Entrepreneurship and Well-Being Across Institutional Contexts

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List of Abbreviations

DoB   Doing of Business
EU-SILC   EU Statistics on Income and Living Conditions
GEI   Global Entrepreneurship Index

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Executive Summary

1. We investigate to what extent job- and life satisfaction of self-employed persons as compared to paid employees varies according to a country's institutional context. The primary data base for the analysis of 32 European Countries is the EU Statistics on Income and Living Conditions (EU-SILC).

2. In a first step we distinguish different groups of countries according to the Varieties of Capitalism approach. In a second step, we use the country scores of the Global Entrepreneurship Index (GEI) of the Global Entrepreneurship Development Institute and the World Bank's Doing of Business (DoB) scores as measures of entrepreneurship-friendliness of the institutional environment.

3. We find a number of significant differences of job- and life-satisfaction between groups of countries. Self-employed people report significantly higher levels of job satisfaction than paid employees in Anglo-Saxon countries (Iceland, Ireland, UK), in Nordic countries (Denmark, Finland, Sweden and Norway), and in Continental countries (Austria, Belgium, France, Germany, Netherlands, Luxembourg and Switzerland). Paid employees report significantly higher levels of job satisfaction than paid employees in the Mediterranean countries (Cyprus, Greece, Italy, Malta, Portugal and Spain) and in some Eastern European countries (Bulgaria, Romania and Serbia). The differences between job satisfaction of self-employed and paid employees are not statistically significant in the Baltic States (Estonia, Latvia, Lithuania) and in another group of Eastern European countries (Croatia, Czech Republic, Hungary, Poland, Slovakia, Slovenia).

4. Differences of life satisfaction between the two occupational groups are less pronounced than for job satisfaction. Life satisfaction of self-employed is higher than of paid employees in a group of Continental countries (Austria, Germany, Netherland and Switzerland) and Eastern European countries (Hungary, Poland, Czech Republic, Slovakia, Slovenia and Croatia) but it is significantly lower in the Mediterranean countries (Cyprus, Greece, Italy, Malta, Portugal and Spain) and in certain Eastern European countries (Bulgaria, Romania and Serbia).

5. The level of job- and life-satisfaction in a country increases with the entrepreneurship-facilitating quality of its institutions as measured by the GEI and DoB scores. This pattern is found for people in both types of occupations, self-employed and paid employees, after controlling for a wide set of individual-level factors that may affect an individual wellbeing including formal level of education, income, socio-demographic characteristics, and health status. Hence, many kinds of entrepreneurship-facilitating institutions can be beneficial to self-employed as well as paid employees. The increase is, however, more pronounced for people in self-employment.

6. The increase of job- and life satisfaction with the entrepreneurship-enhancing quality of a country's institutions is more pronounced for paid employees working in small firms than for those who work in larger firms. We interpret this insight as an additional indication that flexible, less routinized and more entrepreneurial working environments are conducive to individual well-being, perhaps because they give people a higher degree of self-determination and autonomy.

7. The main policy lesson that can be learnt from our study is that promoting entrepreneurial institutions may increase the levels of well-being in a society. The results of our analysis indicate that this is not to the detriment of employees, as paid workers in countries with entrepreneurship-facilitating institutions tend to also enjoy higher levels of well-being. Hence, policies aimed at promoting entrepreneurial societies are pareto-optimal in the sense that they are likely not to decrease well-being of non-entrepreneurs.

8. One limitation of our study is that we do not have much information on the composition of entrepreneurship in the EU-SILC data, for instance, concerning the motives for self-employment.

9. Further research should investigate the effect of single elements of the institutional framework on well-being of self-employed persons as well as of paid employees. Such investigations could be of great help to identify those parts of the framework that are most important for well-being. Moreover, it would be important to know more about the effect of single institutions on different kinds of people such as mainly necessity driven entrepreneurs,

ambitious opportunity entrepreneurs, and of course different types of paid employees. A related important field for future research concerns the effects of institutions and well-being on individual behavior. Our result that in some countries entrepreneurs may realize lower levels of job- and life satisfaction than paid employees raises the question why the respective persons remain in entrepreneurship.

1. Introduction

Creating a more entrepreneurial society became an important topic in the political discussion (Audretsch and Thurik 2001; Audretsch 2007). It is, for example, an explicit goal on the policy agenda of the European Union (e.g., European Commission 2010; 2013; 2016). A key issue in any attempt to create a more entrepreneurial society is to stimulate private initiative and self-employment. Accordingly, 'Why do people become self-employed?' and 'How can the incentives for self-employment be improved?' are essential questions in this respect. A main motivation behind the attempts of creating a more entrepreneurial society is the recognition that entrepreneurship is an important driver of economic growth. In particular, entrepreneurship strengthens a country's or region's innovative capacity, may trigger growth processes, and can be of key importance for coping with the challenges of structural change (Schumpeter 1934; Wennekers and Thurik 1999; Fritsch 2013). Moreover, self-employment can be a way of self-realization and achieving economic freedom.

While there seems to be a general agreement that promotion of entrepreneurship has a positive effect on the general economic welfare of a society, much less is known about the potential impact of efforts to build a more entrepreneurial society on the well-being of individuals. One of the most important concerns in this respect is whether more entrepreneurship-friendly institutions would disproportionately favor the entrepreneurially active part of population at the expense of those who prefer to stay in paid employment.

