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Business Start-Ups: Hope for Future Regional Development in Germany?

Abstract: This article discusses the role of start-up entrepreneurship for regional growth and development in Germany. Entrepreneurship in general can be a key factor for technology-based regional development, in particular. However, not every region provides the necessary entrepreneurial framework conditions. According to Maryann Feldman, there is clear evidence that entrepreneurship is a predominantly “regional event.” Regional factors affect entrepreneurial activity in German regions, too, and the regional environment influences the prospects of start-ups (their growth and survival rates). A short introduction is followed by a description of the regional distribution of entrepreneurial activities in Germany based largely on pooled data from the Global Entrepreneurship Monitor (GEM). Then the determinants of start-up activity and success are discussed, with particular focus on regional determinants. The following section addresses the relationship between entrepreneurial activities and regional economic growth. Finally, options for policy-makers at the national, regional and local levels are discussed in the light of the great popularity entrepreneurship policies have enjoyed in Germany for some years.

1. Introduction

For some time now in Germany, business start-ups have been playing a persistently prominent role in economic, regional, and SME policy, as well as in educational, innovation, and technology policy. As many programmes initiated by federal¹ and state² government departments and by towns and cities³ show, all major spatial reference levels participate in promoting start-ups (cf. overview in Sternberg 2005a). Why are these policy areas currently showing such interest in start-ups in Germany? Apart from the great value that is meanwhile placed on promoting entrepreneurial activity in many other countries (cf. international comparison in Audretsch 2002), three main reasons can be identified. In the first place, there is much to be said for the argument that, in times of globalisation and regionalisation, net gains in employment within the domain of a political institution (of the Federal Republic, a state, or a local authority) tend to be generated by small and young firms rather than by big companies and their subsidiaries, which on balance tend to cut jobs. Although this change of mind took some time, the “Silicon Valley” model of economic development promotion based on young, knowledge-intensive firms from the region is now widespread – however realistic the hopes pinned on specific locations might be. Secondly, the New Economy boom at the turn of the millennium caused a renaissance of the self-employment idea and the entrepreneur image that reached far into the German population, engendering a much more relaxed attitude towards entrepreneurial self-employment, especially among young people, than that which had prevailed over the preceding two decades. Even though the New Economy boom itself came to rapid grief, the effects are still felt. The media and political class had discovered the theme and have not yet forgotten it. The New Economy was limited largely to a very narrow, never representative segment of the start-up sector, namely Internet-based service providers. Although this sector had a strong impact in the media and made the subject popular, really broad sections of the population would never have been in a position to set up in business in this field. The situation is different with regard to present efforts, particularly by the federal government, to exploit the greater acceptance of entrepreneurial self-employment in German society to mitigate Germany's biggest current problem, persistent mass unemployment. Programmes like the “me plc” or the bridging allowance address a clearly defined and much bigger target group than was the case some years ago with the New Economy. In theory, this can be a step towards an entrepreneurial society in which economic autonomy in the form of self-employment constitutes a real alternative to dependent employment. Thirdly and finally, business start-ups are interesting for politics because they are primarily a “regional event” (Feldman 2001, 861). Their causes and effects are primarily to be found within the locational region⁴ – and are thus at least partially controllable at the regional level. The political institutions that

1 E.g., EXIST-SEED (Federal Ministry for Education and Research) (cf. Koschatzky 2003).

2 E.g., “Young Innovators” in Baden-Württemberg, “PFAU” in North Rhine-Westphalia, and “FLÜGGE” in Bavaria; scientific evaluations of these programmes are provided by Klose/Sternberg (2001) and Müller/Sternberg (2005).

3 For example the technology and start-up centres developed since 1983 (cf. Sternberg et al. 1997).

4 This is due particularly to various aspects of “geographic inertia” (Sorenson/Audia 2000). Owing to the spatial immobility of most entrepreneurs and the businesses they set up, such start-ups are theoretically elements in the endogenous development potential of the region and therefore agents of endogenous regional development (cf. Sternberg 2003).

promote new enterprises are therefore more likely to be able to take credit for progress in their regions (e.g., employment effects) than by attracting international group subsidiaries.

This article provides an empirically valid, up-to-date, picture of entrepreneurial activities in Germany in interregional comparison, discussing their causes and effects. Where possible, West and East Germany are also compared.

