciplinary approaches – and the current papers reflect these developments. The changes are set out in the third section; a brief review of the papers is provided in the fourth section, with the fifth section setting out the authors’ personal observations of current uncertainties and hence directions for further work. The paper concludes by offering evidence-based guidance to those tasked with seeking economic improvement through enterprise promotion at a regional level.

SPATIAL VARIATIONS IN NEW AND SMALL BUSINESSES IN ECONOMIC DEVELOPMENT: A REVIEW OF THE 1984, 1994 AND 2004 SPECIAL ISSUES OF REGIONAL STUDIES

The special issue of 1984: context and findings

Although work on new businesses in the Strathclyde region of Scotland (FIRN and SWALES, 1978) and Northern England (JOHNSON and CATHCART, 1979b) had been published in Regional Studies, it was the 1979 contribution of David Birch in the United States – and the controversy this generated (for coverage, see LANDSTROM, 2005) – that transformed the subject.

At the aggregate or national level, BIRCH (1979) was interpreted as showing that two-thirds of the increase in employment in the United States between 1969 and 1976 was in businesses with fewer than 20 workers (STOREY and JOHNSON, 1987a). His second finding, highly relevant for regions, was that the contribution of job losses to employment change was broadly invariant across regions. Regions with a high net increase in employment were therefore those where new jobs were created – rather than those losing the fewest; in contrast, regions with small, zero or negative net new jobs were those where the contribution of new and small businesses was small. Since job creation was delivered primarily by new and small businesses, the interpretation was that poor-performing regions needed to raise new business formation and hence create jobs.

Those contributing to the first special issue of Regional Studies in 1984 were keenly aware of the Birch findings. The six papers were described by the editor as ‘position statements by leading researchers interested in the subject of small firms and regional economic development’ (STOREY, 1984, p. 187). Thirty years later the vocabulary, the geographical and sectoral coverage of the firms, the data sources, and the analytical approaches used in these papers have, perhaps inevitably, a somewhat dated ‘feel’ to them. The changing vocabulary is reflected in that five of the six papers use the term ‘new firm formation’ or ‘new firm’. Conspicuous by their absence are the
terms ‘entrepreneur’ or ‘entrepreneurship’, which are not only absent from the titles of any of the papers, but also appear only once in the text of each of three papers and are completely absent from the text of the other three papers. The geographical coverage is concentrated heavily on the British Isles, with only one paper making a comparison with the United States. Four of the papers examined only manufacturing firms. The data used were, in three cases (GOULD and KEEBLE; GUDGIN and FOTHERGILL; LLOYD and MASON), taken from the records of the UK Factory Inspectorate—a source that had been used by industrial economists such as BEESLEY (1955) virtually 30 years previously. In the other papers the data sources were the fledgling official UK data used by WHITTINGTON (1984); official Ireland data used by O’FARRELL and CROUCHLEY (1984) and personal survey data used by OAKYE (1984).

The analytical approaches were very basic by modern standards. Only three papers (GUDGIN and FOTHERGILL; WHITTINGTON; O’FARRELL and CROUCHLEY, 1984) used ordinary least squares (OLS) regressions, with the others simply providing tabulations. Despite their analytical limitations, what clearly emerged was ‘real differences between regions in terms of the numbers of small firms, birth rates, performance and potential contribution to economic development’ (STOREY, 1984, p. 187). As ever it was the differences, rather than the areas of consensus, that provided the impetus for continuing research.

The ‘explanations’, or at least the emphasis placed upon them by the authors, were very different. WHITTINGTON (1984), for example, placed emphasis on home ownership (as a proxy for access to capital) and occupational structure (as a proxy for human capital). For both GUDGIN and FOTHERGILL (1984) and O’FARRELL and CROUCHLEY (1984) the influences differed starkly between urban and rural areas, with formation rates being higher in urban areas. A third key influence was firm size: geographical areas where average firm size was small had high rates of new business formation (GOULD and KEEBLE, 1984). It remained, however, unclear how far this firm size-effect was due to differences in the sectoral composition of the regional economy (FRITSCH and FALCK, 2007).