A number of empirical studies argue and demonstrate that the choice of entrepreneurship is not solely driven by income prospects but that non-pecuniary motivations such as achieving higher procedural utility from more freedom of decision making, flexibility, and autonomy can play an important role (for an overview, see Croson and Minniti 2012, and Shir 2016). Self-employed people have been found to often experience higher levels of well-being in terms of job- and life satisfaction due to higher degrees of self-determination and self-enhancement (e.g., Binder and Coad 2013, Benz and Frey 2008a, b)[1] or, to put it with Schumpeter, by trying to realize the "dream and the will to found a private kingdom" (Schumpeter 1942, 93). In terms of values, this orientation can be understood as putting emphasis on autonomy or as "… a desirability of individuals independently pursuing their own ideas […] and pursuing intellectual directions and pursuing affectively positive experience" (Licht, Goldschmidt, and Schwartz 2007, 662). The idea that non-pecuniary benefits play a significant role for choosing self-employment is supported by empirical evidence showing that the income of self-employed is not necessarily and systematically higher than that of paid employees (e.g., Hamilton 2000; Moskovitz and Vissing-Jorgensen 2002; Sorgner, Fritsch and Kritikos 2017).

An important shortcoming of the available empirical studies of well-being by occupational status is that they neglect the role of institutional framework conditions[2]. These institutional conditions can play a key role for the attractiveness of entrepreneurship, and, hence, for the allocation of entrepreneurial talent that determines the supply of people in self-employment (e.g., Baumol 1990; Sobel 2008). As a consequence, one should expect that distinct institutional environments have an effect on the well-being of self-employed as well as of paid employees.

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[1] Quite remarkably, higher levels of well-being were also found for paid employees in small rather than in large firms, where more pronounced hierarchies can impede personal autonomy (Benz and Frey 2008a).

[2] Institutions can be generally defined as "the rules of the game" that govern interaction of people in a society (e.g., North 1994). It is common to distinguish between formal institutions that are understood as the set of codified rules such as laws and constitutions and informal institutions that comprise non-codified norms, conventions, codes of behavior, and the conduct of a society

This paper investigates whether the relationship between occupational status and well-being varies across countries with different institutional contexts. Our aim is to enhance the understanding of the effect of institutions on well-being of self-employed persons as compared to paid employees. This is grounded in the idea that institutions determine not only people's selection into self-employment but also the utility that they may gain from being an entrepreneur. If, for example, the ruling institutions are entrepreneurship-inhibiting, the non-pecuniary utility from self-employment should be low as compared to countries with an entrepreneurship-facilitating institutional framework. In more general terms, there is good reason to expect that the considerable cross-country variation with regard to the degree to which formal and informal institutions are supportive for self-employment has an effect on entrepreneur's level of well-being across countries as well as compared to their paid employed counterparts.

In our analysis, we group European countries according to their institutional frameworks. Our starting point for the distinction of different groups of countries according to their institutional framework conditions is a recent classification by Dilli et al. (2017) that we extend to further countries. We find that there are rather significant differences across countries regarding the relationship between entrepreneurship and well-being that we measure by job- and life satisfaction. In order to account for a possible effect of income on well-being, we also investigate these relationships across different income quartiles.

We find pronounced variation of the ratio of job- and life satisfaction of self-employed over paid employees across countries that is clearly related to the entrepreneurship-facilitating character of the respective institutional framework. The analyses make very clear that higher levels of well-being of self-employed that have been found in several earlier studies (McGrath and MacMillan 1992; Benz and Frey 2008a, b; Croson and Minniti 2012; Shir 2016) cannot be regarded as a stylized fact but that country-specific conditions can play an important role for the actual level of well-being. A further important key result of our study is that the entrepreneurship-facilitating quality of entrepreneurial institutions increases the levels of well-being not only for entrepreneurs but also for paid employees, while the effect is more pronounced for the self-employed.

The remainder of the paper is organized as follows: Section 2 discusses the link between institutions and well-being in entrepreneurship in some more detail. The data and the empirical approach are introduced in Section 3 and Section 4 presents the results of the empirical analysis. The Section 5 summarizes the main results, discusses implications for theory and policy, and identifies avenues for further research. The final section (Section 6) concludes,

2. The effect of institutions on well-being

There are many ways in which institutions can affect the well-being of people according to their occupational status. Assuming that a person's occupational choice, i.e., the decision of being self-employed or work as a paid employee, is governed by his or her subjective utility (e.g., Lucas 1978; Holmes and Schmitz 2000; Kihlstrom and Laffont 1979), the relationship between institutions and well-being in different types of occupations may be approached by examining the effect of institutions on the monetary and non-monetary returns (Elert, Henrekson, and Stenkula 2017).

Most of the studies that deal with the role of institutions for entrepreneurship focus on entry barriers.[3] These analyses can, however, only tell a rather minor part of the story. The reason is that as far as costs of entry such as the effort of registration etc. occurs only once at the time a business is set up, they may have some effect on the start-up rate—particularly on entry of marginal entrepreneurs—but not necessarily on the well-being of those who already entered into

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[3] E.g., Djankov et al. (2002); Fonseca, Lopez-Garcia, and Pissarides (2001); Fonseca, Michaud, and Sopraseuth (2007); Klapper, Laeven, and Rajan (2006); Braunerhjelm and Eklund (2014).

self-employment. The set of institutions that is relevant for the well-being of entrepreneurs comprises all regulations affecting entrepreneurs' doing of business that determine the monetary and non-monetary returns to self-employment. Main fields of these regulations are rule of law, protection of property rights, bankruptcy law[4], regulation of goods and service markets, taxation of profits and labor income, availability of finance, labor market regulation[5], organization of the social insurance system, the level and type of R&D activities as well as informal institutions such as traditions and attitudes of the population towards self-employment (Elert, Henrekson, and Stenkula 2017). Hence, the more entrepreneurship-facilitating the 'entrepreneurship ecosystem' in a country or region is, the higher should be the well-being of the self-employed.

It is, however, unknown, which fields of institutions are most important in this respect. It appears plausible to expect that rule of law, protection of property rights, a well-working financial system, appropriate regulation of markets for goods and services, as well as a sufficiently large and efficient innovation system are beneficial for both types of occupation. What is, however, unclear is to what extent improvements in these areas are more beneficial for the self-employed or for the paid employees. Conflicts can particularly arise in the field of labor market regulation where, for example, a lower level of employment protection may be advantageous for self-employed but are at the expense of paid employees who face a greater risk of being laid off. Likewise, low tax rates on profits are beneficial for entrepreneurs but may require higher taxes on value added that put a burden on paid employees. Summarizing these considerations, one may expect that more favorable institutional framework conditions for entrepreneurship may also be beneficial for paid employees, but it depends on the type and quality of a respective institution in how far this applies.