2. The Regional Distribution of Entrepreneurial Activities in Germany

Owing to the lack of official statistics on business start-ups, several sources of data have to be used in Germany for an interregional and intertemporal comparison of start-up activities. Each has comparative strengths and weaknesses (cf. Fritsch/Grotz 2002 for a comparison). Among the most useful secondary data sources are the Institute for Employment Research (IAB) contributory employment records, the Start-Up Panel of the Center for European Economic Research (ZEW) based on data from the Union of Credit Reform Associations (VVC), and the business registration application statistics of state and federal statistical offices. One of the advantages of these sources is the large number of cases recorded, but they lack personal information on entrepreneurs and on the sort of business set up. In particular, such secondary data sources provide no micro-data on entrepreneurs' attitudes, motivation, and capabilities. In principle, this can be obtained from data based on primary surveys. If, moreover, they are integrated into an international research consortium – like the Glocal Entrepreneurship Monitor (GEM) – international comparisons are possible, which can be very important, for example, for learning effects. This article therefore draws essentially on surveys carried out annually since 1999 by the GEM in Germany, the basis for an annual country report on Germany (on the latest report see Sternberg/Lückgen 2005 and www.gemconsortium.org). The GEM data are primarily designed for international comparisons between entire countries (cf. Sternberg/Wennekers 2005 on concept and current applications). The large number of cases in Germany permit interregional comparative analyses using GEM data are under certain circumstances, looking, for example, at the links between regional entrepreneurial activities and sectoral-regional clusters (cf. Rocha/Litzenberger 2004). Explicitly designed for the interregional comparison of start-up activities in Germany is the Regional Entrepreneurship Monitor (REM), which transfers the basic idea of the GEM to German regions, and which has so far investigated ten German planning regions in two survey waves (2001 and 2003) (cf. Lückgen/Oberschachtsiek 2004 on the concept).

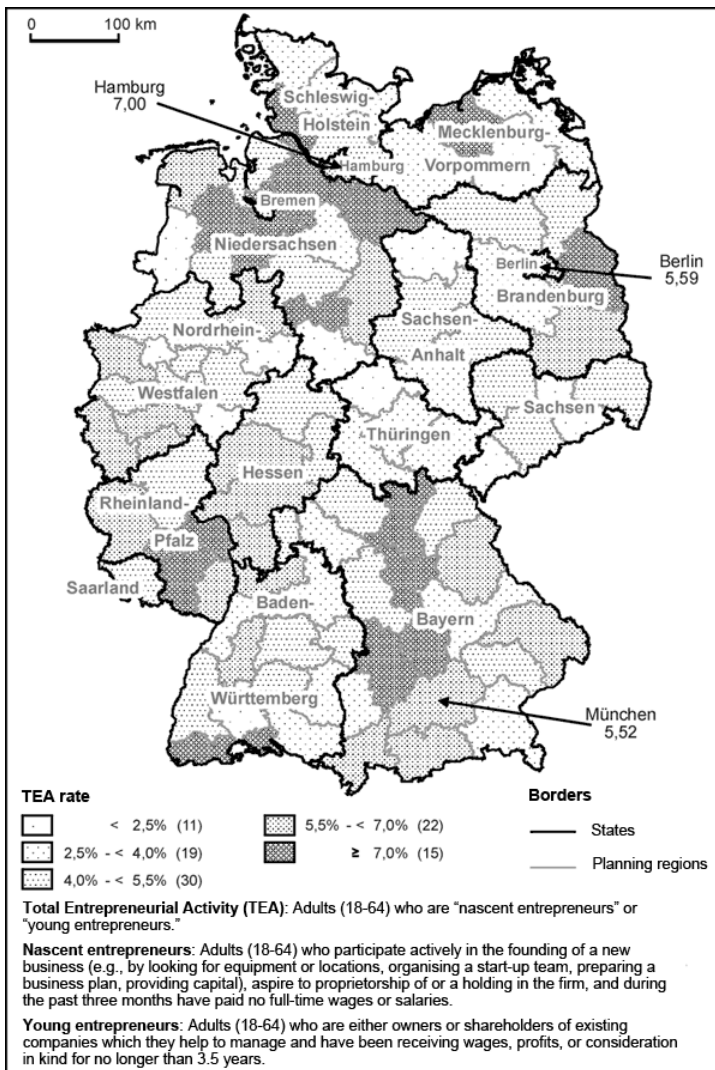
Unlike the REM, the GEM is suitable for capturing region-wide start-up entrepreneurial activity as long as data for several years are pooled. As figure 1 shows, there are interregional differences over the period 2001–2004 in the number of start-ups compared with total entrepreneurial activity⁵ (TEA), which is greater than expected in a country with relatively moderate interregional economic disparities (compared to other leading industrial countries like the USA, Japan, UK, France). There is a clear West-East gap in business start-up intensity, as well as a much less pronounced urban-rural gap. It should be noted that large and urbanised planning regions do not all record higher start-up rates. This also has to do with how the GEM defines business start-up, for it covers every sort of entrepreneurial self-employment, not only knowledge-intensive let alone high-tech business, which show a different regional pattern.

