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Abstract

The discussion on entrepreneurship often treats entrepreneurs as agents of ideas of economic change and growth. Entrepreneurs are considered to serve as potential multipliers delivering individual and social wealth and prosperity. In that context entrepreneurship has been treated as a rather homogenous category, internal differences were not in the focus of academic talk. In public policy discourse entrepreneurship and the labour market category of self-employment are often used interchangeably. Images and interpretation of self-employment are mostly based on comparison of self-employment with other categories of wage or salary dependent labour market groups. This way self-employed people prove to become an averaged one-type figure.

The proposed paper wants to highlight the other side of economic and social reality: the heterogeneity of self-employment. Referring to empirical data for the case of Germany the argumentation intends to illuminate different levels of social and economic integration of self-employed people. Working parameters and firm sizes, economic sectors of activity, income patterns, working hours and biographies have diversified and became increasingly heterogeneous so that further discussion is ultimately provoked: Which entrepreneurship are we talking about when talking entrepreneurship? Where are links between different fractions of the category of self-employment compared to each other and to other socio-economic groups? The contribution must be regarded as a theoretical and empirical task to connect entrepreneurship with debate on innovation, culture and finance.

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1 Introduction

Entrepreneurship is often seen as a way for reaching overall economic prosperity in times where national economies are competing with each other. It is thought that entrepreneurship will overcome economic shortcomings such as

- Low economic development,
- Lack of international competitiveness,
- Missing innovations,
- Insufficient modernisation of the economy, and
- Lack of sufficient new jobs.

Economic policy is always on the search for the Golden Fleece. Since the IT revolution started in Silicon Valley politicians all over the world are trying to answer the question: How to create a new “Silicon Valley”?

Some visionaries proclaim that the health industry in connection with assisting technologies and ambient assisted living is the great white hope referring to ageing societies and it is supposed that the health care market has an enormous growth potential (Henke/Martin 2009 and Eberhardt et al. 2009). They see new forms of products, services and even cooperation emerging as Schumpeter’s new sources of opportunities. Biological and medical research will lead to new products and services in biotechnology, the pharmaceutical industry and in medicine technology. As example Berlin’s politicians are trying to concentrate the economic policy on health care to become a leading health region in Germany, know as “the city of health care”. The organization of a progressive network between health care science and health care economy, biotechnology and medicine technology is in the focus of further developments in Berlin.

Most of the arguments concerning the development of entrepreneurship are implicitly or explicitly referring to the allocative efficiency of political measures. However, the other side of the coin is often neglected in literature: the distributional effects, although economic policy on national and even on international EU level are aiming at reducing differences in living standards by fostering self-employment (Henrekson and Roine 2005).

The underlying message of the paper is that the equation of entrepreneurship equals prosperity or (in other words) prosperity follows entrepreneurship is too simple. Standards of living, labour, biographies, expectations and aspirations of people are too heterogeneous (Ronen 1989, Knight and McKay 2000, Brown et al. 2008) and the idea of an “entrepreneur as permanent opportunity seeker and finder” does not match with all self-employed people

(Kirzner 1973). Many of them are close to low incomes and their existence is to be explained against a background of experienced or feared unemployment (Parker 2004, Bögenhold, Fachinger and Leicht 2001, Bögenhold and Fachinger 2007) and the intersections are manifolds (Budig 2006). The category of self-employments contains social winners and losers simultaneously but also new indifferent types have appeared which are difficult to be characterized. The heterogeneity has no clear and systematic logic of economic and social evolution (Verheul and van Stel 2007). We observe secular changes of employment and industrial relations which effect also self-employed work (Kalleberg 2009). Gartner (1985, 696) argues that differences between positions within self-employment can be higher than differences between individual self-employed people and employees.

The basic idea of the paper is to discuss the heterogeneity of self-employment in a framework which combines labour market research within a wider socioeconomic context (Bögenhold 2004 b) and to compare the development at different regional levels in Germany. We are trying to shed some light on the forces which push self-employment, on how much regions matter, and whether a special level of self-employment is a proxy for higher wealth. Based on data for Germany our findings indicate that no convergence between specific ratios of self-employment and specific growth patterns exist at levels of regional units. Links between figures of economic prosperity and patterns of self-employment are contradictory and not linear. In so far, evaluation of self-employment underlines the same conclusions some authors have drawn for entrepreneurship (Baumol 1990). Modern economies and the inner mechanisms of capitalism are too complicated to reduce them to a couple of sentences of believes as entrepreneurship sometimes seems to be used for (Baumol, Litan and Schramm 2007).

2 Entrepreneurship – Theoretical Considerations

While following ideas introduced primarily by Schumpeter (1947, 1963) that economies always need “fresh blood” out of social and economic innovations in order to keep the capitalist engine in motion, we agree in principle that entrepreneurship might be an appropriate instrument to “transport” diverse forms of innovation. However, the conventional equation that entrepreneurship has to be translated by the labour market category of self-employment must be questioned theoretically and empirically. Self-employment is heterogeneous and has diverse elements, social logics and social path-dependencies leading to the fact that fractions of self-employment can be very constitutive as sources and agents of innovation but other fractions are simultaneously very non-entrepreneurial in a Schumpeterian sense running enterprises in routines without ever having ideas of innovation. The last group is very often driven by needs to keep the firms

running to secure income or living standards and they are created out of diverse motives, frequently also against a background of unemployment.

The introduction of an *institutional* context to the debate on entrepreneurship, innovation, and self-employment helps to foster a better understanding of many phenomena under discussion. The turn to an economy within an institutional context helps to realize a turn from an *economy in abstracto* to an *economy in concreto*. When talking entrepreneurship it must be related to real societies with concrete time-space coordinates. Arriving at real societies and economies we realize that theoretical scripts which are given through abstract models for capitalist development diverge from empirical findings.

When discussing links between entrepreneurship and the division of occupations and changes in the labour market the analytical category of 'self-employment' seems precise and adequate for operationalizing a quantifiable understanding of entrepreneurship. Self-employment as a labour market category can be numerically counted and individual fractions of the category can be compared with each other (Grilo and Thurik, 2005 a and b). However, referring to self-employment raises the difficulty that it usually serves as a kind of proxy for entrepreneurship but self-employment and entrepreneurship are never the same. Entrepreneurship covers only parts of the category of self-employment and the population of self-employed people includes people who can rarely be identified as entrepreneurial agents (Stam 2008).

Entrepreneurship is treated as a policy instrument to introduce innovation in order to initiate positive effects for the economy and the labour market. Regarding the question what innovation really means it is necessary to operate with a wide understanding of the term innovation. Having in mind the broad scenario of interpretations and applications of innovation we should take into account that no single pattern of innovation exists but diverse ways of innovation as formerly not known "new combinations" (Schumpeter 1963). Innovation research is an elementary part of the broader debate on stimulating economic growth. A long tradition in discussing how to implement further growth most appropriately exists. Competing approaches are still coexisting although recent debate is moving towards a so-called unified growth theory "... in which variations in the economic performance across countries and regions could be examined based on the effect of variations in educational, institutional, geographical, and cultural factors on the pace of the transition from stagnation to growth. ...", (Galor 2005, 284-85).