As will become clear, several of these explanations continue to be seen as important by the scholars of today, but they are incomplete. They failed to take into account the full range of potential influences upon new business formation rates at a regional level that could be identified, even from the limited research evidence available at the start of the 1980s. Table 1, amended from STOREY (1982), identifies five groups of influences and ten associated metrics that prior work had shown to influence new business formation rates at a regional level. By producing a simple, unweighted, collation of these metrics Storey generated a regional new business formation ‘league table’ of UK regions. Verification of this ‘league table’ came later.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Rationale</th>
<th>Evidence</th>
<th>Metric(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm size in locality</td>
<td>Individuals working in small firms are more likely to start a (small) business than those working in large firms, primarily because of greater awareness of the enterprise ‘option’ and experience of what was required</td>
<td>JOHNSON and CATHCART (1979a)</td>
<td>Percentage of manufacturing employment in small plants</td>
</tr>
<tr>
<td>Human capital</td>
<td>Individuals with more human capital are more likely to create a successful business, although not necessarily more likely to start a new business, ownership generally required some literary and numerical skills provided by formal education</td>
<td>CROSS (1981)</td>
<td>Percentage of population with degree(s)</td>
</tr>
<tr>
<td></td>
<td>The ambiguity over the link between education and formation rates was because education also enhanced the earnings of an individual as an employee</td>
<td>NICHOLSON and BRINKLEY (1979)</td>
<td>Percentage with no qualifications</td>
</tr>
<tr>
<td>Access to finance</td>
<td>Business creation normally requires some access to finance and so regions where finance is more plentiful will have more new firms</td>
<td>COOPER (1973)</td>
<td>Percentage in administration and management</td>
</tr>
<tr>
<td>Barriers to entry</td>
<td>Given that individuals are most likely to start a firm in the sector in which they were (most recently) employed and because it is more difficult to start a firm in sectors where large firms dominate, then regions with more employment in such sectors are likely to have fewer new firms</td>
<td>LITVAK and MAULE (1972)</td>
<td>Percentage manual workers</td>
</tr>
<tr>
<td>Demand-side influences</td>
<td>New business formation is likely to be stimulated by local spending power since most new firms sell (very) locally</td>
<td>GUDGIN (1978)</td>
<td>Percentage of manufacturing employment in four large firm-dominated sectors: shipbuilding, metal manufacturing, chemicals, and mechanical engineering</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LLOYD (1980)</td>
<td>Regional disposable income</td>
</tr>
</tbody>
</table>

Source: STOREY (1982).
when value added tax (VAT) data (Whittington, 1984) and information about public policy expenditure (Storey and Johnson, 1987b) became available.

Therefore, summarizing the stock of knowledge on this topic in the early 1980s it is fair to say that in the UK there were real regional variations in new business formation. There were also a range of possible explanations for these variations. What was needed was a clearer understanding of the role played by these, and possibly other, influences. This began to be addressed a decade later.

The 1994 special issue: coordinated research in high-income countries

The inability of researchers in 1984 to agree on the explanations for the observed regional differences in new business formation was, in part, because the sources of data used to make the comparisons were so diverse. It was noted above that even though these data were UK based – and three of them even came from the same source: Factory Inspectorate – valid comparisons were hindered by inconsistency over definitions, time periods and sectoral limitations. A second cause was that the analytical approaches varied considerably. A third problem was omitted variable bias.

The 1994 special issue set out to address these three limitations explicitly. It was also able to benefit from establishment data becoming available in several high-income countries (Fritsch, 1993, for West Germany; and Reynolds and Maki, 1990, for the United States). But in doing so, it introduced the international component as a new source of variation. Instead of being limited primarily to the British Isles (the UK and Ireland), the 1994 special issue covered France, Germany (West), Italy, Sweden and the United States. As Reynolds et al. (1994a) state:

To provide partial compensation for this variation and enhance the potential for cross-national comparisons, two procedures were employed to increase standardization. First, the same conceptual framework was used for all analyses – there was harmonization of the abstract models. This meant that each country team made an attempt to incorporate indicators of the same set of regional factors, even if the measures were different. Second, the same analysis procedure was employed in all of the studies – ordinary least squares regression analysis with forced entry of all independent variables.

A third change, compared with 1984, was the first formal attempt to introduce a measure of policy. This was meant to capture the recognition that, by the mid-1990s, policy-makers at national and regional levels had become aware that new enterprises could play an important role in stimulating job and wealth creation and had introduced policies to enhance firm formation rates (Storey, 1994). It was therefore reasonable to assume that those areas that had introduced policies might have been expected to have formation rates above those in otherwise similar regions that had not introduced such policies.

To reflect these developments the five key influences on new business formation noted in Table 1 were expanded and developed and are shown in Table 2. Consistent evidence was found across all countries that urban regions had higher rates of new firm formation than rural regions; that regions with a relatively high proportion of its firms defined as small had higher rates than regions with a low proportion of small firms; that in-migration and population and income growth were also associated with higher new business formation rates. The factors examined, and the results obtained, are captured in Table 2 and taken from Reynolds et al. (1994b).

Despite confirming many of the findings from 1984, from a policy point of view key uncertainties remained. It appeared that the main influences on new business formation were ‘set in stone’ and not easily amenable to public policy change. Second, the unemployment result was ambiguous – implying that in some regions low unemployment appeared to be associated with high rates of new business formation, whereas in other regions it was the opposite. Thirdly, it was difficult to point to clear evidence of enterprise policies – or even the political composition of regions – exerting a direct influence on new business formation.

This was frustrating for politicians who, as noted above, were keenly aware of research telling them that new firms were a crucial source of economic dynamism. However, the regional research implied that, even if such a relationship existed, the strongest influences on formation rates were not easily amenable to change at the regional or local levels – such as educational attainment, firm size, population density and existing economic buoyancy. Reynolds et al. (1994a) summarized it thus: ‘This research programme suggests that regional characteristics are a major factor affecting variation in firm births. The ability of governments to affect regional characteristics is an open question’ (p. 346). The key analytical limitation of the 1994 papers was that they all used only cross-section OLS regression. This was primarily because time-series data for most countries provided insufficient observations for fixed-effects panel regression techniques to take account of unobserved region-specific fixed effects.