3. Data and empirical approach

3.1 Measuring individual well-being

Our main data source is the EU Statistics on Income and Living Conditions (EU-SILC). This data is the EU reference source for comparative statistics on income distribution and social exclusion at the European level, particularly in the context of the "Programme of Community Action to Encourage Co-Operation Between Member States to Combat Social Exclusion" and for producing structural indicators on social cohesion for the annual Spring Report to the European Council. The EU-SILC provides comparable and high quality cross-sectional data for 32 European countries. The reference population of the EU-SILC is all private households and their current members residing in the territory of the countries at the time of data collection. Persons living in collective

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[4] The easier and less costly it is to close down or sell a venture the higher the propensity to become self-employed. This pertains particularly to the danger of bankruptcy when unfulfilled financial obligations remain. Therefore, insolvency regulation that includes discharge clauses, the postponement of debt service and repayment, as well as the possibility of restructuring the business should not only be conducive to the decision to start an own business but also diminish entrepreneurs' fear of suffering from financial hardships in case of bankruptcy.

[5] Labor market regulation is of key importance because it determines the availability of personnel and the conditions for hiring employees such as protection against dismissal, maternity leave, etc. An obvious expectation in this respect is that the more freedom is left to an entrepreneur's employment decisions the higher his or her level of well-being.

households and in institutions (e.g., nursing homes) are generally excluded from the target population. Each year EU-SILC includes ad-hoc modules in its survey program that provide additional information in selected realms. For the purpose of this study, we use the cross-section from the year 2013, which includes an ad-hoc module on well-being.

We use two indicators of individual well-being that are available in the EU-SILC, namely, an assessment of current overall life- and of job satisfaction. Overall life satisfaction is a respondent's evaluation of his or her life taken as a whole. It intends to represent a broad, reflective appraisal a person makes of his or her life. It is the by far most frequently used and best validated concept of measuring well-being (Pavot and Diener 2008). The variable refers to the respondent's feeling about the degree of satisfaction with his or her life in "these days" rather than specifying a longer or shorter time period.[6] The level of life satisfaction is measured on an 11-points Likert scale, with the lowest value of 0 meaning "not at all satisfied" and the highest value of 10 meaning "completely satisfied".[7]

The second variable of interest is a person's assessment of his or her level of job satisfaction, which is also measured at an 11-points Likert scale. It refers to the respondent's opinion about the current degree of satisfaction with his or her job. If the respondent has several jobs, the answer about the level of job satisfaction refers to the main job.[8]

Self-employed individuals are identified in the EU-SILC based on their self-reported current economic status. The indicator includes self-employed persons that work full-time or part-time for the purpose of earning a profit. We construct a binary variable that equals 1 if a person is regarded as self-employed, and it is 0 if a respondent is a paid employee. Paid employees are defined as persons who work for an employer and who receive compensation, for instance, in the form of wages or salaries. Unemployed, non-employed persons, respondents currently in full-time education, those in compulsory military community or service, and home workers are not considered in the analysis.

The EU-SILC includes a set of socio-demographic variables such as age, gender, marital status, and nationality that we use as control variables in our analysis. Furthermore, we use the information about the highest level of education (defined according to the ISCED classification),[9]

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[6] Although the measure of life satisfaction is related to happiness it is different in so far as responses to the question regarding a person's life satisfaction tend to be considerably more stable over time and less influenced by momentary incidences (Lucas, Diener, and Suh 1996; Diener, Inglehart, and Tay 2013).

[7] The concrete formulation in the questionnaire is as follows: "The following question asks how satisfied you feel, on a scale from 0 to 10. Zero means you feel 'not at all satisfied' and 10 means you feel 'completely satisfied'." The question than is: "Overall, how satisfied are you with life as a whole these days?"; OECD (2013). This type of question is well-established in empirical research on well-being and it has been shown that responses have a high level of validity; see Diener, Inglehart, and Tay 2013).

[8] The question is "How satisfied are you with your job?"; OECD (2013).

[9] The International Standard Classification of Education (ISCED) has been developed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and provides internationally comparable education statistics. We distinguish between primary education, secondary education, and tertiary education in our analysis.

occupation (defined at a 2-digits level of ISCO08),[10] industry sector (according to the NACE rev.2),[11] the number of hours usually worked per week in the main occupation, and information on change of job in the previous year.

We account for a person's financial situation that may significantly affect the level of individual well-being. The EU-SILC contains information on gross monetary income of paid employees and gross monetary income or losses for self-employed persons during a previous 12-month period (such as the previous calendar or tax year) in national currency.[12] We construct country-specific income quartiles in order to make the income measure comparable between countries. Since health status is an important determinant of the overall life satisfaction (van Praag et al. 2003; Binder and Coad 2013), we include self-reported information on a person's current health condition.[13]

The final sample contains a total of 161,127 observations. Table A1 in the Appendix shows the correlations of the variables used in the analysis and Table A2 provides descriptive statistics.

3.2 Measurement of institutional contexts

3.2.1 Varieties of entrepreneurial capitalism

As a first approach of accounting for varieties of institutional contexts, we form groups of countries with similar institutional conditions. The starting point of our classification is the work by Dilli, Elert, and Herrmann (2017) who distinguish between the following "varieties of entrepreneurial capitalism": (i) Liberal market economies (including Anglo-Saxon economies), (ii) Coordinated market economies (including Continental and Northern European economies), (iii) Mediterranean market economies, and (iv) Eastern European market economies.