Many economic models try to come up as simple as possible in order to find core principles which can be applied to all situations. The institutional framing with specific socio-spatial-cultural characteristics including social, legal, demographic or regional specific is often ne-

glected in such models. Therefore, no relevant explanatory power is given to those characteristics and as a consequence the deduced policy measures are missing essential components. Thus, it should be no surprise that the success of economic policy with respect to reducing regional differences is deplorable. Engerman and Sokoloff (2005) clearly express that economic growth theories can be formulated better by a more sensitive understanding of institutions: „Economists do not have a very good understanding of where institutions come from, or why societies have institutions that seem conducive to growth, while others are burdened by institutions less favorable for economic performance. Until they do, it will be quite difficult to specify the precise role of institutions in processes of growth. ... what little we know about the evolution of institutions suggests caution about making strong claims about their relationship to growth ...”, (Engerman and Sokoloff 2003, 664).

The consequence for research on entrepreneurship is that not only the context of entrepreneurship has to be acknowledged but also its change in temporal sequences. Especially historical analysis provides applications for entrepreneurship research. Baumol (1990) exemplified that in his historical analysis of entrepreneurship and he expresses that entrepreneurship *as such* can not always be equated with economic upswings and positive effects of innovations. He explains that "... entrepreneurs are always with us and always play *some* substantial role. But there are a variety of roles among which the entrepreneur's efforts can be reallocated, and some of those roles do not follow the constructive and innovative script that is conventionally attributed to that person ...", (Baumol 1990, 894). An analytic look on the development over centuries indicates that frameworks of economies can vary considerably and that mentalities and further cultural dispositions change (Munro 2006) which is an argument that specifications of space and time should be provided when talking entrepreneurship (Bögenhold 1995). Comparing self-employment ratios and their dynamics internationally show considerable divergencies (Luber 2003, Müller and Arum 2004, Göggel, Gräß and Pfeiffer 2007, Blanchflower 2000).

3 Entrepreneurship and Regions

Network research (Nohria and Eccles 1995, Scott 2007, Stegbauer 2008) increased a conceptual understanding that economic cycles are best interpreted as socially controlled and organized interaction processes of individual and corporate actors. Economic activities function along specific "ties" of contacts which are organized according to specific social circles of communication. Organizational networks can be seen analogously to social networks. The difference is that organizational networks focus on interaction between organizations compared to ego-centred networks based on social action of human agents. Michael E. Porter (1990) argues that it is more reasonable to compare regions instead of referring to aggregate

economies and their aggregate data. Regions are the core *subject* of socio-economic analysis. When talking about “microeconomics of prosperity”(Porter 2000) the term serves as a research program. Nowadays discussion on growth and regional policies often claims the need to foster clusters, a discussion which is based upon a perspective spread by Porter (see Stern et al. 2000).

A big part of recent literature on innovation (see Kaiserfeldt 2005) is led by questions for adequate socio-economic contexts generating innovation. Social networks are explicitly treated as “extra-market externality” (Westlund 2006) and a direct link between “networking” and “entrepreneurial growth” is postulated (Johannisson 2000). In the discussion clusters as sources of innovation through cooperation has increased significantly (for a review see Karlsson 2007), and the growth of *socio-economic* elements is simultaneously expressed within entrepreneurship literature. Looking at specific models of economic success and growth we are arriving at a matrix of specific combinations of information processing, product generation, opportunity and market finding and regional characteristics (Asheim et al. 2006, Asheim and Coenen 2005), which are based upon issues of material and immaterial dimensions of production and organization (in the same direction see findings of Mugler, Fink and Loidl 2006).

To get an adequate understanding of growth patterns acknowledging the institutional context of entrepreneurship (Benneworth 2004) implies the recognition of social factors being of strategic importance. These social factors include items as language, mentalities, family structures, systems of basic and higher education, industrial relations, trust, or knowledge. They constitute different societal regimes of production, which always have specific faces in divergent regional contexts. In that sense business historians explained it as “cultural are regions rather than nations. Ideas about the microeconomics of prosperity (Porter 2000) match with geographic thought as delivered by Krugman (1991). Looking at regions enables seeing specific paths and path dependencies of economic and social development, which allow to analyze regional prosperities within their own logics of evolution (Audretsch et al. 2008).

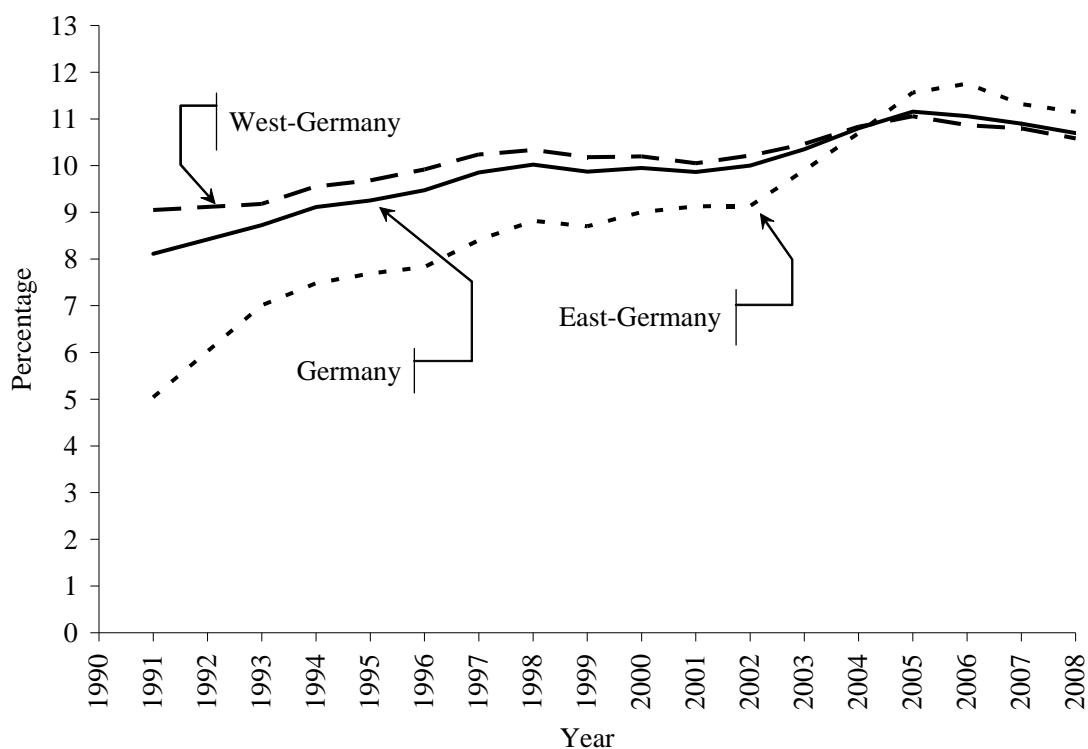
4 Some remarks on the overall development