The 2004 special issue: broadening the perspectives

The key starting point for the 2004 special issue was the policy void left by Reynolds et al. (1994a, 1994b). Could researchers say what, if anything, local politicians could do to stimulate enterprise in the hope that it would lead to enhanced economic development? To address this, the seven papers in the 2004 special issue sought to be a development in four respects. The first
was to widen the disciplinary approaches beyond its existing heavy focus upon economics and geography. The second was to draw upon cross-section as well as the, now more available, longer time-series data, without which it was difficult to draw conclusions about the direction of causation. A third advance was to analyse the effect of new business formation on regional economic development more widely (Audretsch and Keilbach, 2004; Frütsch and Mueller, 2004; van Stel and Storey, 2004). Finally, it took the first steps in linking creativity with entrepreneurship (Lee et al., 2004).

The overall effect was again to confirm many of the relationships identified earlier (Tables 1 and 2), but with important provisos concerning the link between entrepreneurship and the economic performance of regions. These provisos are highly relevant for the 2014 papers.

The first is the role of time lags, Frütsch and Mueller (2004) showed the impact of entrepreneurship on employment could be considered as having three effects over time. The first was consistently positive — reflecting the additional economic activity/employment created by the new firm. However, the next effect, at a later point in time, was to remove the less efficient economic incumbents. A ‘third round’ effect was to stimulate improved performance amongst surviving incumbents. This model emphasized that entrepreneurship/new business formation was capable of being either positive or negative, depending on whether the destructive effect was outweighed by the two positive contributions. It was also clear these effects were far from instantaneous and pointed to the importance of examining these relationships by taking full account of time lags. Evidence of the role of time lags and their ambiguity for UK regions was provided by van Stel and Storey (2004) and later by Mueller et al. (2008) pointing to entrepreneurship having a positive effect in existing prosperous regions but a negligible, or even negative, effect in low-income regions where there was the greatest need for new firms to contribute to job creation.

However, the paper that generated the greatest policy interest was by Lee et al. (2004) who documented a correlation between enterprise and cultural creativity.
Entrepreneurship and institutions as a focus of research

Differences in observed rates of entrepreneurship across countries are frequently attributed to differences in the scale and nature of both formal and informal institutions. The role played by formal institutions such as entry regulations or labour laws for the emergence and the development of new businesses is extensively documented (Baumol, 1990; Boettke and Coyne, 2009; Henrekson, 2007; Nystrom, 2008; van Stel et al., 2007). This is valuable context for making international comparisons, but because most of these formal

entrepreneurship in a regional context

Acs and Storey (2004) interpret their results as showing that ‘areas having disproportionate numbers of authors, designers, musicians, composers are associated with entrepreneurship as is the so-called “Melting Pot Index”, which measures the proportion of the population that is foreign-born’ (p. 875). This provided an incentive to policy-makers in many areas to support the greater diversification of its population on the grounds that this would enhance entrepreneurship and hence economic development.

However, despite its superficial attraction, the policy implications were more opaque. This was because, although there clearly was a spatial correlation between the presence of ‘bohemians’ and rates of new business formation, it was less clear how areas that were ‘un-creative’ could transform themselves. Moreover, the causal relationship underpinning this correlation between artistic culture and new business formation remained unclear. As Glaeser (2004) pointed out, the regional share of people in creative occupations is also highly correlated with a range of other indicators capturing the formal qualifications of the regional workforce. Hence it is unclear whether the creativity indicator captures only creativity, or more generic educational qualifications. If it is the latter, then enhancing these is likely to be possible only in the (very) long run and for reasons only partly related to entrepreneurship.

This reflected a wider concern that, although associations were observed between structural variables such as education, wealth, in-migration etc. and new business formation, the direction of causation was open to question. In short, were high rates of new business formation a cause of economic development or an outcome? The issue of endogeneity therefore became centre stage in the discussions.

The context for the 2014 papers

The authors of the 2014 papers have three advantages over their predecessors. They have access to considerably better data, at least for high-income countries. They can also draw upon a wider range of disciplinary perspectives to identify factors other than the ‘usual suspects’ that may explain regional variations in business formation rates. Finally, the analytical tools that can be used to test hypotheses have advanced considerably.

Better data

During the last decade there has been a huge leap forward in the quality and availability of entrepreneurship data. These include:

- More precise measurement of self-employment and the more accurate identification of start-ups. For many countries data on start-ups are available by industry and by types (e.g., those owned by females, high growth enterprises, own-account workers), and by survival rates (Organisation for Economic Co-operation and Development (OECD), 2013).
- The availability of longitudinal data at the micro-level of firms and at the level of regions. These longer time-series facilitate fixed-effect panel analysis accounting for unobserved influences (e.g., Fritsch and Falck, 2007; Sutaria and Hicks, 2004).
- More longitudinal data about individuals such as the Panel Study of Entrepreneurial Dynamics (PSED) (Reynolds and Curtin, 2011; Davidsson and Gordon, 2012) and diverse household panels (e.g., the German Socio-Economic Panel or the British Household Panel Survey – BHPS). This enables entrepreneurial choice to be more accurately modelled.
- More broadly comparable data about new business formation and business ownership across countries. This includes the Global Entrepreneurship Monitor (GEM) (Bosma, 2013) and the COMPENDIA database for a number of OECD countries (van Stel, 2008). This enables researchers to take account of factors that apply nationwide such as macro-economic conditions and the role of formal institutions when examining regional variations across national borders (Naudé, 2011; Vivarelli, 2013).