The differences between West and East Germany have changed repeatedly since 1990. In the first half of the 1990s, start-up rates in the East were much higher than in the West, in keeping with the backlog of demand and the prevailing sense of a new start.

5 The TEA rate is the sum of the share of “nascent entrepreneurs” and “young entrepreneurs.” The rate of “nascent entrepreneurs” records the percentage of people aged between 18 and 64 who

- a) at the time of the survey were attempting, alone or with partners, to start a set up a new firm (this includes all types of self-employed activity),
 - b) in the past twelve months had done something to support this start-up (e.g., by looking for equipment or sites, organising a start-up team, preparing a business plan, providing capital),
 - c) aspire to proprietorship of or a holding in the firm, and
 - d) during the past three months have paid no full-time wages or salaries.
- “Young entrepreneurs,” who have already set up a business, are between 18 and 64 years old, and
- a) are either owners or shareholders of existing companies which they help to manage, and
 - b) have been receiving wages, profits, or consideration in kind for no longer than 3.5 years.

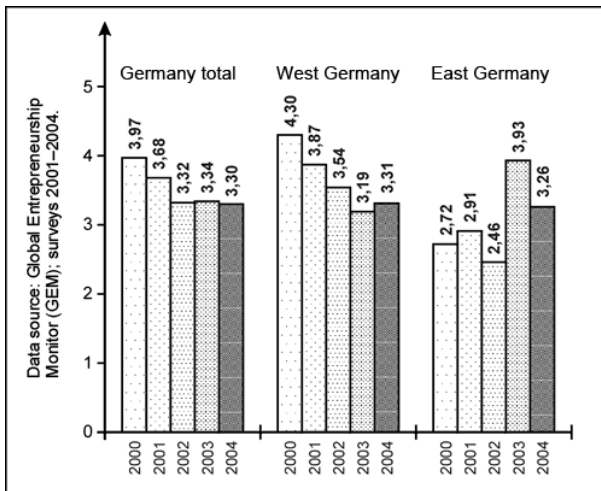
Figure 1: Start-up entrepreneurship in planning regions 2001-2004



Data source: Global Entrepreneurship Monitor (GEM); surveys 2001–2004.

In the second half of the 1990s, start-up dynamics in East Germany slowed down, and later, during the New Economy boom, the West was to match or even overtake the East in start-up intensity. Following the crash of the New Economy, business start-up figures throughout Germany initially fell, but in recent years they have partly risen again in certain sectors, albeit with a completely different structure and entrepreneurial motivation (cf. section 3). Figure 2 shows that in mid-2004 nascent entrepreneur rates differed in West and East Germany.

Figure 2: Development of the share of nascent entrepreneurs in total adult population (18-64) in West and East Germany 2000-2004



3. What Factors Determine the Creation and Success of New Businesses?

From the policy point of view, it is important to understand what lies behind the regional pattern. Policy recommendations and programmes can be developed only when the causes of this pattern have been analysed. We have seen in section two that start-up frequency differs not inconsiderably from region to region in Germany. These differences can be interpreted as the outcome of decisions for or against entrepreneurial self-employment made by the totality of individuals in the regions. The factors guiding these decisions can be assigned to three categories: personal factors (gender, age, education, experience, attitudes, etc.); micro-social environmental or network factors (e.g., contacts with other founders, integration in personal networks); and regional and supraregional contextual factors (general or start-up-related framework conditions, as well as national and regional conditions). The latter are generally approximated in empirical studies through aggregated data on the region or country taken from secondary data sources (e.g., unemployment rate, GDP/population, etc.) or gleaned from expert surveys.

GEM and REM studies have shown that personal attitudes and abilities have a considerable impact on an individual's decision to set up in business (cf. Bergmann 2004; Wagner/Sternberg 2004). It is also significant that these determinants differ strongly from region to region in Germany. Table 1 (next page) with REM data shows some of these determinants in an interregional comparison between ten planning regions.

