

Mapping Entrepreneurial Activity and Entrepreneurial Attitudes in European Regions

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Introduction

Entrepreneurship has received increasing attention in the past three decades and has been shown to be one of the key drivers of economic growth (Acs et al. 2004; Audretsch and Keilbach 2004; Wennekers 2006). By now considerable knowledge has been accumulated on antecedents and consequences of cross-country differences in entrepreneurial activity (for an overview see Blanchflower et al., 2001; Wennekers, 2006). However, it has also become clear that the sub-national level is at least as important as the national level for understanding differences in entrepreneurship (Sternberg 2000, Fritsch and Mueller, 2006; Tamásy 2006). In various studies it is found that regional variation in entrepreneurship is persistent (Parker, 2005; Fritsch and Mueller 2006).

Most empirical studies on regional variations in entry rates are based on registration data. Since registration methods and definitions vary across countries, this enables comparisons within countries only (for examples see e.g. Ashcroft et al. 1991; *Regional Studies* 28(4), 1994 - special issue; Baptista et al. 2005, Bosma et al., 2006). There is practically no evidence of studies on entrepreneurial activity that encompass regions *and* countries at the same time. Although the EU actively stimulates entrepreneurial activity as part of the Lisbon agenda (European Commission, 2003), an ‘outlook on entrepreneurship in European regions’ has been missing so far¹. This paper provides a first step towards bridging this gap. In this paper we present harmonised regional indicators on early-stage entrepreneurial activity and entrepreneurial attitudes for the NUTS 1 level regions in several European countries².

Based on the existing literature we hypothesise that (i) for both entrepreneurial activity and entrepreneurial attitude cross-regional variation is higher than cross-national variation and (ii) cross-regional variation in entrepreneurial activity is higher than cross-regional variation in entrepreneurial attitude. By mapping our regional indicators we reveal

- a) cultural patterns by looking at supra- or sub-national regions with a specific culture;
- b) institutional patterns by looking at differences between countries;
- c) urbanization economies by examining population density, unemployment and migration indices in NUTS 1 regions.

We confront our explorations of entrepreneurship in Europe with the existing literature on spatial variations in entrepreneurship.

Data and Methodology

We use data from the Global Entrepreneurship Monitor (GEM) for creating indicators on regional entrepreneurial activity. Since 1999 GEM provides several *national* indicators on entrepreneurial activity for an increasing number of countries (see Reynolds et al., 2005; Minniti et al., 2006). The indicators are based on telephone surveys among the adult population. One important finding of the GEM studies so far is that cross-country variation in early-stage entrepreneurial activity is very persistent over years. By merging 2001-2005 GEM data, we create *regional* indicators on entrepreneurial activity and attitudes that pertain to the 2001-2005 period.

¹ Eurostat presents regional data on self-employment in the Statistical Yearbook since 2005, but this is a ‘static’ measure and does not reflect dynamic processes in entrepreneurship.

² We use the NUTS II level for Spain and Denmark to provide for more spatial detail for those countries.

The regional indices provided in the paper are the following:

1. *Entrepreneurial activity indices:*

- Prevalence rates among the adult population relating to:
 - nascent entrepreneurs (involved in setting up a firm at the time of the survey)
 - owner-managers of young firms: firms generating income for up to 42 months
 - people involved in Total early-stage Entrepreneurial Activity (TEA): either nascent entrepreneurial activity or young firms
- High potential entrepreneurial activity: percentage of all people involved in entrepreneurial activity who aim at new products, new markets or use new technology
- Job creation entrepreneurial activity: percentage of all people involved in entrepreneurial activity who expect to create more than 10 jobs within five years.

2. *Entrepreneurial attitudes indices:*

- Perceive good opportunities for start-ups in the region
- Claim to have knowledge and skills to start a firm
- Fear of failure as a barrier when it comes to setting up a business

3. *Combining entrepreneurial activity and entrepreneurial attitudes:*

- Measure of Unused Entrepreneurial Potential (UEP): percentage of adults who (i) believe they have the required skills and knowledge to start a firm and (ii) believe there are good opportunities in their neighbourhood to start a firm, but (iii) are currently not involved in any kind of entrepreneurial activity.