Talk about heterogeneity of entrepreneurship requires empirical data, which cover a broader timeframe because the development is a protracted process and reactions of people to political measures take time. The analysis is based upon German microcensus data from the Statistical Office Germany which are available for the period from 1989 till 2006 (see for a description of the data <http://www.gesis.org/en/services/data/official->

microdata/microcensus/; 25st January 2009). Those data are used to obtain further specifications of the changes within the field of self-employment. Furthermore, we will highlight some regional differences to demonstrate the relevance of spatial analysis. Our main interest is to ask for structural changes of self-employment by observing the period since 1991. The questions are (i.) do we find significant differences in the development between the two regions: West- and East-Germany, and (ii.) which differences can be located when asking for self-employment ratios in regional specifications.

In the following figure, the development of the self-employment rate in Germany is shown. Since the entry of the five states of the formerly GDR to the FRG – wrongly called the unification – the self employment rate in East-Germany increased and is now as high as in the West-German states. Overall it seems, as if an adjustment – fostered mainly by economic policy measures and by pressure groups – of East-Germany to the standards of West-Germany has taken place.

Figure 1: Self-employed People as Percentage of Labour Force



Source: Own calculations based on Statistisches Bundesamt (2009).

The development of the number of self-employed people in Germany, differentiated in two groups: the self-employed with and those without employees, is mainly due to the disproportionate increase of solo-self-employment, whereas the self-employed people with

employees remain nearly at the same level (see Block and Wagner 2006, and Bögenhold and Fachinger 2007 for Germany, and Böheim and Muehlberger 2006 for the UK). Therefore, the political measures with which the government intended to reduce unemployment through promoting self-employment seem not to be reflected by the empirical data.

5 Heterogeneity

The comparison between self-employment in West- and East-Germany with reference to self-employed people with and without employees and between self-employed women and men just takes two states into account. Those changes are not a sign or reflection of the heterogeneity of self-employment. Heterogeneity means that in every given state, e.g. self-employed women without employees in West-Germany, multiple forms are evolving and could be observed regarding working time, earnings, working conditions or kind of professional life. A change of group membership e. g. between West- and East-Germany - this may be caused just by a relocation of the premises - or without and with employees does not reflect the heterogeneity of self-employment. Thus other criteria have to be taken into accounts which are better suited to demonstrate the heterogeneity of self-employment.

5.1 Region

To get a first impression of heterogeneity of self-employment we take a look at the regional distribution and its structure regarding the economic sectors. To get an idea of the heterogeneity in Figure 2 the *regional distribution* of self-employment is given.

Figure 2 shows an inconsistent picture and corroborates the argumentation of Porter (1990). There is a high self-employment rate in Saxony and in northern parts of Hesse and a low rate in Brandenburg. Noteworthy is also the fact that regions with high self-employment rates border on regions with a very low rates. This raises the question for the reasons behind this pattern, which can only be answered by detailed comparative regional studies.

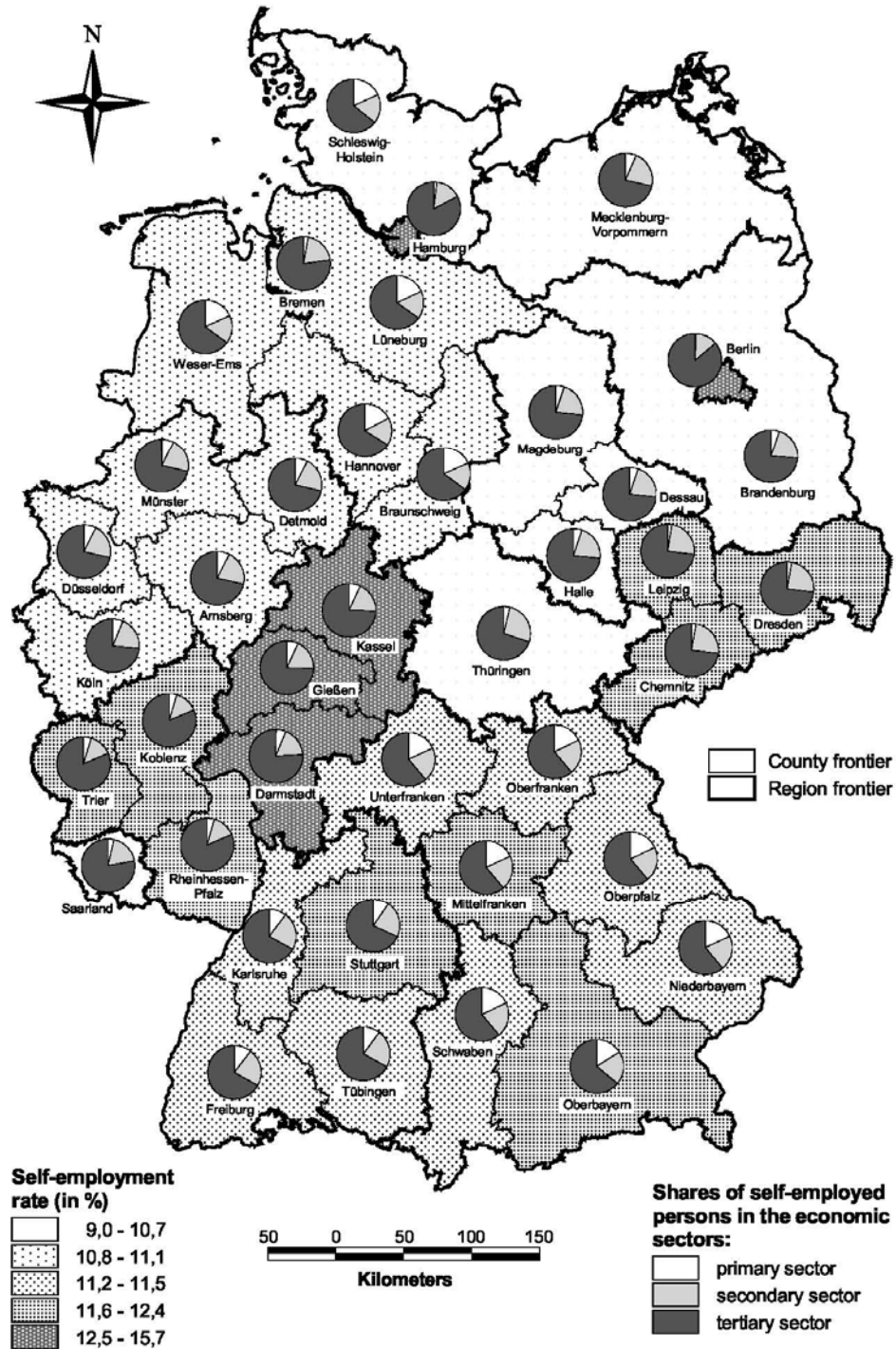
With respect to the economic sectors the situation turns out to be even more heterogeneous. There are regions with a low rate of self-employment in the tertiary sector, where the overall rate is also low – as for example in Schleswig-Holstein – and there are other regions with a high rate of self-employment in the tertiary sector and a high self-employment rate.