The "entrepreneurial climate" so willingly and imprecisely cited by politicians and the print media therefore plays an important role in decisions on business start-ups because how it is perceived influences the behaviour of potential entrepreneurs. One such element of the – regionally specific – entrepreneurial climate is assessment of the prospects for a new business venture in the near future and the prevailing regional environment. Even if a person were to believe he had the capabilities needed to start a business and fear of failure would not deter him from doing so, he would nevertheless not embark on the project if he saw no satisfactory prospect of success. Figure 3 shows the response to the relevant question in the GEM surveys for 2000 to 2004. In many regards the result is sobering. In none of the other 33 countries that took part in the GEM in 2004 is the assessment more pessimistic. In the course of the study period, the percentage of optimists fell almost continuously. Among both respondents engaged in entrepreneurial activities and those not so occupied at the time of the survey, West German subjects saw better prospects for entrepreneurial self-employment than respondents in East Germany. This explains why start-up rates in West Germany were higher for so long. However, the gap between West and East Germans is closing. Optimism has dwindled more strongly in the West than in the East.

Table 1: Entrepreneurial attitudes and abilities in German REM regions¹

Planning region (official number)	Knowledge and abilities ²	Good entrepreneur- ial prospects ³	Fear of failure
Schleswig-Holstein Centre (3)	48.0	13.4	45.7
Central Mecklenburg/Rostock (8)	43.3	8.6	48.5
Lüneburg (21)	50.4	9.5	47.1
Emscher-Lippe (40)	47.5	13.1	48.9
Cologne (44)	52.6	22.8	45.8
Central Hesse (49)	47.3	14.2	40.9
West Saxony (57)	43.1	18.5	52.1
Stuttgart (72)	48.1	26.4	45.2
Main Rhön (82)	44.6	14.9	49.2
Munich (93)	50.8	32.8	39.4

1 Percentage of "yes" answers among all respondents aged 18-64

2 Statement verbatim: "You have the knowledge, the ability, and experience needed to set up a business"

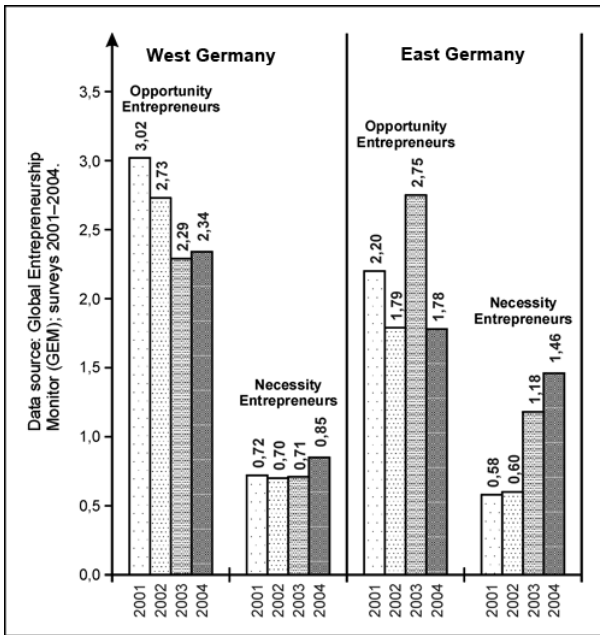
3 Statement verbatim: "In the coming 6 months there will be good prospects in the region in which you live for starting a business."

4 Statement verbatim: "The fear of failure would stop you from founding a business"

Source of data: Regionaler Entrepreneurship Monitor (REM); survey 2003.

Other variables of personal entrepreneurial attitudes and capabilities can also play an important role in deciding to set up a business. They also vary greatly from region to region, as the REM and table 1 show. Almost without exception, the two East German regions take the last two places in the ranking for the three variables listed. This is fully representative, as the latest GEM country report on Germany confirms (cf. Sternberg/Lückgen 2005): in East Germany the fear of failure is a more widespread obstacle to entrepreneurial activity than in the West. People more rarely see favourable prospects for new businesses, and their own capabilities are less highly valued. Among the ten REM regions, Munich shows by far the best figures for this variable. Differences between regions are particularly great in the assessment of entrepreneurial prospects.

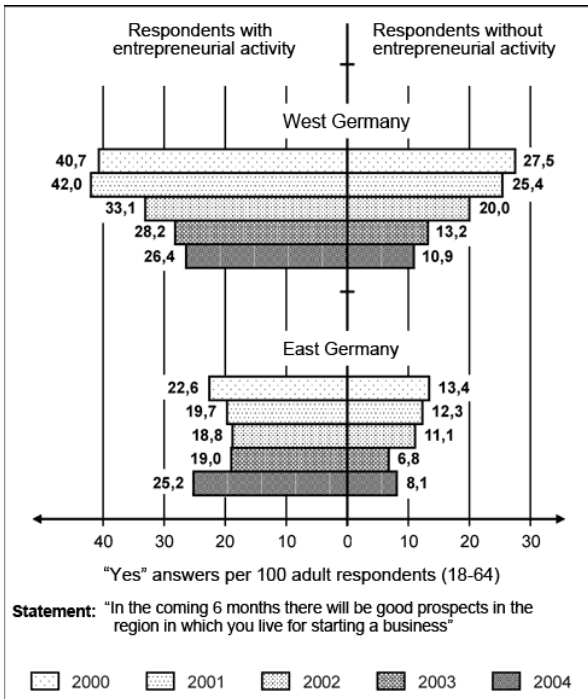
Figure 3: Changes in the assessment of start-up prospects in West and East Germany 2000-2004