Table 1: Country groups used in the analysis

Varieties of entrepreneurial capitalism	Country groups	Score in the Global Entrepreneurship Index	Doing of Business score	Countries
Liberal market economies (LMEs)	Anglo-Saxon	67.4	84.8	Iceland*, Ireland, UK
Coordinated market economies (CMEs)	Nordic	69.9	83.0	Denmark, Finland, Sweden, Norway,
	Continental-I	64.7	78.0	Austria, Germany, Netherlands, Switzerland

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[10] The International Standard Classification of Occupations (ISCO) provided by the International Labor Organization is used by Eurostat to provide internationally comparable information on occupational participation.

[11] The statistical classification of economic activities (NACE; Nomenclature Statistique des Activités Économiques dans la Communauté Européenne) is employed by Eurostat to provide internationally comparable information on participation in industrial sectors.

[12] In Ireland the survey is continuous and indication of income refers to the last twelve months.

[13] Health status is measured on a 5-points ordinal scale ranging from 1 (very bad) to 5 (very good).

	Continental-II	62.5	70.5	Belgium, France, Luxembourg*
Mediterranean market economies (MMEs)	Mediterranean	39.9	68.1	Cyprus*, Greece*, Italy, Malta*, Portugal, Spain
Eastern European market economies (EMEs)	Baltic States	46.7	75.1	Estonia, Latvia*, Lithuania*
	Eastern European-I	28.9	64.0	Bulgaria*, Romania*, Serbia*
	Eastern European-II	39.9	70.0	Croatia*, Czech Republic, Hungary, Poland, Slovakia, Slovenia

Notes: *The country was not considered in the analysis by Dilli et al. (2017). GEI scores are weighted by country-specific population numbers. A GEI score is not available for Malta. High DoB scores indicate closeness to the frontier that is defined as the best performance across countries and over time. A score of 100 indicates the frontier.

We modify this classification in several respects. First, we add a number of countries that are available in our data but were not considered by Dilli, Elert, and Herrmann (2017). In detail, we add Cyprus, Greece, and Malta to the group of Mediterranean market economics, Luxembourg to the Continental Europe countries and Bulgaria, Croatia, Romania, and Serbia to the group of Eastern European market economies. Based on the assumption that the Baltic States (Estonia, Latvia, and Lithunia) have much in common, they enter the analysis as a separate group.

A second modification of the approach of Dilli, Elert, and Herrmann (2017) is that we form subgroups of larger clusters of countries in order to account for the heterogeneity within the country groups. Hence, we divide the group of Continental Europe countries by forming the Continental-I group consisting of Austria, Germany, The Netherlands, and Switzerland and a Continental-II group that comprises those countries that follow more the French type of economy, Belgium, France, and Luxembourg. Among the Eastern European market economies we distinguish between those countries where larger parts have once been part of the Habsburg Empire (Eastern European-I: Croatia, Czech Republic, Hungary, Poland, Slovakia, and Slovenia) and the rest (Eastern European-II: Bulgaria, Romania, and Serbia). Table 1 provides an overview of the definition of country groups used in the analysis with the respective GEI scores and DoB scores.

3.2.2 Variables representing the entrepreneurship-facilitating quality of institutions

A disadvantage of classifying countries into different groups according to the quality of their entrepreneurial institutions is that the variety of institutional contexts within these groups remains unexplored. In order to exploit the variation of contexts within the different groups we use two metrics that indicate the entrepreneurship-facilitating context of a country's institutions, the Global Entrepreneurship Index (GEI) and the Doing of Business (DoB) index as provided by the World Bank.

The GEI is a comprehensive measure for the quality of a country's entrepreneurship ecosystem that accounts for factors such as education, cultural support of entrepreneurship, availability of risk capital, innovation, and internationalization (for details, see Acs et al. 2017). The indicators of the GEI are based on individual assessments of representative population samples or on assessments made by experts. The higher the value of this index, the more entrepreneurship-facilitating the institutions and economic conditions for entrepreneurship in a country should be. The GEI scores for most of the countries in the sample refer to the year 2013.[14]

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[14] For several countries the GEI scores were not available for 2013 and, thus, they were taken from an available wave most close to 2013. This was the case for Iceland (2010), Denmark and Austria (2012), Serbia (2009), Bulgaria (2015), and Cyprus (2017). No GEI score was available for Malta.

An alternative indicator of the quality of national institutions with regard to the conditions for entrepreneurship that we use in robustness checks is the Doing of Business (DoB) scores for the year 2013 as provided by the World Bank (2013). In contrast to the GEI, the DoB index is not particularly focused on entrepreneurship and it is not primarily based on subjective assessments of the surveyed population but on hard facts. The DoB score assesses the regulatory performance of 189 countries with regard to its general business-friendliness that are also relevant for established companies. It covers diverse areas that are relevant for entrepreneurship such as the procedures, time and cost of starting a business, dealing with construction permits, registering property, enforcing contracts, resolving insolvency as well as the total tax rate on profits.

The overall indicator for the quality of the institutional environment of a country measures the distance of each country to the 'frontier,' which represents the best performance observed across all countries in the sample since 2005. A country's distance to frontier is reflected on a scale from 0 to 100, where 0 signifies the lowest performance and 100 represents the frontier. For example, a score of 75 means that a country was 25 percentage points away from the frontier constructed from the best performances across all countries and across time.

Despite the differences in the definition of the GEI and the DoB score, both indicators show closely corresponding assessments; the correlation between the two scores among the countries in our sample is 0.8209 (see Table A1 in the Appendix). The average scores of both indicators are highest for the liberal market economies and for the Nordic countries and show the lowest scores for the Eastern European-I (Bulgaria, Romania, Serbia) and the Mediterranean countries (see Table 1).