In general, the findings show that differences between regional levels cannot be reasonably explained simply according to the West-East-scheme.

In the following, we will take a look at two other measures of heterogeneity which are

- a) working time and
- b) income of the self-employed.

Figure 2: Regional and sector specific self-employment rate 2005



Source: Own calculations based on the scientific use file of the Microcensus of Federal Statistical Office Germany for the year 2005; we are grateful to Helmut Bärle, who draw up the map.

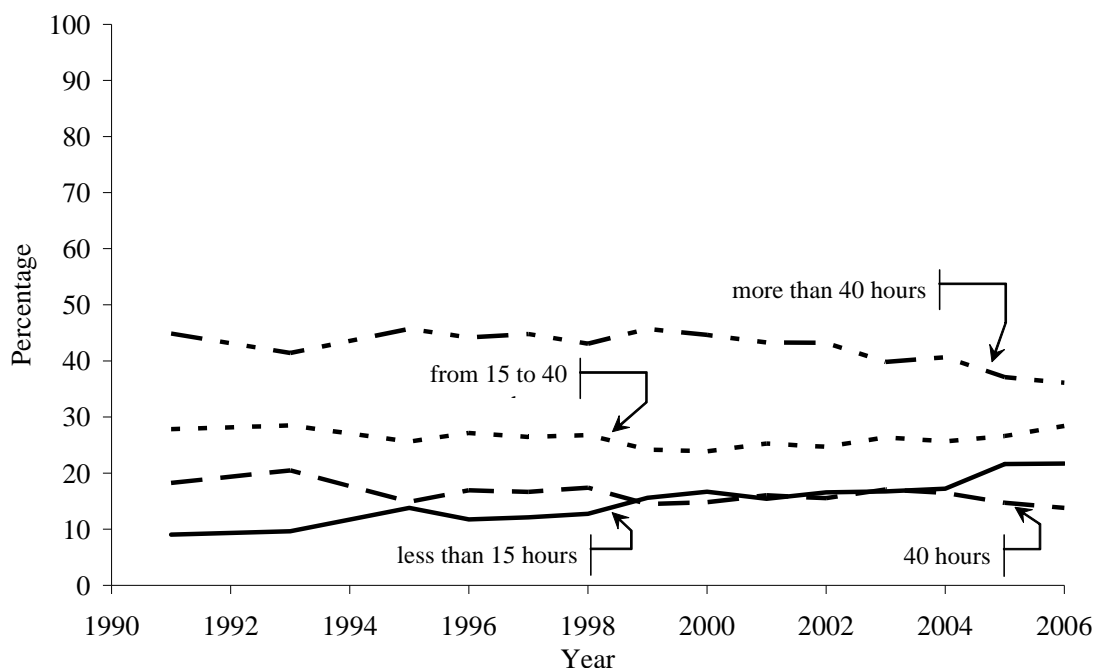
5.2 Working time

The idea of “normal” self-employment implies an average type of self-employment which is an abstraction whereas reality is much more diverse. Figure 3 and Figure 4 deal with the working of the self-employed differentiated between women and men.

Under the aspect of heterogeneity a considerable dispersion of workload can be seen. It differs between less than 15 hours per week up to more than 40 hours per week. Those differences have diverse causalities when looking at logics of individual agents. They may mirror bad business situations because of insufficient orders or intended decisions in favour of part-time self-employment.

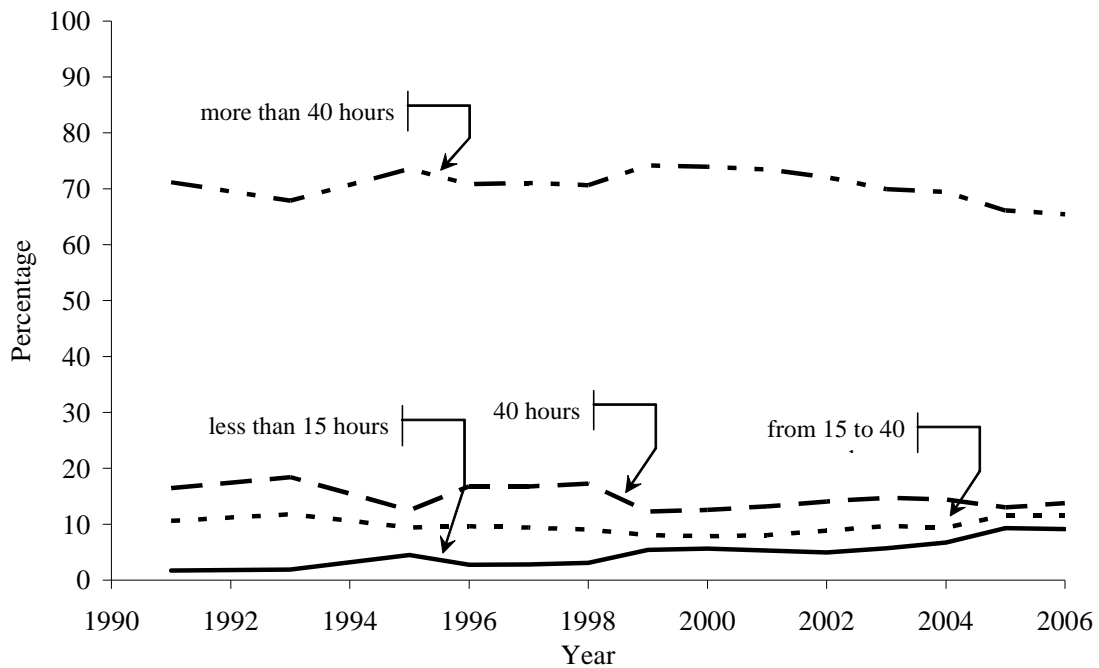
Whereas less than 45 % of women are working more than 40 hours per week more than 70 % of men report to work full-time. For women, part-time work seems to be more “normal” than for men. This could be an indication that women use the flexibility of self-employment and the “freedom” of self-determination regarding the workload. On the other hand, the normal case for men is full-time work with more than 40 hours per week – reflecting the social image of self-employed people.