Data source: Global Entrepreneurship Monitor (GEM); surveys 2001–2004.

Another aspect is important in assessing the effects of business start-ups – a personal factor – the motive for entrepreneurial ventures. Both GEM and REM distinguish simplistically between two motives: the lack of better earning alternatives (necessity start-ups) and the realisation of a business idea (opportunity start-ups). A comparison of nascent entrepreneurs' motives in West and East Germany reveals striking differences both in 2004 and over time (cf. figure 4).

Figure 4: Changes in start-up motives among “nascent entrepreneurs” in West and East Germany 2001-2004



Whereas the proportion of opportunity start-ups in West Germany grew slightly for the first time since 2001, the figure fell by almost one per cent in the new federal states. In contrast to 2003, more people in the West than in the East founded an enterprise to exploit a business idea. After remaining constant for the previous three years, the necessity start-up rate rose slightly in the old federal states in 2004. After doubling in 2003, the rate in East Germany rose still further in 2004 to far above the figure for West Germany. While the number of new businesses founded for both reasons increased in the old federal states, in the new federal states it fell mainly owing to the strong decline in opportunity start-ups. The increase in the number of firms founded for reasons of economic necessity meant that start-up activity in East Germany did not decline more strongly. In all, it is clear that businesses set up to remedy what is considered an unsatisfactory earning situation (not necessarily by unemployed persons) currently play a very important role in German entrepreneurial activity. As we will see, this has major implications for the economic effects to be expected.

In addition to personal and micro-social environmental conditions, regional entrepreneurial conditions also play a role. They can be identified with the methods of empirical social and regional research, as the REM has done for ten representative German planning regions (cf. Sternberg 2005b). These framework conditions, too, differ considerably between single East German and West German regions, mostly to the disadvantage of the two East German REM regions (cf. Lückgen/Oberschachtsiek 2004). A multiple linear regression analysis to explicate the seven most important regional start-up conditions shows statistically significant differences for several dependent variables in expert evaluations by type of region and between East and West Germany (cf. Bergmann 2004, 122 ff.). Five of seven conditions are given a better evaluation in agglomerations than in rural areas, while differences between urbanised areas and agglomerations are less marked. The entrepreneurial infrastructure is also given a higher assessment in proportion to the degree of agglomeration. Similar differences are apparent between West and East Germany (cf. table 2).

A new business can achieve the regional economic effects that support hopes to attain (e.g., employment, income development) if it is itself successful. Success implies firstly that the business survives, which is not a matter of course for German start-ups considering the 33 per cent death rate after 5 years (according to the "Munich Start-Up Study," cf. Brüderl et al. 1996). Failure – abandonment of a start-up project or the closure of an existing firm – can have many causes. Mostly, young firms do not manage to generate the necessary demand for their products, often because of inadequate or lacking market analysis before founding. Another frequent cause is the lack of external or personal capital resources in combination with very high (relative) fixed costs. Less frequent overall, but significant, is failure due to a lack of qualified personnel. Finally, quite a few entrepreneurs, particularly those escaping unemployment by setting up a business, discover they lack the capability to manage a firm.

Table 2: Regional entrepreneurial framework conditions in terms of region type and East-West location¹

Independent variable	Dependent variable ²						
	Funding	Policy framework	Public support infrastructure	Knowledge and technology transfer	Producer services	Physical infrastructure	Labour market
Region type ³							
Urban agglomeration	0.22**	0.11	0.21**	0.30**	0.28**	0.07	0.05
Urbanised area	-0.01	-0.04	-0.01	0.20**	0.19**	0.06	0.04
Old vs. new fed. states ⁴							
New fed. states	-0.27**	-0.08	-0.15**	-0.10*	-0.15**	0.12*	-0.05

1 Standardised beta coefficients of regression coefficients; **: statistically significant at the 1 per cent level, *: statistically significant at the 5 per cent level.