The last decade has also seen new and better data become available on the independent variables that are expected to influence new business formation rates at the regional level. This has enabled the inclusion of a more diverse range of influences on new business formation rates. These include measures of social capital (e.g., Westlund and Adam, 2010; Westlund et al., in this issue) or the values of the population (e.g., Kibler et al., in this issue).

However, despite these clear improvements one issue remains unresolved. It is that virtually all these datasets relate either to the founder or to businesses. Data linking the two are far less common yet vital, since businesses can be owned by multiple individuals, and individuals may own multiple businesses, so it is likely that a different picture emerges depending upon which metric is chosen.

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institutions apply nationwide, with only modest variation across regions, their effect is primarily to provide context for regional variations (Klapper et al., 2006, Henrekson, 2005). However, in countries undergoing major political change, the effect of a radically changed institutional framework – such as in the former socialist countries of Central and Eastern Europe – on entrepreneurship is likely to be considerable (Estrin and Mickenwicz, 2011; Fritsch et al., 2014; Kshetri, 2009; Smallbone and Welter, 2001).

It is not only formal institutions that influence behaviour, but also the unwritten ‘rules of the game’ (North, 1994) such as norms, values and codes of conduct (Williamson, 2000; Freytag and Thurik, 2007). A number of empirical studies show that informal institutions differ significantly between regions (Beugelsdijk and Noorderhaven, 2004; Beugelsdijk, 2007; Bosma and Schutjens, 2011; Obschonka et al., 2013; Wagner and Sternberg, 2004). Such differences may then lead to more or less entrepreneurship-friendly policies at the regional level. Although several studies find a statistical relationship between personality traits and personal attitudes of the regional population and the level of entrepreneurship, they are unable to identify the causality of these effects. Do specific value-sets amongst the population of a region bring about relatively high or low levels of entrepreneurship or is it entrepreneurship that causes the expression of these values? Such analyses are further hampered by entrepreneurial regions becoming attractive to in-migrants.

One approach to addressing this problem of endogeneity is to draw upon long-run historical data. Fritsch and Wyrwich (in this issue) and Glaeser et al. (2012) use this approach as an instrument for the historical level of entrepreneurship.

Knowledge and innovation: entrepreneurship as economic creativity

During the last 20 years knowledge and innovation have increasingly been seen as closely linked with entrepreneurship at both the national and regional levels. The most direct link is reflected in the commercialization of knowledge through the creation of a new enterprise. This relationship lies at the heart of the ‘knowledge spillover theory of entrepreneurship’ (Acs et al., 2009). From this it follows that the knowledge conditions in the respective industry or technological field are of importance (Audretsch, 2007). In so far as industries follow a life cycle, new business formation plays a role in the early phases that tend to be characterized by a so-called ‘entrepreneurial technological regime’, in contrast with latter stages which have a more ‘routinised regime’ (Audretsch, 1995).

Since knowledge tends to be ‘sticky’ in space, the regional knowledge-base becomes a determinant of regional start-ups, particularly for innovative new businesses. This regional knowledge may have different sources, including the educational attainment of the workforce, the presence of private and public research in the locality, as well as the work experience of the population that is related to the regional industry structure (Helfat and Lieberman, 2002). It is not only a main source of entrepreneurial opportunities but also may be a determinant of important capabilities such as the recognition of entrepreneurial opportunities and the absorptive capacity for new knowledge (Qian and Acs, 2013).

Entrepreneurship as a process of individual development in its regional context

Another potentially promising approach for improving our understanding of regional entrepreneurship is to investigate individual behaviour in its regional and its wider (sectoral, national) context. Entrepreneurship is then primarily seen as a development process at the individual level. Many contributors to this approach come from academic disciplines such as sociology and psychology, but also from the natural sciences (for an overview, see Obschonka and Silbereisen, 2012). Examples of this research include:

- **Identifying the entrepreneurial personality, i.e. finding those personality traits that are conducive, and those that are unfavourable, to starting and running a business** (Zhao and Seibert, 2006; Zhao et al., 2010; Rauch and Frese, 2007, Caliendo et al., 2014). Much of this research draws upon the concept of the ‘Big Five’: a comprehensive personality taxonomy comprising five dimensions which are associated with entrepreneurial behaviour. These are, however, very general patterns that, to become valuable, would, as a minimum, have to recognize that different personality profiles are likely to be required in different entrepreneurial circumstances.

- **The intergenerational transmission of entrepreneurship**. Entrepreneurship research has consistently found that children and grandchildren of parents who ran a business have a significantly higher probability of being entrepreneurs themselves (e.g., Chlosta et al., 2012; Dunn and Holtz-Eakin, 2000; Laspita et al., 2012). However, there are at least four explanations for this intergenerational transmission: peer effects of being close to entrepreneurs, so acquiring knowledge and the ‘taste for entrepreneurship’; transfer of valid personality characteristics and entrepreneurial skills from parents (Schmitt-Rodermund, 2007); direct inheritance of existing businesses; and direct financial support from parents (Nicolaou et al., 2008; Koellinger et al., 2010; Lindquist et al., 2012). Currently it is unclear which are dominant.