We use the NUTS1 spatial level for seventeen European countries (including twelve of the EU-15 countries)³. The selection of countries is restricted by participation in the GEM project; we require GEM participation for at least three years in the 2001-2005 period. From several maps and tables we explore cultural, institutional and urbanization effects relating to entrepreneurial activity and entrepreneurial attitudes

Results

Our preliminary results clearly point at the importance of distinguishing regions for exploring entrepreneurial activity. For example Figure 1 sets out Total early-stage Entrepreneurial Activity (TEA) rates per region. TEA measures the percentage in the adult population who are either involved in a start-up attempt or owner-manager of a young business. We observe that for most countries this percentage is highest in dense areas such as London, Madrid, Catalunya (Barcelona), Bavaria (München), Copenhagen, Brussels and the western part of the Netherlands (Amsterdam, Rotterdam and The Hague). This finding supports the existing evidence on the importance of urbanization economies for entrepreneurship (see e.g. Armington and Acs, 2002). Figure 2 presents the Unused Entrepreneurial Potential (UEP) index: it shows that regional differences are not as pronounced as entrepreneurial behaviour (as presented in figure 1).

Although we have only included seven of the seventeen countries we can already observe some effects that can be attributed to institutional and cultural differences. As regards institutional differences, we see France and Belgium underperforming. This may be related to the effect of institutions hindering early-stage entrepreneurial activity, such as the administrative burden attached to setting up a firm (see Djankov et al. 2002), or the degree of employment protection and union power (Worldbank 2005). As regards cultural differences, we see for instance that the French Mediterranean Region differs from the rest of France in both figures.

³ We have currently created indices for Belgium, Denmark, France, Germany, the Netherlands, Spain and the United Kingdom. Other countries to be added in the paper are Croatia, Finland, Greece, Hungary, Ireland, Italy, Norway, Slovenia, Sweden and Switzerland.

Discussion

This paper contributes to field of entrepreneurship studies by presenting harmonised entrepreneurship data over European regions *and* countries. Our approach has two drawbacks. First, our indices are based on surveys rather than count data and therefore our indices are statistical estimates. In this, larger samples imply smaller confidence intervals. This is the reason to merge data into a five-year period rather than presenting the data for single years, which can be considered as a second drawback. However, we argue that the existing evidence in entrepreneurship literature on the pervasiveness of regional differences in early-stage entrepreneurship justifies our approach. By mapping patterns in entrepreneurial activity and entrepreneurial attitudes for regions, countries and supra-national areas we are able to explore (possible) influences of urbanization economies, institutions and culture. The newly constructed UEP index is unique in that it combines entrepreneurial attitudes and behaviour which makes it highly relevant for policy makers.

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Figure 1 Early-stage entrepreneurial activity: TEA rates 2001-2005 for regions in five European countries

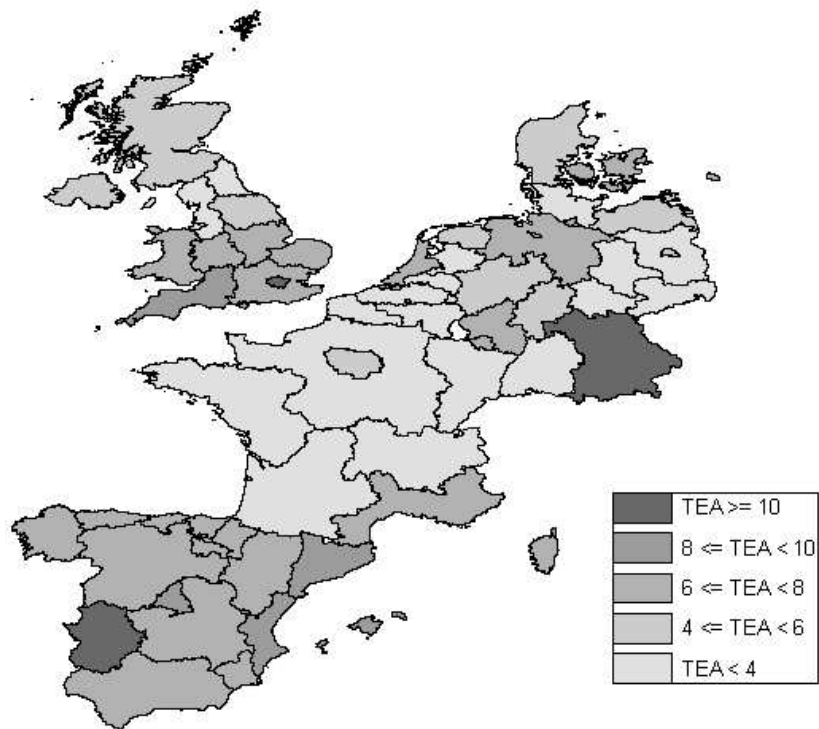


Figure 2 Unused Entrepreneurial Potential: UEP rates 2001-2005 for regions in seven European countries