2 Each variable represents an index combining the answers to several statements without weighting; on the methodology of REM see Lückgen/Oberschachtsiek (2004).

- 3 Region type in accordance with the settlement structure region types of the Federal Office for Building and Regional Planning; reference: rural area.
- 4 Reference: old federal states.

Source: Bergmann (2004, 123); Source of data: Regionaler Entrepreneurship Monitor (REM); expert surveys 2001.

However, survival of the business alone – even in the aggregate of all start-ups in a region – cannot markedly reduce the unemployment rate. Significant growth of the enterprise, measured for example in terms of an increase in employee numbers, is necessary. The determinants mentioned at the beginning of this section are partially responsible for success operationalized in this or a similar manner. Other factors are the characteristics of the enterprise itself, for example the sector it belongs to, initial size, financial base, or the region where it is located (meso-level). The factors motivating a person to start a business need not always be the same that determine the success of the project. This is also true for regional determinants, as Stuart/Sorenson (2003) show with regard to American biotechnology clusters. A glance at the literature shows that empirically valid, interregional comparative studies on entrepreneurial success are rarer than those on start-up decisions. Moreover, the few studies available have not delivered consistent results. But all the groups of determinants mentioned clearly have at least a modicum of influence on entrepreneurial success, so that start-up promotion policy in the regions should take account of both personal factors⁶ and network-related factors, of factors relating to the start-up itself (e.g., through sector-specific promotion) and region-related factors.

4. The Regional Economic Effects of Start-Ups and their Determinants

Only a growing enterprise can give economic impetus to a region in the medium and long term. Whether the region that once promoted the entrepreneurial venture finally benefits depends on whether the young firm remains in its originally chosen (meso) location or moves elsewhere. This happens relatively seldom, but is not to be excluded, especially in the case of high-growth, technology-intensive firms. The assessment of locational factors can very well change as the young company develops. Regions that offer favourable conditions for starting a business need not necessarily favour the growth of the same firm (cf. Stuart/Sorenson 2003). Really perceptible regional development effects cannot be generated by a single start-up but only by the aggregated impact of, for example, a start-up cohort. Unlike the rare, spectacular recruitment of major group subsidiaries, which create a very large number of jobs in a location (or at least promise to do so), young and therefore very small firms can achieve this only in aggregate. From the economic development promotion perspective, supporting young enterprises is perhaps less eye-catching but it may well bring more sustainable success (locational loyalty!) than attracting a multinational subsidiary.

If the effects (including the regional effects) of start-ups in Germany are to be quantified, it must first be established how many there are. The competing data sources mentioned in section 2 allow generally acceptable answer. In Germany as a whole between 1996 to 1998, business registration statistics (only genuinely new firms) recorded a good 214,000 start-ups, the IAB company statistics just under 189,000, and the ZEW Start-Up Panel over 260,000 (cf. Fritsch/Niese 2002). These figures provide some indication, but they are meaningful only when we know how many and which enterprises survive in the long term and how strongly they grow in terms of the numbers of people employed. The result would also have to be differentiated in regional terms if anything is to be said about the regional effectiveness of start-ups. National assessments are of little use to an economic development promoter in a concrete region with a specific regional environment and start-up structure. This and other information can be provided by panel analyses, which study (one or more) start-up cohorts over time, and which repeatedly monitor survival and workforce levels. However, such regionally differentiating analyses are very rare because they are complex and costly. Alternatively, one can investigate what proportion of jobs in a region and at a given point in time in the recent past is attributable to firms newly founded in the region.

It should be remembered that many business start-ups need not automatically engender far-reaching regional economic effects. Many experts agree with Fritsch (2005) that the connection between start-up activities and (regional) economic development is very complex and that simple, monocausal explanations are misguided. Business start-ups can generate positive supply effects (e.g., accelerating structural change, implementing innovations, ensuring efficiency) but also displacement effects (job cuts and market exits among established firms). It is quite plausible that necessity start-ups with lower growth intentions and/or potential generate lower effects than opportunity start-ups.

⁶ For example, by specifically promoting business start-ups by women, who notoriously set up in business far less frequently than men; cf. the focal theme of the German GEM country report (2003); Sternberg et al. (2004).

Cohort analyses in Germany show that, although the number of jobs within a cohort initially increased, it soon fell again, so that after 10 years the number of jobs was once more far below the workforce level of the cohort in the year of founding (cf. Fritsch/Müller 2004 and Fritsch/Weyh 2004). Brixy/Grotz (2002) offer somewhat more positive results: they found that the medium-term number of employees of a start-up cohort corresponded to the number of employees at the time of founding. Really positive net employment effects can be calculated if only technology and knowledge-intensive start-ups and/or start-ups from certain time windows and/or regions (e.g., East Germany in the early 1990s) are taken into account (cf. Engel/Metzger 2005).