- **Education, choices and experiences made during the professional career**. The link between educational
attainment and subsequent business ownership has been examined extensively. The relationship is, however, by no means consistently positive (Storey and Greene, 2011). Generally, education enhances the individuals’ skills making them more able to be either an employee or a business owner. Somewhat more robust is the evidence positively linking business performance with educational attainment – at least at the aggregate level of regions (Figueiredo, 2013; ACS and Armington, 2004).

Another item, identified in Table 1, that receives more consistent empirical support in recent research is prior employment in a small firm (Elfenbein et al., 2010) or in a professional environment where self-employment is relatively frequent (Sorgner and Fritsch, 2013). In both cases it appears to enhance the likelihood of an individual starting in business. Disagreement with an employer is also frequently an important driver of spin-offs (ACS et al., 2009; Klepper, 2009), but the regional dimension of this has yet to be explored.

Regional differences in new business formation clearly reflect differences in the composition and contribution of these groups of factors across regions. So, for example, regions with a high share of entrepreneurial personalities (Obschonka et al., 2013) or of people working in small firms would be expected to have higher new business formation rates. However, such simple explanations that are based on the correlation between two variables are only a part of the story because individual behaviour can also be significantly shaped by the regional environment. Hence, people with identical characteristics may act differently when shaped by the regional environment. For example, founders have a mobile across regions and may self-select into certain spatial environments. For example, founders have a strong tendency to locate their businesses close to their place of residence (Figueiredo et al., 2002; Stamat, 2007; Dahl and Sorenson, 2009), so that spatial mobility during the career path has an important effect on the regional distribution of new businesses. Alternatively, certain regions may attract people with specific characteristics, implying that their potential or talent is lost for their ‘home’ region (for a review, see Levie, 2007). Therefore, explaining new business formation and firm behaviour also requires explanations that account for the effect of the regional environment on individual behaviour and mobility.

This view of entrepreneurship as a development process at the individual level supplements our understanding of new business formation at the regional level. It acknowledges that because individual development and behaviour take place in a certain location and in an environment that is partly region specific, then outcomes are also linked to the region. One therefore needs an improved understanding of how regional conditions shape individual decisions and developments.

As far as these decisions then feed back into the region-specific, it has to be regarded as an evolutionary process not only at the individual level but also at the level of regions (Boschma and Frenken, 2011).

Minniti (2005) provides an illustrative example of these relationships by modelling the interplay between individual decisions and their regional context. The mutually reinforcing nature of entrepreneurship is reflected in a regional environment in which one person’s decision to start a business – and be demonstrably successful – encourages others to follow, meaning that high levels of regional entrepreneurship can be self-reinforcing. This process also works in reverse with low enterprise regions continuing in that manner over long periods of time.

The effect of new business formation on regional development

It was noted above that, for 30 years or more, politicians have been persuaded there is research-based evidence that new business formation promotes economic growth. Hence many countries, and regions within those countries, have introduced policies aimed at stimulating the formation of new firms.

From a theory perspective, the basic mechanism that transforms new business formation into growth is competition between entries and incumbent firms (for an overview, see Fritsch, 2013). Hence the new business constitutes a challenge to incumbents leading to increased competition. This process is strongly influenced by both industry-specific conditions and the regional environment. As a result, the contribution of new businesses to employment across regions varies markedly and can, as noted above, even be negative (Mueller et al., 2008). Theory suggests the effect of new business formation on regional growth is influenced by three factors: the quality of the newcomers in terms of the competitive pressure they exert on incumbents; how incumbent firms react to this competition; and the characteristics of the competitive process. In the latter instance the legislative environment plays a vital role in either promoting or inhibiting both entry and exit, so influencing the number of competitors, demand conditions and technological developments.

In short, the evidence increasingly questions the prevalence of an automatic and positive link between new firm formation and economic development. So, although the link may be present, its strength and even its sign depend heavily upon a wide range of other factors.

The persistence of regional entrepreneurship over time

The long-term persistence of regional levels and structures of self-employment and new business formation
has been documented in several recent papers (Fritsch and Mueller, 2007; Andersson and Koster, 2011; Fotopoulos, 2013; Fritsch and Wyrych, in this issue). It appears that in Germany, Sweden and the UK the cross-regional structure of entrepreneurship remains broadly constant over time – even when there are considerable changes at national level and when countries undergo striking political change. Andersson and Koster (2011) and Fritsch and Wyrych (in this issue) attribute this stability to a regional culture of entrepreneurship that, as an informal institution, changes only slowly (North, 1994; Williamson, 2000). Nevertheless key questions remain unresolved:

- What are the main constituents of a regional entrepreneurship culture?
- How does it emerge?
- How is it transferred across generations and over longer periods of time despite, in some instances, massive external shocks and migration flows?
- Why is there stability in a region’s relative position with regards to the level of entrepreneurship, an entrepreneurship culture, when, at a national level, many high-income countries have experienced a considerable increase in new business formation rates (Audretsch et al., 2011) – implying that a ‘cultural’ change has taken place?

The link with unemployment, deprivation and disadvantage

Despite the range of ‘health warnings’ over assuming a direct causative link between increased enterprise, job creation and the reduction in unemployment (for a recent summary, see Vivarelli, 2013) the simplistic notion that unemployment can be reduced by converting the unemployed into self-employed business owners remains widespread. This theme, linking enterprise with promoting social inclusion, is also captured in a greater focus on social – as well as for-profit – enterprises (Haug, 2007). It is therefore no surprise that the political emphasis upon entrepreneurship rises sharply when economic conditions deteriorate and in localities in which there is deprivation (Frankish et al., in this issue).