4. Results of the empirical analysis

4.1 Descriptive evidence on job- and life satisfaction by occupational status

We find rather considerable variation of the levels of job- and life satisfaction depending on the institutional context. People in countries belonging to Anglo-Saxon, Nordic, or both Continental institutional contexts tend to experience on average higher levels of job- and life satisfaction than residents of Mediterranean and many Eastern European states (see Figures A1 to A4 in the Appendix). Interestingly, residents of the Baltic States and of countries constituting the Eastern European-I group more often report very high levels of job satisfaction as compared to Mediterranean countries and the Eastern European-II group of countries. In addition, residents of the latter group are more likely to show higher levels of overall life satisfaction.

Table 2: Descriptive statistics for satisfaction with job-and life by employment status and institutional context

	Self-employed		Paid employees			Number of observations
	Mean	Standard deviation	Mean	Standard deviation	p-value	
Varieties of institutional contexts:	*Job satisfaction*					
Anglo-Saxon	7.565	2.185	7.303	2.126	0.000	10,371
Nordic	8.262	1.428	7.936	1.614	0.000	14,705
Continental-I: Austria, Germany, Netherlands, Switzerland	8.113	1.719	7.505	1.886	0.000	26,452
Continental-II: Belgium, France, Luxembourg	7.623	1.723	7.359	1.734	0.000	13,912
Mediterranean	6.453	2.356	7.071	2.039	0.000	35,853
Baltic States	7.417	1.913	7.314	1.899	0.094	12,673
Eastern European-I: Bulgaria, Romania, Serbia	5.618	2.584	6.721	2.241	0.000	13,152
Eastern European-II: Hungary, Poland, Czech Republic, Slovakia, Slovenia, Croatia	7.26	2.184	7.224	2.045	0.276	34,009
	Life satisfaction					

Anglo-Saxon	7.641	1.783	7.643	1.731	0.968	10,371
Nordic	8.139	1.309	8.169	1.337	0.377	14,701
Continental-I: Austria, Germany, Netherlands, Switzerland	7.968	1.555	7.849	1.522	0.000	26,441
Continental-II: Belgium, France, Luxembourg	7.560	1.502	7.547	1.473	0.777	13,906
Mediterranean	6.652	2.078	6.992	1.938	0.000	35,585
Baltic States	6.917	1.804	6.855	1.813	0.293	12,671
Eastern European-I: Bulgaria, Romania, Serbia	5.993	2.340	6.410	2.212	0.000	13,152
Eastern European-II: Hungary, Poland, Czech Republic, Slovakia, Slovenia, Croatia	7.267	1.957	7.162	1.907	0.001	33,022

Note: The last column contains p-values of t-tests of equal means between self-employed and paid employees.

Table 2 reports the differences in the levels of job- and life satisfaction between self-employed and paid employees. Previous studies often provided evidence of self-employed people being on average more satisfied with their jobs as compared to their paid employed counterparts. Our data do, however, suggest that these differences in the level of job satisfaction do strongly vary with the institutional context. In particular, self-employed people are on average more likely to be satisfied with their jobs than paid employees in Anglo-Saxon, Nordic, and both groups of Continental European countries. The level of job satisfaction is also slightly higher for self-employed than for paid employees in the Baltic States (however, only statistically significant at a 10 percent level). Self-employed people report on average significantly lower levels of job satisfaction than paid employees in Mediterranean countries and in countries constituting the Eastern European-I group. No statistically significant difference can be found for the Eastern European-II group of countries.[15]

The differences in the levels of the overall life satisfaction between self-employed and paid employees also vary between institutional contexts, although to a lesser degree than the levels of job satisfaction (Table 2). For instance, we do not find any statistically significant differences for Anglo-Saxon, Nordic, and the Continental-II group of countries as well as for the Baltic States. Self-employed in the Continental-I and the Eastern European-II groups of countries are on average slightly more satisfied with their lives than paid employees. In contrast, self-employed in Mediterranean countries and in countries of the Eastern European-I group are on average significantly less satisfied with their lives as compared to paid employees. Interestingly, both of these institutional contexts showcase the lowest average levels of life satisfaction, as compared to countries with other institutional contexts.[16]

All in all, the descriptive evidence suggests that the differences in job satisfaction between self-employed and paid employees are more pronounced than for the overall level of life satisfaction. Moreover, there are clear differences according to the institutional contexts. It is particularly remarkable that self-employed in Mediterranean countries and in the Eastern European-I group of countries (Bulgaria, Romania, Serbia) show on average significantly lower levels of job satisfaction as compared to paid employees. This becomes particularly obvious at the country level (Figures A3 and A4 in the Appendix). The ratio of job satisfaction of self-employed over job satisfaction of paid employees is pronounced negative for Croatia, Cyprus, Greece, Portugal, Romania, and Serbia while it shows the highest values for Estonia, Germany, Luxembourg,

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[15] Cross-country differences observed within various institutional contexts are reported in Figure A3 in the Appendix. For instance, within the Baltic States Estonian self-employed are on average more satisfied with their jobs than paid employees, while entrepreneurs from Latvia and Lithuania report slightly lower levels.

[16] Country-specific differences between self-employed and paid employees in the levels of life satisfaction are shown in Figure A4 in the Appendix.

Sweden, and Switzerland. About the same pattern can be found for the ratio of overall life satisfaction of self-employed over overall life satisfaction of paid employees.

The variation of the ratio of job- and life satisfaction of self-employed over paid employees across countries makes very clear that a higher well-being of self-employed that has been found in several studies (McGrath and MacMillan 1992; Benz and Frey 2008a, b; Croson and Minniti 2012; Shir 2016) cannot be regarded as a stylized fact. The evidence suggests that country-specific conditions can play an important role in this respect.