Figure 3: Hours of work per week - women



Source: Own calculations based on the scientific use files of the Microcensus of Federal Statistical Office Germany.

Figure 4: Hours of work per week - men



Source: Own calculations based on the scientific use files of the Microcensus of Federal Statistical Office Germany.

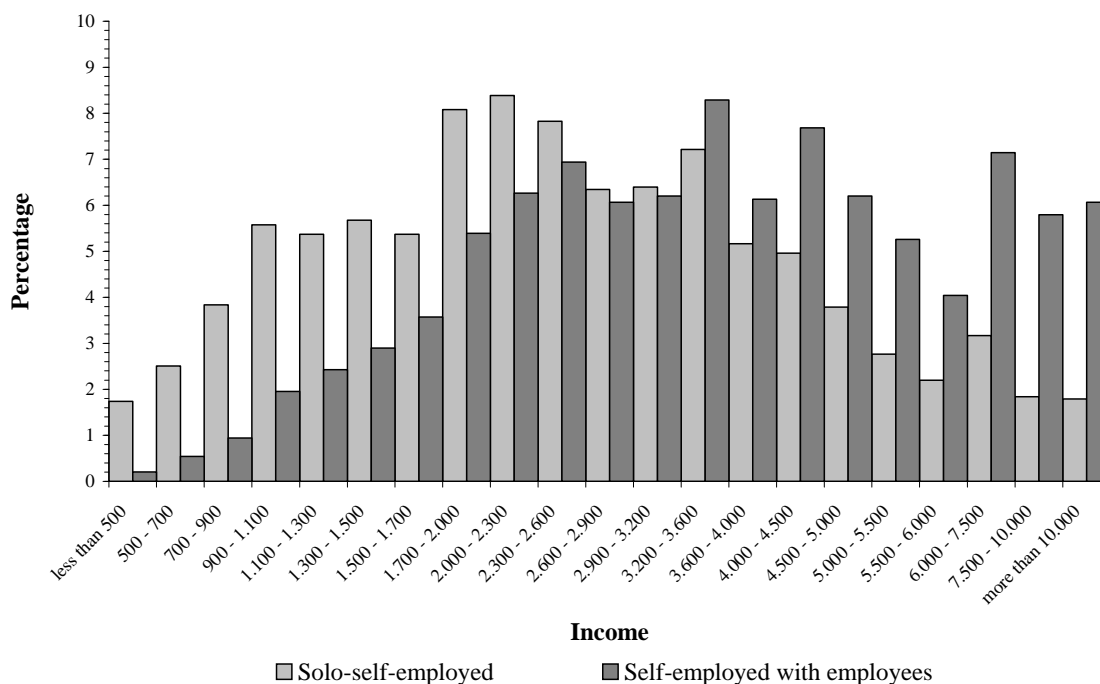
The number of firms which are run by self-employed people working without further employees increases significantly. This result is an indicator for a tendency that a substantial and obviously growing number of economic agents is involved which is not initiated and motivated by intrinsic enthusiasm but which is forced by a lack of alternatives in the regular labour market. Social problems in cases of missing income after retirement, or caused through illness or low incomes fall together with this group more often than with others (Fachinger 2007 oder Fachinger 2002).

5.3 Income

To analyse the income situation, the microcensus is also used as a more differentiated sampling of income in self-employment with more specific information does not exist in Germany. While no satisfying information concerning „objective“ incomes is available, microcensus data provide some insight into the income situation of self-employed people. Although the microcensus doesn't provide a reliable survey of the material situation of private households because the statistics rely on respondents on (subjective) evaluations of their own material conditions (Statistisches Bundesamt 2006). Figure 5 shows the division of

monthly household net incomes of self-employed people having further employees in their firms¹ or working without employees.

Figure 5: Income of self-employed people, according to self-assessment, Germany 2006



Source: Own Calculations based on Scientific Use Files of *Mikrozensus*, several years, Statistischen Bundesamtes.

Data show considerable diversity of incomes of self-employment households. The range of incomes covers high and extraordinary high income zones but goes – at the other end – fluently into low and lowest zones of the income distribution for which adjectives as precarious and pauperised situations should be adequate. Solo-self-employed people are primarily concerned with the situation since 14 percent of them have a net income of less than 1,100 Euro and further 24.5 percent between 1,100 and 2,000 Euro.

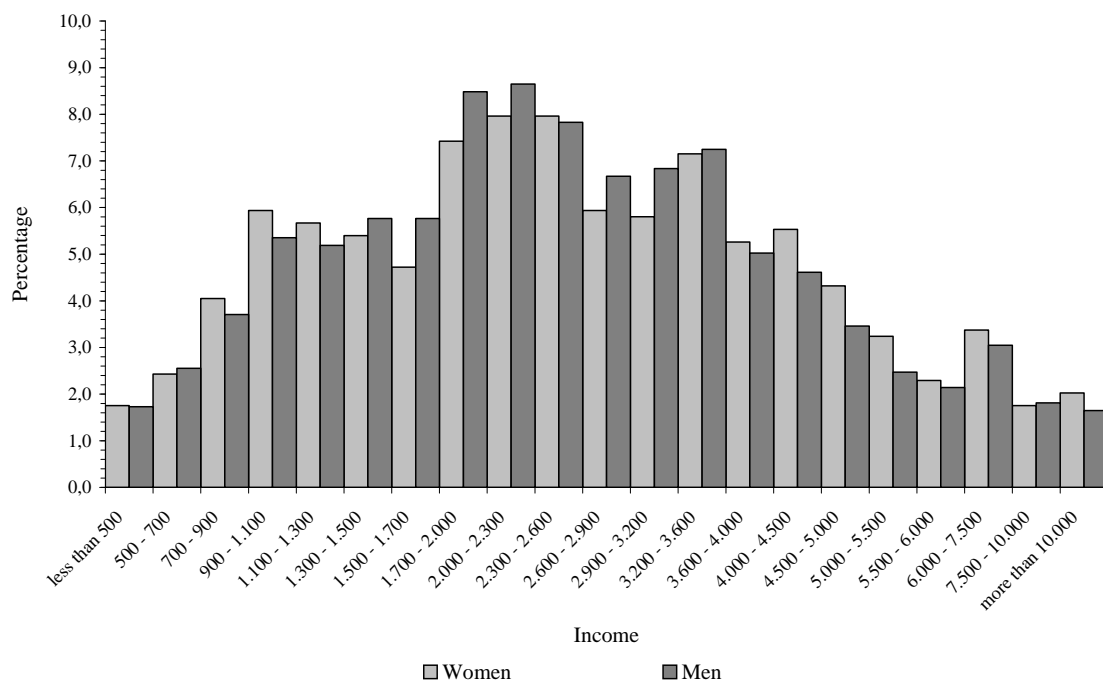
On the other side, nearly 42 percent of households of self-employed people with employees show a monthly net income of more than 4,000 Euro and further 20 percent have more than 6,000 Euro. The average net household income for all households provides additional information: In 2006 the average income was 2.764 Euros (Statistisches Bundesamt 2008, 550). Taking the report on poverty and wealth of the German government („Armut- und Reich-

¹ Principally, the size of households should be recognized when evaluating the income situation (Faik 1995). In the microcensus, the data on income are interval scaled, therefore we do not multiply the income with equivalence numbers to get equivalence scaled income.

tumsbericht“, Bundesregierung 2009, 40 f.), poverty is defined as an income category of households having an income which is less than 60 percent of the average income of all households. In that interpretation about 30 percent of all households doing solo-self-employment and 12.5 percent of households of self-employment with employees belong to the category of income poverty. Our descriptions underline positions as already found in previous debate on inequality and heterogeneity within self-employment (Merz/Zwick 2003, Merz 2006, for U.K. Parker 1999).