Whether the economies of countries or regions with high entrepreneurial activity later grow more strongly than those of other countries or regions with fewer start-ups is an urgent topic for empirical start-up research. For instance, the time lag between an increase in start-up rates and later employment growth has not yet been investigated. International studies with GEM data comparing entire countries show that countries with a high proportion of high-growth start-ups also record above average economic growth (cf. Wong et al. 2005, and Stel et al. 2005). The distinction between opportunity and necessity start-ups is crucial in this context, because this positive correlation does not apply with regard to start-ups in general. A comparison between regions in Germany (Audretsch/Fritsch 2002) shows that there are apparently regional growth regimes that control the influence of start-ups on employment effects. During the 1980s, business start-ups in West German planning regions made no significant contribution to employment development, but in the 1990s they did. Moreover, at least in German regions, the long-term employment effects of business start-ups are more pronounced than the short-term effects.

5. What can Public Policy Achieve?

Start-up promotion policy can always influence only some of the factors determining the founding of a business. The same must be said of the factors for later growth. Nevertheless, there are in principle a range of policy tools and measures for attaining the goals set (cf. Sternberg 2005a, b). In the recent past, as we have seen in section 2, start-up structure has changed considerably. Start-ups in reaction to the economic straits of the entrepreneur have increased, which has been both the cause and effect of more recent economic development and labour market programmes, like the promotion of "me plcs" and bridging allowances.

GEM data impressively capture this important structural change (cf., also for the following Sternberg/Lückgen 2005). The relative importance of business start-ups from "necessity" (necessity entrepreneurship) has increased significantly and continuously. However, the relative increase in the number of necessity entrepreneurs is not attributable to any absolute increase in the proportion of new entrepreneurs, for this remained more or less stable. It is that the percentage of opportunity entrepreneurs has steadily decreased since 2001. The slight decline in the TEA rate in Germany is hence primarily due to the fall in the number of opportunity entrepreneurs. The situation is similar in other GEM countries.

This finding has important economic implications, raising the fundamental question whether appropriate promotion programmes can maximise the total number of business start-ups in order to attain specific economic (and societal?) goals. The GEM country ranking for start-up entrepreneurship shows the greatest start-up activity in developing countries (e.g., Uganda headed the TEA rate in 2003 and Peru in 2004). This "Uganda effect" may prompt the conclusion that attaining start-up rates similar to those in developing countries cannot be the aim, for there is clearly no necessary correlation between a high start-up rate in a country and economic growth or prosperity. However plausible this conclusion might be, it grossly neglects the motivation for start-ups. Industrialised and developing countries differ significantly in the proportion of necessity entrepreneurship and as regards the opportunity/necessity entrepreneurship quotient. Countries with a high per capita GDP have lower necessity rates (TEA) and vice versa. The reason is simple. People in wealthier industrialised countries have access to more diversified labour markets, and benefit from well developed social security safety nets. Neither is available in developing countries, so that necessity entrepreneurship is relatively more frequent (compared with the opportunity rate in the same country) and absolutely more frequent (compared with the necessity rates in industrialised countries). It is economically plausible that the relative share of opportunity start-ups increases in proportion to per capita GDP.

The situation in Germany is therefore not representative of industrialised countries, for, despite high gross domestic product, the quotient between TEA opportunity and TEA necessity is as low as in developing countries. At the same time, both rates are very low (necessity entrepreneurship includes not more than 1.48 per cent of adults), which distinguishes Germany from all developing countries. One of the most important and lasting recommendations for a high-wage and high-income country like Germany is that the system of advanced

educational institutions must be given a significantly more important role than in the past, and a more salient role than in developing countries in research and development, in the commercialisation of economically relevant new knowledge, in scientific training and in imparting entrepreneurship-related skills. Ultimately, this means that business start-ups from such educational institutions make a lasting and economically necessary contribution in such countries to reinvigorating the business landscape – which is why such ventures deserve the support of economic and educational policy.

This finding has major economic implications, for Germany, too. If it is to be the goal of start-up promotion policy to further economic growth, this could be better achieved by supporting opportunity start-ups/entrepreneurs. Their share in total start-ups and absolute numbers would have to be increased in the pursuit of purely economic goals. For various reasons, opportunity entrepreneurs have better prospects for growth and survival than necessity entrepreneurs. As the latest GEM country report on Germany shows, the human capital of start-up entrepreneurs, the financial resources available to the new firm, and demand for the new product are on average higher than in the case of necessity start-ups. The same is true for many of the attitudinal variables analysed in the GEM, and for the enterprise's growth motivation. This can be a further argument in favour of policy measures designed to increase the number of start-ups by university graduates.