Figures A3 and A4 in the Appendix show the overall GEI score of the countries in our sample. The correlation coefficients between GEI scores and individual job- and life satisfaction are 0.17 and 0.15, correspondingly, thus, indicating that an entrepreneurship-friendly institutional environment is conducive to individuals' well-being (Table A1 in the Appendix).[17]

4.2 Institutions and well-being of entrepreneurs and paid employees: multivariate analyses

For a more in-depth investigation we examine the relationship between institutional context and well-being by performing multivariate analyses at the individual level accounting for factors such as age, gender, marital status, level of education, working hours per week, job change in the previous year, and a person's income level. The results of ordered logit regressions are reported in Table 3.[18]

The results of the empirical models (columns I and IV in Table 3) suggest that self-employed people are generally significantly more likely to experience higher levels of job satisfaction and overall life satisfaction than paid employees. As compared to Anglo-Saxon countries, the levels of job satisfaction are significantly higher in Nordic and Continental-I institutional contexts and they are significantly lower in Continental-II, Mediterranean and Eastern European countries. Furthermore, residents in Nordic and Continental-I countries are more likely to be satisfied with their lives in general than people in Anglo-Saxon countries. Residents of Mediterranean, Baltic and Eastern European-I countries show significantly score of life satisfaction.

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[17] The corresponding correlation coefficients are 0.31 and 0.32 for the self-employed and 0.14 and 0.27 for paid employees.

[18] The results for control variables indicate that older people and males report lower levels of well-being while being married has a positive effect. The number of working hours per week is negatively related to overall life satisfaction but this relationship is not statistically significant for job satisfaction. A change of occupation in the previous year is related to significantly higher job satisfaction but with significantly lower levels of overall satisfaction with life. Both, job satisfaction and overall life satisfaction increase with a person's position in the income distribution. People with higher education levels tend to report higher levels of life satisfaction while the relationship between the education level and job satisfaction comes out to be negative which is in line with previous studies (e.g., Clark and Oswald 1996; Millán et al. 2013). In an attempt to explain this latter result, Clark and Oswald (1996) speculate that higher education induces higher aspirations for characterizing one's situation as "good" or "excellent" that are then not fulfilled in reality. Millán et al. (2013, 665) suggest "that employees with university studies have more demanding jobs and have to meet higher expectations, and thus keeping one's job is more challenging."

Table 3:   Determinants of job- and life satisfaction

	Job satisfaction			Life satisfaction		
	I	II	III	IV	V	VI
Paid employee (reference)						
Self-employed	0.122***	0.473***	-1.322***	0.0555***	0.183***	-0.451***
	(0.0167)	(0.0653)	(0.0522)	(0.0162)	(0.0607)	(0.0517)
Varieties of institutional contexts:						
Anglo-Saxon (reference)						
Nordic	0.530***	0.520***		0.766***	0.761***	
	(0.0238)	(0.0252)		(0.0230)	(0.0244)	
Continental-I: Austria, Germany, Netherlands, Switzerland	0.161***	0.145***		0.408***	0.409***	
	(0.0225)	(0.0237)		(0.0215)	(0.0227)	
Continental-II: Belgium, France, Luxembourg	-0.0675***	-0.0522**		0.0311	0.0459*	
	(0.0235)	(0.0248)		(0.0228)	(0.0241)	
Mediterranean	-0.405***	-0.277***		-0.599***	-0.537***	
	(0.0222)	(0.0235)		(0.0218)	(0.0233)	
Baltic States	-0.0204	0.0106		-0.357***	-0.344***	
	(0.0250)	(0.0262)		(0.0249)	(0.0262)	
Eastern European-I: Bulgaria, Serbia and Romania	-0.619***	-0.480***		-1.094***	-1.055***	
	(0.0264)	(0.0281)		(0.0267)	(0.0286)	
Eastern European-II: Hungary, Poland, Czech Republic, Slovakia, Slovenia, Croatia	-0.0695***	-0.0496**		-0.194***	-0.206***	
	(0.0224)	(0.0236)		(0.0222)	(0.0235)	
GEI 2013			0.0162***			0.0341***
			(0.000362)			(0.000369)
Interaction terms:						
Self-employed x Nordic		0.0639			0.0306	
		(0.0756)			(0.0709)	
Self-employed x Continenta-l I		0.267***			0.0294	
		(0.0754)			(0.0704)	
Self-employed x Continental-II		-0.0740			-0.123	
		(0.0812)			(0.0763)	
Self-employed x Mediterranean		-0.832***			-0.374***	
		(0.0701)			(0.0658)	
Self-employed x Baltic States		-0.236***			-0.0972	
		(0.0880)			(0.0824)	
Self-employed x Eastern European-I		-0.961***			-0.264***	
		(0.0812)			(0.0786)	
Self-employed x Eastern European-II		-0.194***			0.0862	
		(0.0733)			(0.0695)	
Self-employed x GEI			0.0292***			0.0105***
			(0.000990)			(0.000975)
Number of observations	161,127	161,127	158,463	159,849	159,849	157,185
Pseudo R-squared	0.0190	0.0207	0.0197	0.0554	0.0557	0.0558
Log Likelihood	-316027	-315509	-310827	-290055	-289957	-285124

Notes: Results of ordered logit regression. Dependent variable: 11-points scale measuring job- and life satisfaction. Robust standard errors in parentheses. ***: statistically significant at the 1% level; ** statistically significant at the 5% level; * statistically significant at the 10% level. The number of observations in columns III and VI is lower than in other models, because GEI scores were not available for Malta, which is part of the Mediterranean group of countries. Control variables are included. Effects of control variables are reported in Table A3 in the Appendix.