Differentiating the category of solo-self-employment by gender², Figure 6 shows that no significant differences occur in households of male or female reference persons and that 30 percent of these households with a monthly income of less than 1.700 Euros must be classified as precarious.

Figure 6: Genderspecific income of self-employed people, according to self-assessment, Germany 2006



Quelle: Eigene Berechnungen und Darstellung auf Basis der Scientific Use Files der Mikrozensus des Statistischen Bundesamtes.

However, is there a specific structure in the heterogeneity? We have regional and county specific policies fostering self-employment which may cause heterogeneity. We know that

² Eilsberger/Zwick (2008) deal with incomes of self-employment and gender specification. Merz (2006) provides an analysis of income distribution over time.

self-employment is increasing due to the tertiarisation of the economy. We know that self-employment is very high in specific occupations.

Descriptive analysis often provides first insights into the distribution of factors but the relationships are just prima facie links. In order to complement the descriptive analysis, a linear regression was done with the county specific rate of self-employment as endogenous variable and economic sectors, Bundesländer (regions), counties, wealth³, and Blossfeld's classification of occupation as explanatory variables⁴. It turned out, that no linear relationship exists as can be seen in Table 1.

Table 1. Summary statistics of the regression

	Not standardized coefficients		Standardized coefficients	T	Significance
	B	Standard error	Beta		
constant	16,331	,020		828,267	,000
Blossfeld's classification of occupation	,014	,000	,007	38,181	,000
economic sectors	-1,671	,002	-,126	-700,333	,000
wealth	,133	,001	,019	93,163	,000
regions	-,126	,000	-,082	-449,936	,000
counties	-,096	,001	-,024	-132,818	,000
R-Square	0,26				
corrected R-Square	0,26				
Standard error of estimation	6,91831				

Source: Own calculations based on the scientific use file of the Microcensus of Federal Statistical Office Germany for the year 2005.

³ Wealth is measured as the median net-income of households in the counties.

⁴ For a description of the classification; see <http://www.gesis.org/en/research/programs-and-projects/official-microdata/blossfeld-s-occupational-classification//>; 25st January 2009 and for its use e.g. Uunk, Mach, and Mayer 2005.

6 Summary and Conclusions: Do the findings allow any general conclusions?

Our analyses show that social and economic processes after the so-called German reunification prove to assimilate the ratios of self-employment in East- to that in West-Germany. The gap between curves of self-employment ratios in East- and West-Germany has increasingly shortened. However, differences between regional levels cannot be reasonably explained simply according to the East-West-scheme but must better be interpreted in a *multicomplex* framework of intranational relations and different growth and labour market patterns within Germany (see Koetter and Wedow, 2008, for findings which are different but comparable). Attempts to explain variation primarily with the argument of German history of consisting of a post-communist and a “purely” capitalist part in the country will fall too short.

We observe that all of Germany is fragmented regarding the ratios of self-employment. At the first view, the heterogeneity has no clear and systematic logic of economic and social evolution. The link between entrepreneurship and growth (Audretsch and Thurik 2001, Davidsson, Delmar, and Wiklund 2006) is not linear and universal when going down at regional evidences. The variation in regional levels of self-employment ratios is seemingly contradictory relating to different sizes of metropolitan or rural regions or to different levels of economic prosperity. All possible explanations according to mono-causal explanatory schemes can be confronted with counterfactual examples of regional development elsewhere. The equation of rising entrepreneurship with rising self-employment and rising prosperity fails if someone takes a specific regional view.

Our findings serve as a first step of describing and explaining the development of self-employment with respect to the forces which push self-employment, on how much regions matter, and whether a special level of self-employment is a proxy for higher wealth. Much further research is needed to get to a state, where we have a clear picture of a model for explaining self-employment development and for developing adequate economic policy measures. Also information regarding further attributes of the self-employed people like gender, age or educational level (Davidsson and Honig 2006) or levels of social security (Sainsbury, Finch, and Gordon 2006) could gain a deeper insight. Our results suggest that self-employment ratios on regional comparison are likely to be a dependent variable rather than an independent one. “Understanding entrepreneurship” (Bjerke 2007) implies to get better insight into diverse dynamics of entrepreneurship and to try sorting up mechanisms of driving forces and effects.

The non-identity of entrepreneurship and self-employment has been discussed in the beginning of the paper: Not everything labelled entrepreneurship can be translated with the cate-

gory of self-employment and vice versa not all self-employed people can be regarded as proper entrepreneurs. Celebrating a revival of entrepreneurship by indicating the increasing numbers of self-employment is not always serious since the explosion of solo-self-employment has not very much in common with a revival of entrepreneurship. These tendencies have better been explained by global sectoral changes including labour market trends, secular processes towards tertiarization and the emergence of new professions which can be operated through free-lanced activities or micro-firms.

The lesson for policy recommendations is that one has to be careful when talking entrepreneurship because entrepreneurship has to be differentiated for different meanings. Assuming that the need for innovation as growth driver is widely shared the crucial question is how to arrive at such patterns of “getting better” to enhance international competitiveness. Our preliminary findings can be summarized in a way that looking at self-employment figures may be misleading because these figures just mirror diverse further trends and, in so far, they are *dependent* variables. The social code of self-employment figures differs from region to region. Instead, it is better to invest into an understanding of the “microeconomics of prosperity” (Porter 2000) to see how regionalized economies are bounded in very specific own regimes of positive and negative conditions fostering growth which are very much path-dependent. Economic policy with a sensitive regionalized focus must take into account that socio-economic embeddedness of regions which serve as grammar to understand growth dynamics. One of these elements is also the search for the specific industry structure of regions and their sectoral composition. The attempt to foster the endogenous potential of regions implies the need for an adequate awareness of the local economic portray of regions. In rural regions with strong components of agriculture and construction industry, high technology developments will have difficulties to get started.