In practice, evidence examining the role of unemployment in influencing new business formation at a regional level has a long history of generating mixed results. It will be recalled from Table 2 summarizing the 1994 results that these were conflicting – perhaps in part because the institutional setting in, for example, the United States and Sweden differed sharply. Parker (2009) summarizes the position admirably by saying:

there is really no economic reason why unemployment and entrepreneurship need to be related at all. The extent to which they are related probably reflects rigidities in the economy. These rigidities are likely to diminish over time as governments adjust their tax-benefit systems to make their economies more flexible.

(p. 146) On these grounds it would seem unlikely that evidence would emerge that entrepreneurship could become a tool in the armoury of those seeking to reduce unemployment and the social and economic costs this imposes on individuals and society more widely. However, as will be shown, two of the papers in this volume reopen that issue.

OVERVIEW OF THE PAPERS IN THIS ISSUE

This section briefly describes the papers included in this special issue and links their findings to the existing stock of knowledge described above. Fritsch and Wyrych (in this issue) analyse the persistence of self-employment and new business formation in German regions over longer periods of time. As noted above, several studies found the regional ‘league table’ of start-up rates varied little over time (Fritsch and Mueller, 2007; Andersson and Koster, 2011; Fotopoulos, 2013). This might have been expected if there had been few changes over time in factors influencing new firm formation rates, then these rates would also have been expected to be stable. The novelty of the Fritsch and Wyrych (in this issue) paper is that this regional stability is found in East Germany over a period of time when it experienced seismic shocks such as the Second World War and four decades of a socialist regime that sought to eliminate private businesses. Fritsch and Wyrych attribute this long-term persistence to the presence of a regional culture of entrepreneurship.

Westlund et al. (in this issue) investigate the relationship between social capital and self-employment in Swedish municipalities. Based on survey data, they find clear differences in public attitudes towards entrepreneurship. Those living in metropolitan regions say they view entrepreneurship positively, whereas this is much less the case amongst those living in traditional manufacturing municipalities with only one or very few dominant employers. Their multivariate analysis shows that areas reporting more positive public attitudes towards entrepreneurship also have higher new business formation.

Kibler et al. (in this issue) deal with a closely related topic. They provide a detailed analysis of how social acceptance of entrepreneurship in the spatial environment – the regional social legitimacy of entrepreneurship – affects new business formation. Using survey data for selected regions of Austria and Finland, they positively link the regional social legitimacy of entrepreneurship with both entrepreneurial intentions and the likelihood of realizing these intentions by engaging in a start-up. They conclude that social legitimacy ‘can compensate for economic restrictions in the local environment and can give those with entrepreneurial intentions the final impulse needed to turn their intentions into actual start-up behaviour’.

Bosma and Sternberg (in this issue) examine whether urban areas have higher rates of new firm
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formation than other types of region. Using GEM data for 47 urban areas in 22 European countries they find no such effect, so contradicting the Reynolds et al. (1994a, 1994b) finding shown in Table 2. Instead, what they find is that the ‘type’ of entrepreneurship varies, with urban areas having more opportunity entrepreneurship. Further analysis of a subsample of urban areas reveals a positive relationship between GEM indicators of entrepreneurial activity and many of the variables noted in Table 2 such as high education levels, prior growth, household income as well as diversity of economic activities. This confirms the link between a regional environment characterized by economic prosperity and one conducive to the emergence and the realization of entrepreneurial opportunities. Again, however, the direction of causation has to be left open.

Delfmann et al. (in this issue) focus on the effect of regional population change, particularly a decline of population, on entrepreneurship. The issue is important because many regions in Europe will shortly be faced with this problem. Their analysis for the Netherlands shows the effect of population change on the level and structure of new business formation varies markedly between urban and rural areas. Population decline in urban areas lowers new business formation. In contrast, in rural regions the effect can even be positive as a result of responding to the need to provide minimum levels of services and activities even when population falls. This is compatible with seeing entrepreneurship in regions with a declining population as more driven by necessity, whereas in regions with population growth there is a greater emphasis upon opportunity-based entrepreneurship.

Brixy (in this issue) deals with the effect of entries and the turnover of establishments on regional total factor productivity (TFP) and employment in Germany. The paper theorizes that it is longer-lived, rather than the total numbers of, entrants that influence TFP because only the former constitute a credible threat to incumbents. Brixy finds support for this, with even short-term survivors exerting a more powerful influence on TFP than the overall number of start-ups. A second important result points to sectoral differences. While new business formation has a positive effect on employment growth in both manufacturing and services, the effect is significantly greater in manufacturing.

Finally, one of the key limitations of prior special issues was their exclusive focus upon high-income countries. In part this reflected an absence of good data, so it is pleasing to see this addressed by Ghani et al. (in this issue) who examine regional entrepreneurship in India. They emphasize the distinction between the formal and the informal – or unorganized sectors. They find new business formation is higher in areas where the quality of physical infrastructure and workforce education is also higher. Stringent labour laws appear to lower formal new business formation while household banking access appears to be conducive to the emergence of start-ups particularly in the service sector, and in unorganized manufacturing.