However, start-up promotion policy can pursue goals other than purely economic ones. Significantly, promotion measures have long since ceased to be the exclusive domain of state or federal departments of economic affairs. For example, most programmes to support university start-ups are initiated and financed by departments of education. Purely economic goals cannot predominate. And the grants for "me plcs," like the older bridging allowance, pursue social goals rather than exclusively and primarily economic aims. This is understandable and reasonable in view of the massive employment problems facing Germany. It is also plausible to link start-up promotion policy with labour market policy. However, both critics and advocates of such policies should not forget that start-up promotion programmes designed primarily to attain social goals (like "me plcs") are hardly capable of attaining explicitly economic growth objectives. This should not be misunderstood as fundamental criticism of this element of the Hartz reform package. Like every policy instrument, "me plcs" can be assessed only in terms of the goals they are designed to attain. Businesses set up for reasons of necessity cannot significantly attain either macro-economic growth goals (in relation to the national or regional economy) or microeconomic goals (in relation to the individual "me plc"). This is not the case with opportunity start-ups. Promotion policy should therefore devote greater attention to such enterprises without reducing socially important support for necessity start-ups. The current boom in government support for start-ups, especially necessity start-ups, must not be at the cost of other ventures. But official statistics on start-up frequency indicate that is precisely what has been happening. In Germany in 2002 and 2003, with a more or less constant number of new businesses, there was a strong rise in publicly supported start-ups and hence a strong fall in non-subsidised start-ups (the majority of them opportunity start-ups). GEM findings suggest that entrepreneurs with explicit growth intentions and realistic growth prospects also need adequate support. The recent decision by the Federal Ministry for Education and Research to expand the EXIST-SEED⁷ programme shows that at least some federal government actors have recognised this. The start-up sector as a whole (opportunity and necessity start-ups) is so important for a society that it deserves political support in all segments. Only then will Germany slowly but surely evolve into an entrepreneurial society. And this is the necessary condition for coping with the major and growing challenges, both economic and social, that Germany faces. Regions and local authorities have both the opportunity and the duty to do everything in their power to create the start-up entrepreneurship conditions described in this article. As we have seen, the regional and local environment is relatively more important than the national environment for a person's decision to set up in business. In this phase, local authorities can and should exploit their scope for action. Even after the actual act of founding, this local/regional influence persists, although it becomes progressively less important than supraregional factors for the success and survival of the enterprise (cf. Sternberg 2005c).

Municipal economic development promotion, if it wishes to support start-ups in the initial phase and later growth, must recognise that a person's inclination to start a business and his entrepreneurial activity depend on many factors. Some are personal e.g., gender (fewer woman entrepreneurs) and age (younger people start businesses more frequently than older people). Others depend on the social environment, for instant, the attitudes of friends and acquaintances towards entrepreneurial ventures. Finally, however, regional start-up conditions like financing and the availability and quality of policy programmes determine the probability of business start-ups in a region. Some of the many factors can be influenced by public policy, others not. For example, the public promotion infrastructure can naturally be directly controlled by local policy. Personal start-up attitudes, on the other hand, are

7 EXIST-SEED is a national promotion programme for the direct support of technology-based business start-ups in the early phase. It helps future entrepreneurs from universities to realise their start-up ideas.

more difficult to improve through policy measures, especially in the short term. The influence that government measures can exert at the level of potential incubator facilities is similarly diverse. Publicly operated incubator facilities, like most universities and higher educational institutions, are in principle easier to control through policy measures than business companies, quantitatively the most important type of incubator facility in all German regions.

The point of departure for policy in general and start-up promotion policy in particular should be the start-up attitudes of the population, which correlate strikingly with start-up activities. Greater efforts should be made to foster a culture congenial to entrepreneurship. Action is needed at the regional level in financing, in support infrastructure, and in research and development transfer, as well as in entrepreneurship-related vocational and further training. Depending on the field concerned, the need for action differs from region to region. Furthermore, it cannot be assumed that greater political efforts will have a positive impact on start-up activities with regard to every facet of the policy framework and public promotion infrastructure. Nevertheless, an interim appraisal of the economic effects of most public promotion programmes for business start-ups in Germany shows positive results, because, in sum, they help young firms to survive in the market and increase the number of people they employ and thus the number of people in the region who have a job (cf. Pesch 2005).

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