On the other hand, one has always to look for endogenous strengths of regions. Policy strategies to foster regional growth may be to foster innovation in traditional industries, e.g. even construction or wood industries need permanent inputs through new ideas to come up with new markets, production methods or products. New markets come up permanently, and their initial conditions and flavouring should be registered in early stages to get a chance to foster their “in the making”. E. g. in recent times we have considerable growth markets in the health care sector (Eberhardt et al. 2009, Henke and Martin 2009) and general trends towards an enlarging service sector and an ageing society (Blaschke et al. (2009), European Commission (2006)) do the same as well. Scott Shane in his “General Theory of Entrepreneurship” (Shane 2003) discusses three different sources of new opportunities to create new ventures, employment, and growth. The sources are based in technological changes, political and regulatory changes, and social and demographic changes in economy and society. Given the dynamics of recent economies and societies new opportunities are permanently coming

up through changes in the demand side *and* the side of potential supply (Shane and Venkataraman 2000). Economic policy must be able to foster a better mapping of these dynamics in different regional and sectoral markets to arrive at a better understanding than crude neoclassic economics suggests which operates centrally with market concepts without having clear ideas of how the inner principle of markets works. Providing jobs to people through increasing sustainable growth by innovation is an essential task for policy which needs careful and adequate analysis rather than some few sentences of believe. Regions have their own very specific institutions, networks, and histories which provide endogenous sources for innovation. The task is to accept and to decode these compositions rather than simply looking at self-employment figures. Those figures have diverse inherent histories and socio-economic logics which hide the diversity which is inherent in these figures.

7 Bibliography

- Asheim, B., and L. Coenen (2005): Knowledge Bases and Regional Innovation Systems: Comparing Nordic Clusters. *Research Policy* 34: 1173-90.
- Asheim, B., L. Coenen, and J. Vang (2006): Face-to-Face, Buzz and Knowledge Bases: Socio-spatial Implications for Learning, Innovation and Innovation Policy. Working Paper, Universities of Lund, Aalborg and Oslo.
- Audretsch, David B (2002): Entrepreneurship: A Survey of the Literature. Research under Commission of the Commission of the European Union, Enterprise Directorate General, Brussels: Commission of the European Union.
- Audretsch, David B (2007): *The Entrepreneurial Society*. Oxford: Oxford University Press.
- Audretsch, D. B., and R. Thurik (2001): Linking Entrepreneurship to Growth. OECD Science, Technology, and Industry Working Papers 2001/2. OECD Publishing.
- Audretsch, David B., Oliver Falck, Maryann P. Feldman, and Stefan Heblich (2008): The Lifecycle of Regions. CEPR Discussion Paper 6757, Centre for Economic Policy Research.
- Baumol, William J. (1990): Entrepreneurship: Productive, Unproductive, and Destructive. *Journal of Political Economy* 98,5: 893-921.
- Baumol, William J., Robert E. Litan, and Carl J. Schramm (2007): *Good Capitalism, Bad Capitalism and the Economics of Growth and Prosperity*. Yale: Yale University Press.
- Benneworth, P (2004): In what sense 'regional development?' Entrepreneurship, underdevelopment and strong tradition in the periphery. *Entrepreneurship and Regional Development* 16: 439-58.
- Bjerke, Bjorn (2007): *Understanding Entrepreneurship*. Cheltenham: Edward Elgar.
- Blanchflower, D.A (2000): Self-Employment in OECD Countries. *Labour Economics* 7: 471-505.

- Blaschke, Christina M. / Freddolino, Paul P. / Mullen, Erin E. (2009): Ageing and Technology: A Review of the Research Literature, in: *British Journal of Social Work* 39,4: 641-656.
- Block, Joern H., and Marcus Wagner (2006): Necessity and Opportunity Entrepreneurs in Germany: Characteristics and Earnings Differentials. MPRA Paper No. 610, Munich Personal RePEc Archive. http://mpra.ub.uni-muenchen.de/610/1/MPRA_paper_610.pdf.
- Bögenhold, Dieter (1995): Selbständige Erwerbsarbeit in sozial- und wirtschaftshistorischer Perspektive. In *Neue Unternehmen: Interdisziplinäre Beiträge zur Gründungsforschung*, ed. Jürgen Schmude, 11-23. Heidelberg: Physica Verlag.
- Bögenhold, Dieter (2004 a): Entrepreneurship: Multiple Meanings and Consequences. *International Journal of Entrepreneurship and Innovation Management* 4,1: 3-10.
- Bögenhold, Dieter (2004 b): Creative Destruction and Human Resources: A Labor Market Perspective on Firms and Human Actors. *Small Business Economics* 22,3-4: 165-177.
- Bögenhold, Dieter, and Uwe Fachinger (2007): Micro-firms and the Margins of Entrepreneurship: The Restructuring of the Labour Market. *The International Journal of Entrepreneurship and Innovation* 8: 281-293.
- Bögenhold, Dieter, Uwe Fachinger, and Réne Leicht (2001): Entrepreneurship, Self-Employment, and Wealth Creation. *The International Journal of Entrepreneurship and Innovation* 2: 81-91.
- Böheim, René, and Ulrike Muehlberger (2006): Dependent Forms of Self-Employment in the UK: Identifying Workers on the Border between Employment and Self-Employment. IZA Discussion Paper No. 1963, Institute for the Study of Labor.
- Brown, Sarah, Lisa Farrell, and Mark N. Harris (2008): Modelling the Incidence of Self-Employment: Individual and Employment Type Heterogeneity. Sheffield Economic Research Paper Series SERP Number 2008010, University of Sheffield.
- Budig, Michelle J (2006): Intersections on the Road to Self-Employment: Gender, Family and Occupational Class. *Social Forces* 84: 2223-2238.
- Cochran, Thomas C. (1960): Cultural Factors in Economic Growth. *Journal of Business History* 20,4: 515-530.
- Davidsson, Per, and Benson Honig (2003): The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing* 18,3: 301-331.
- Davidsson, Per, Frederic Delmar, and Johan Wiklund (2006): Entrepreneurship as growth; growth as entrepreneurship. In *Entrepreneurship and the Growth of Firms*, eds. Per Davidsson, Frederic Delmar, and Johan Wiklund, 21-37. Cheltenham: Edward Elgar.
- Eberhardt, Birgid / Fachinger, Uwe / Henke, Klaus-Dirk (2009): Better Health and Ambient Assisted Living (AAL) from a global, regional and local economic perspective. Diskussionspapier 2009/3, Berlin: Wirtschaftswissenschaftliche Dokumentation – Fakultät VII – Technische Universität Berlin.