Slovenia, Croatia

■ Paid employee ■ Self-employed ▲ GEI Score

Figure 1 : **Predicted probabilities of being completely satisfied with one's job by employment status and institutional context. The 95% confidence intervals are reported**

■ Paid employee ■ Self-employed ▲ GEI Score
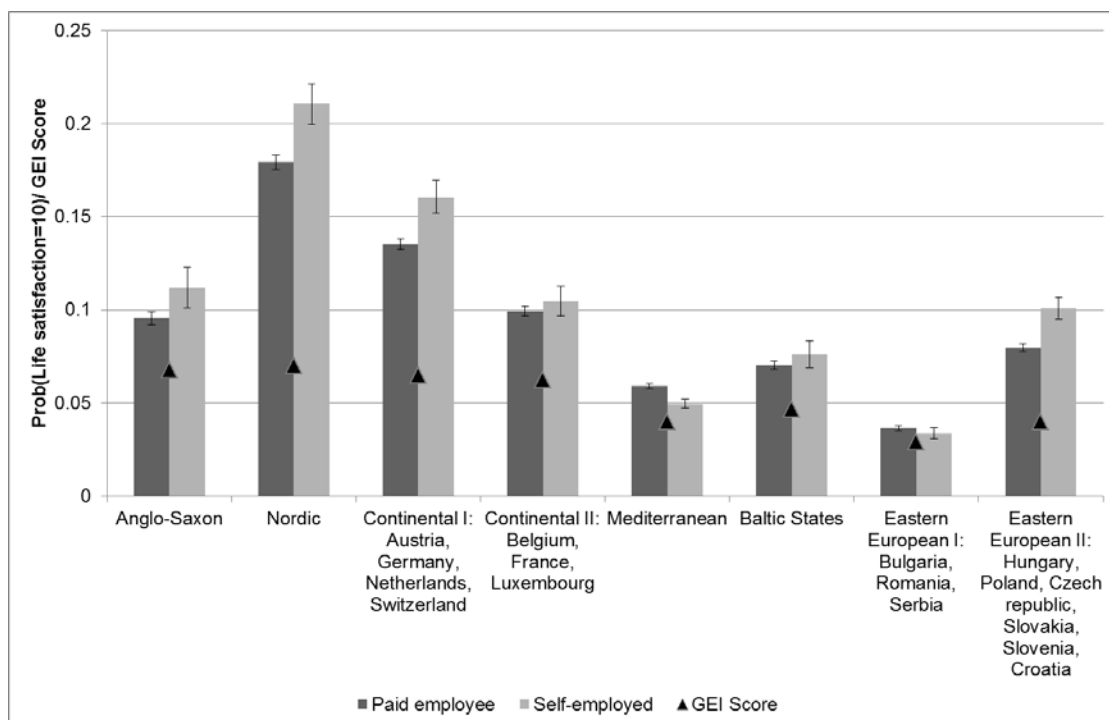
Figure 2: **Predicted probabilities of being completely satisfied with one's life by employment status and institutional context. The 95% confidence intervals are reported**

To examine whether self-employment is differently associated with individual well-being depending on institutional context, we include interaction terms between employment status and type of institutional context into the models. Column II of Table 3 reports the results of this approach for job satisfaction, and column V presents the results for the overall level of life satisfaction.[19] Figures 1 and 2 visualize these results by showing the predicted probability of reporting the highest level of satisfaction with one's job- and life by employment status and groups of countries. We find a strong variation of the levels of individual well-being across institutional contexts. The variation between self-employed and paid employees is much stronger for the levels of job satisfaction than for overall life satisfaction. Figures 1 and 2 also display the overall GEI scores of the country groups. The higher the value of the GEI index, the more entrepreneurship-facilitating are institutions and economic conditions for entrepreneurship (for details, see Acs et al. 2017). The figures show that job- and life satisfaction of self-employed people tend to be higher in countries with a higher GEI score. Quite remarkably, also the job- and life satisfaction of the paid employees tends to be more pronounced in countries with a higher GEI score.

Models III and VI in Table 3 show the estimates for the relationship between a country's GEI score and individual well-being. The results suggest that higher GEI scores are positively associated with

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[19] Note that the constitutive terms of the interactions indicates the effect in case that the other interacting variable has the value of zero (for details regarding the interpretation of interaction effects see Brambor et al. 2006). Hence, the coefficients for the constitutive term can hardly be interpreted in isolation in a meaningful way.

individual well-being of the self-employed as well as of the paid employees. Figures 3 and 4 visualize differences between self-employed and paid employees regarding the predicted probability of being completely satisfied with one's job and life according to a country's GEI score. We find that the self-employed are significantly less likely than paid employees to be completely satisfied with their jobs in countries where the GEI score is relatively low and does not exceed 45 points. The probability of being completely satisfied with one's job is however

Figure 3: Difference between self-employed and paid employees in the predicted probability of being completely satisfied with one's own job

Figure 4: Difference between self-employed and paid employees in predicted probability of being completely satisfied with one's life

higher for the self-employed in countries with GEI scores of more than 45 points. That a more entrepreneurship-facilitating institutional environment is conducive to job satisfaction of people in both types of occupation is consistent with our expectation, that many kinds of entrepreneurship-facilitating institutions can be beneficial to self-employed as well as paid employees (Section 2). This effect is, however, stronger for self-employed than for paid employees so that the difference of job satisfaction between both types of occupation is the larger the higher the GEI score of a country is. Concerning life satisfaction, the difference between self-employed and paid employees is negligibly small, although negative, for countries with GEI scores below 40. It increases, however, and becomes positive for higher GEI scores. Again, the probability to be completely satisfied with one's own life increases for both types of occupation with increasing scores of the GEI.[20] As in the respective figure

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[20] Figures A5 and A6 in the Appendix show similar results for the probability to report 7 and more points on an 11-points job- and life satisfaction scale. We note that the relationship becomes concave if we relax the condition of reporting the highest satisfaction levels. This means that promoting entrepreneurship-friendly institutions in countries that have relatively low GEI

for job satisfaction, this increase is more pronounced for the self-employed than for the paid employees.