The final two papers have a strong policy focus, which has been a consistent theme throughout previous special issues. Frankish et al. (in this issue) examine whether those living in low-income areas benefit from entrepreneurship more than those in employment living in the same location. This is an important issue since if it is the case then there is some justification for governments encouraging enterprise amongst the disadvantaged. The core result of the paper is that over a five-year period business owners living in deprived areas are more likely than employees to move their main residence to a more prosperous area – implying increased wealth. However, the paper finds this is also the case in prosperous areas – implying that entrepreneurship ‘pays’ wherever you live. A third, less surprising, result is that the ‘returns’ to entrepreneurship are strongly linked to business performance. Broadly, the business owner is only more likely to move their main residence to a more prosperous location when their business survives and its sales rise by more than one-third over five years.

Calendo and Künne (in this issue) analyse regional differences in the effectiveness of two publicly funded programmes that support start-ups by the unemployed in Germany. Both programmes are shown to be effective by enhancing the probability that participants will re-enter employment and with higher income. The interesting finding is that these effects differ in regions with different economic conditions. While the Bridging Allowance programme appears to be more effective in regions with disadvantaged economic conditions, the pattern is less pronounced for the Start-up Subsidy programme. The authors conclude that the two programmes have been successful in effectively helping participants to overcome labour demand restrictions and integrating them in the labour market, but particularly in areas with poor economic conditions.

Observations, Limitations and Areas for Further Work

Over the last three decades, although there has been a striking improvement in understanding and quantifying new business formation – and why it varies between regions – many important issues remain unresolved. This section highlights these issues as the basis for further work, with the ultimate intention of being able to offer better evidence-based recommendations to regional policy-makers.

The emergence, quality and performance of new businesses in regional context

The emergence of new businesses is a development process at the individual and the regional levels.
Unfortunately our ability to offer guidance on the design of policy instruments is limited by our imperfect knowledge of the determinants of individuals’ decisions to start and run their own business and how this process is shaped by region-specific factors.

The case of innovative start-ups demonstrates why it is important to analyse new business formation in this way. Several empirical studies have shown that most innovative founders have at least some academic background (Stuetzer et al., 2012) and that, after finishing university, they then work as dependent employees before starting their own firm. Some of these individuals are spatially mobile during their career and so are at least partly motivated by the availability of attractive jobs (Chen and Rosenthal, 2008; Dahl and Sorenson, 2010). When asked, such individuals frequently report that being able to start their business close to their place of residence was a powerful factor in making this choice (Larsson et al., 2003).

This suggests that there are at least four factors that determine the emergence of an innovative start-up: first, the personal background and personality of the founder; second, education at a more or less ‘entrepreneurial’ university; third, geographical labour market mobility and experience acquired in dependent employment; and fourth, the conditions for start-up in the region of residence. Empirical analyses that regress the number of innovative start-ups on regional characteristics (e.g., Fritsch and Aamoucke, 2013; Bade and Nerlinger, 2000) find a strong positive correlation between innovative start-ups and the presence of universities and other public research institutes.

What is less clear is which of the four factors are dominant, in part because of data limitations. In addition to detailed information about regional characteristics, such an analysis requires representative longitudinal micro-data about individuals that includes information on location, family background, education, employment and, in the case of founders, about their respective firm and its development. Several of the Nordic countries have access to this type of data and our expectation is that, for this reason, these countries are likely to take the lead in this strand of research.

**Cultures, regional persistence of entrepreneurship and the league table phenomenon**

The availability of time-series data on national and regional measures of entrepreneurship that stretch back many decades provides new insights, but also new challenges. The challenges stem from very different emphases being placed on observing and analysing the data. For Audretsch (2007) the key change is the clear move towards an entrepreneurial society. In contrast, others see an almost eerie long-term stability in the regional ranking of rates of new business formation in Sweden, the UK and Germany, respectively (Andersson and Koster, 2011; Fotopoulos, 2013; Fritsch and Wyrwich, in this issue). The third key long-term characteristic is, perhaps alongside this long-term stability, considerable short-term volatility – both in the creation and in the survival of new firms and in their performance.

This combination of long-term stability – in this case at a national level – and short-term volatility is reflected in Fig. 1. It shows quarterly data on new firm registrations and de-registrations in the UK over the period 2000–11. The stability is reflected in new registrations in Q1 2000 being approximately 50,000, which is virtually the same as more than a decade later. In contrast, the temporal variations are considerable, with the recession of 2007–09 seeing new registrations falling by 50% and de-registrations more than doubling in less than two years.

This concurrence of short-term fluctuations and regional long-term persistence might suggest that the

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*Fig. 1. Business registrations and de-registrations at the end of the quarter in the UK, 2000–11*
factors explaining temporal variations in the national rate differ from those that determine long-term trends at a regional level. So, for example, the drivers of short-run temporal changes are (Koellinger and Thurik, 2012; Parker, 2009; Saridakis et al., 2014) interest rates and immediate personal economic circumstances – most notably unemployment, job insecurity and income levels. In contrast, the factors influencing enterprise in the longer-term, such as attitudes, culture and psychological factors, family, human capital, education, sectoral structure etc. may change at a national level but the relative position of regions with regard to these factors can remain stable.