- Engerman, Stanley, and Kenneth L. Sokoloff (2005): Institutional and Non-Institutional Explanations of Economic Differences. In: Handbook of Institutional Economics, eds. Claude Menard and Mary M. Shirley, 639-65. Berlin: Springer.
- European Commission (2006): Creating an Innovative Europe. Report of the Independent Expert Group on R&D and Innovation appointed following the Hampton Court Summit and chaired by Mr. Esko Aho. Luxembourg:
- Galor, Oded (2006): From Stagnation to Growth: Unified Growth Theory. In Handbook of Economic Growth, eds. Philippe Aghion and Steven Durlauf, 171-293. Amsterdam: Elsevier.
- Gartner, W. B. (1985): A conceptual framework for describing the phenomenon of new venture creation. *Academy of Management Review* 10,4: 696-706.
- Grilo, Isabel, and Roy Thurik (2005a): Entrepreneurial Engagement Levels in the European Union. *International Journal of Entrepreneurship Education* 3,2: 143-68.
- Grilo, Isabel, and Roy Thurik (2005b): Latent and Actual Entrepreneurship in Europe and the US: Some Recent Developments. *International Entrepreneurship and Management Journal* 1,1: 441-59.
- Göggel, Kathrin, Johannes Gräb, and Friedhelm Pfeiffer (2007): Selbständigkeit in Europa 1991-2003. Empirische Evidenz mit Länderdaten. *Jahrbücher für Nationalökonomie und Statistik* 227: 153-167.
- Henke, Klaus-Dirk / Martin, Karl (2009): Health as a Driving Economic Force, in: Kickbusch, Ilona (Hrsg.): Policy Innovation for Health. Heidelberg: Springer, 95-124.
- Henrekson, Magnus, and Jesper Roine (2005): Promoting Entrepreneurship in the Welfare State. Working Paper, The Research Institute of Industrial Economics, IUI.
- Kaiserfeld, Thomas (2005): A Review of Theories of Invention and Innovation. Working Paper. Royal Institute of Technology Stockholm.
- Kalleberg, Arne L. (2009). Precarious Work – Insecure Workers: Employment Relations in Transition. *American Sociological Review* 74: 1-22.
- Karlsson, Charlie (2007): Clusters, Functional Regions and Cluster Policies. Working Paper 84, Jönköping, CESIS.
- Kirzner, Israel (1973): Competition and Entrepreneurship. Chicago: University of Chicago Press.
- Kirzner, Israel (1985): Discovery and the Capitalist Process. Chicago: University of Chicago Press.
- Knight, Genevieve, and Stephen McKay (2000): Lifetime Experiences of Self-Employment. Policy Studies Institute, Department of Social Security, Research Report 120, Leeds.
- Koetter, Michael, and Michael Wedow (2008): Does Regional Redistribution Spur Growth?. *Economic Studies Discussion Paper* 28, Deutsche Bundesbank.
- Krugman, Paul (1991): Geography and Trade. Cambridge, MA: MIT Press.
- Luber, Silvia (2003): Berufliche Selbständigkeit im Wandel. Frankfurt a.M.: Peter Lang Publishers.

- Mugler, Josef, Matthias Fink, and Stephan Loidl (2006): *Erhaltung und Schaffung von Arbeitsplätzen im ländlichen Raum*. Wien: Manz.
- Müller, Walter, and Arum Richard (2004): *Self-Employment Dynamics in Advanced Economies*. In *The Reemergence of Self-Employment: A Comparative Study of Self-Employment Dynamics and Social Inequality*, eds. Richard Arum and Walter Müller, 1-35. Princeton: Princeton University Press.
- Munro, John (2006): *Entrepreneurship in Early-Modern Europe (1450-1750). An Exploration of Some Unfashionable Themes in Economic History*. Working Paper 30, Institute for Policy Analysis, University of Toronto.
- Nohria, Nitin, and Robert G. Eccles, eds. (1995): *Networks and Organizations. Structure, Form, and Action*. Boston: Harvard Business School Press.
- Parker, Simon C (2004): *The Economics of Self-Employment and Entrepreneurship*. Cambridge: Cambridge University Press.
- Porter, Michael E. (1990): *The Competitive Advantage of Nations*. New York: Free Press.
- Porter, Michael E (2000): *Attitudes, Values, Beliefs, and the Microeconomics of Prosperity*. In *Culture Matters. How Values Shape Human Progress*, eds. Lawrence E. Harrison and Samuel P. Huntington, 14-27. New York: Basic Books.
- Ronen, Joshua. (1989): *The Rise and Decay of Entrepreneurship: A Different Perspective*. *The Journal of Behavioral Economics* 18: 167-84.
- Shane, Scott (2003): *A General Theory of Entrepreneurship. The Individual-Opportunity Nexus*, Cheltenham: Edward Elgar.
- Shane, Scott, V. Venkataraman (2000): *The Promise of Entrepreneurship as a Field of Research*. *Academy of Management Review* 25,1: 217-226.
- Sainsbury, Roy, Naomi Finch, and Anne Corden (2006): *Self-employment and retirement*. The University of York, Department for Work and Pensions, Research Report No. 395.
- Schumpeter, Joseph A. (1963): *The Theory of Economic Development*. New York and Oxford: Oxford University Press.
- Schumpeter, Joseph A. (1947): *Capitalism, Socialism and Democracy*. London: Allen & Unwin.
- Scott, John (2007): *Social Network Analysis*, London: Sage.
- Stam, Erik (2008): *Entrepreneurship and Innovation Policy*. Jena Economic Research Paper, 006-2008, Friedrich Schiller University and the Max Planck Institute of Economics, Jena.
- Statistisches Bundesamt (Hrsg.) (2009): *Mikrozensus. Bevölkerung und Erwerbstätigkeit. Stand und Entwicklung der Erwerbstätigkeit. Band 2: Deutschland, 2008. Fachserie 1, Reihe 4.1.1, 4.1.1*. Wiesbaden: Statistisches Bundesamt.
- Stegbauer, Christian (2008): *Netzwerkanalyse und Netzwerktheorie. Ein neues Paradigma in den Sozialwissenschaften*. Wiesbaden: VS-Publishers.

- Stern, Scott, Michael E. Porter, and Jeffrey L. Furman (2000): The Determinants of National Innovative Capacity. Working Paper 7876, National Bureau of Economic Research (NBER).
- Uunk, Wilfred, Bogdan W. Mach, and Karl Ulrich Mayer (2005): Job Mobility in the Former East and West Germany: The Effects of State-Socialism and Labor Market Composition. *European Sociological Review* 21,4: 393-408.
- Verheul, Ingrid, André van Stel (2007). Entrepreneurial Diversity and Economic Growth. Scales Research Paper ERS-2007-070-ORG, Zoetermeer.
- Westlund, Hans (2006): The Social Capital of Regional Dynamics: A Policy Perspective, University of Tokyo. Working Paper F 423, Center for International Research on the Japanese Economy.