Yet even this distinction is not wholly satisfactory. First, it does not explain why enterprise rates vary so markedly between regions in the same country when some variables – such as interest rates – play a powerful role at national level, but vary only very marginally between regions in the country. Second, it fails to recognize that regions are, to different degrees, sensitive in their response to national influences. This could, for example, mean that people in regions with high levels of entrepreneurship are more likely to set up and own a business when becoming unemployed as compared with people in less entrepreneurial regions. Hence the same factors could have very different influences in different regions. A third criticism is that regions reflect relative positions in a league table, whereas the national data reflect overall change. So, in a sports league, if the standards of all the clubs participating go up (or down) this does not automatically imply a change in the league position of the clubs that participate. Yet even this is somewhat counter-intuitive since expansion and decline are not normally consistent. We are therefore faced with a challenge to understand the processes at work when the same explanations for entrepreneurial activity are offered when this rises, often considerably, at a national level, yet the regions that comprise that national total seem to make the same relative contribution (Fotopoulos, 2013).

The still largely unfulfilled promise of regional entrepreneurship research: policy guidance

The paper concludes by exploring the implications raised by the persistence of regional entrepreneurship rankings, when combined with short-term volatility. What can be done to improve regional entrepreneurship if, in the medium-term, so much appears to be predetermined by history? Can regions lagging behind in entrepreneurship be helped to move up, and remain high, in the national league table?

The central starting point is to recognize that moving up the regional league table, other than on a temporary basis, is likely to take perhaps several decades – unless the region is fortunate in terms of having a discovery of natural resources or the growth of a major employer. It then has to recognize that there is no simple and automatic link between new business formation and job creation (Fritsch, 2013) implying that policies simply to ‘get more enterprise’ are likely to be no more successful than the Scottish Business Birth Rate strategy referred to by van Stel and Storey (2004). As a minimum, policies need to be clear on what they are expected to achieve. Brixy (in this issue) shows that the factors influencing productivity at a regional level are different from those that influence direct employment creation. Politicians therefore have to make decisions on what economic factors they wish to address. The papers also point to the importance of recognizing that policies may impact rural and urban areas, prosperous and less prosperous, and growing and declining regions very differently (Bosma and Sternberg, in this issue; Delfmann et al., in this issue; Caliendo and Kunn, in this issue). Policy therefore needs to reflect these differences and has to be tailored to local circumstances.

Once the duration and the need for clarity of objectives and for regionally tailored policies are recognized, the papers point to the potential returns from such measures. Frankish et al. (in this issue) show that disadvantaged individuals who make the transition to business ownership do benefit more than others. Policies to ease that transition are therefore valuable. Ghani et al. (in this issue) find that infrastructure, labour laws and access to finance can promote enterprise, whilst Caliendo and Kunn (in this issue) provide a broadly positive assessment of public programmes seeking to encourage the unemployed to become business owners.

What remains less tractable is seeking to address directly attitudes towards entrepreneurship which both Westlund et al. (in this issue) and Kibler et al. (in this issue) show vary considerably by region and are associated with actual entrepreneurial activity. The policy response fundamentally depends on whether attitudes are a cause or an outcome. If they are a cause then they should be addressed directly – perhaps through awareness-raising of the benefits of entrepreneurship. If, instead, they are an outcome then the valid policy response is to address issues of economic disadvantage – health, education and knowledge, infrastructure etc. – so improving economic conditions directly. During the next decade researchers have to shed more light on this association if policy is to move forward based on evidence.

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NOTES

1. These papers in the special issues were supplemented by others on this topic in a separate book (Storey, 1985).
2. In the associated edited volume (Storey, 1985) two chapters relate to the United States (Shaffer and Pulver, 1985; Markusen and Teitz, 1985).

3. The European Value Study (http://www.europeanvasuestudy.eu/) also provides such information at a regional level. Unfortunately, in some regions it has insufficient observations.

4. A notable exception is the Nordic countries. For example, Dahl and Sorensen (2012) draw upon the Danish IDA database to track individuals and their enterprises. They conclude that new firms performed better when their owners had lived for a longer period in the region in which they started a business.

5. For example, Greene et al. (2008) find that about one in four new business owners also own another business. The earlier work by Rosa and Scott (1999) – albeit restricted to limited companies – found half had only a single director but that 10% had more than three.

6. Obschonka et al. (2013) find evidence that people with an entrepreneurial personality are not evenly spread over space but are clustered in certain regions.

7. Parker (2009, p. 380) is more positive about the positive strength of this relationship and attributes much of the inconsistency to the lack of econometric sophistication in the approaches used by some researchers.

8. This corresponds to the distinction between ‘nature’ (an individual’s innate qualities) and ‘nurture’ (personal experiences made) that can be particularly found in the psychological literature (White et al., 2007; Obschonka and Silbereisen, 2012).

9. The average age of an innovative founder in Germany is about 41 years (Metzger et al., 2010; Mueller, 2010). Assuming that an average founder has finished his or her university education at the age of 25, this means that he or she has worked as a dependent employee for a period of a little more than 15 years before starting their own firm.

10. Roberts and Eesley (2011) by assessing the employment effects of new businesses set up by alumni of the Massachusetts Institute of Technology (MIT) find that only about one-third of the jobs created in these firms are located in Massachusetts.

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