4.3 Well-being of paid employees by firm size

The concept of procedural utility suggests that people may draw utility not only from the outcome of the work process but also from the work process itself. This can explain the fact that many self-employed are more satisfied with their jobs than paid employees although they often have lower and less secure incomes. Based on such considerations Benz and Frey (2008a) argue that higher levels of autonomy and flexibility that are common for entrepreneurs and small firm employees may compensate for lower incomes and less economic security that is typical of such jobs. In a same vein, Coad and Binder (2014) show that workplace autonomy plays an important role in determining job- and life satisfaction. If high-quality entrepreneurial institutions have a positive effect on the procedural utility that people derive from work, then this positive effect should be more pronounced for small firm employees than for employees in larger companies. We test this hypothesis by analyzing the relationship between job satisfaction and employment in firms of different size.

Table 4:   Individual well-being and firm size

	Job satisfaction		Life satisfaction	
	I	II	III	IV
Self-employed (reference)				
Paid employee, less than 10 employees	-0.0149	0.882***	-0.0253	0.200***
	(0.0208)	(0.0704)	(0.0205)	(0.0707)
Paid employee, 11-19 employees	-0.0542***	1.041***	-0.0357*	0.325***
	(0.0188)	(0.0619)	(0.0185)	(0.0619)
Paid employee, 20-49 employees	-0.107***	1.385***	-0.0349*	0.479***
	(0.0198)	(0.0660)	(0.0197)	(0.0666)
Paid employee, 50 and more employees	-0.208***	1.565***	-0.101***	0.630***
	(0.0182)	(0.0576)	(0.0178)	(0.0574)
GEI 2013	0.0202***	0.0455***	0.0354***	0.0447***
	(0.000352)	(0.000937)	(0.000357)	(0.000921)
Interaction terms:				
Paid employee, less than 10 employees x GEI		-0.0187***		-0.00480***
		(0.00134)		(0.00133)
Paid employee, 11-19 employees x GEI		-0.0225***		-0.00740***
		(0.00120)		(0.00118)
Paid employee, 20-49 employees x GEI		-0.0302***		-0.0104***
		(0.00124)		(0.00123)
Paid employee, 50 and more employees x GEI		-0.0353***		-0.0144***
		(0.00107)		(0.00106)
Number of observations	153,337	153,337	152,080	152,080
Pseudo R-squared	0.0181	0.0201	0.0553	0.0557
Log Likelihood	-300836	-300211	-275276	-275161

Notes: Results of ordered logit regression. Dependent variable: 11-points scale measuring job satisfaction (models I and II) and life satisfaction (models III and IV). Robust standard errors in parentheses. ***: statistically significant at the 1% level; ** statistically significant at the 5% level; * statistically significant at the 10% level. All control variables are included. Effects of control variables are reported in Table A4 in the Appendix.

scores can lead to a stronger increase in well-being as compared to similar measures in countries that score already high on this index.
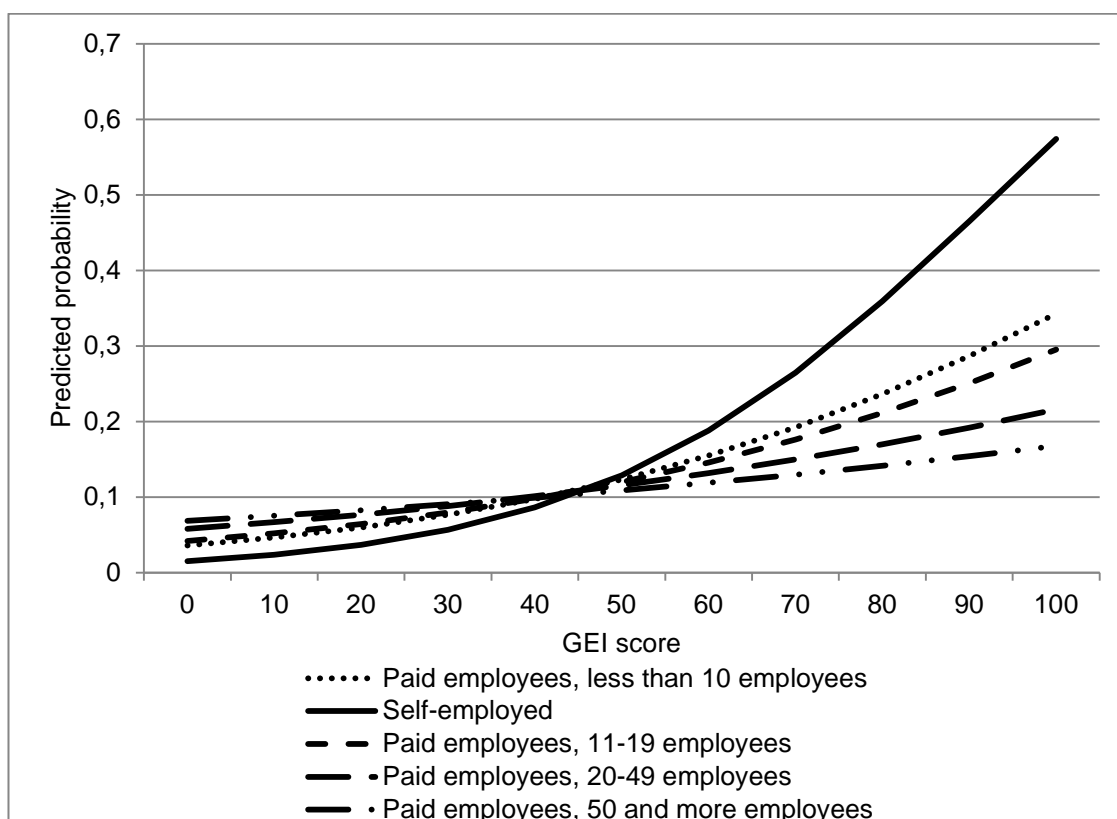
Figure 5: Predicted probability of being completely satisfied with one's own job

The results in Table 4, column I, suggest that job satisfaction of paid employees decreases with the size of the firm. The highest levels of job satisfaction are observed among self-employed and paid employees in firms with less than 10 employees. Column II of Table 4 investigates the differences in this relationship depending on the quality of entrepreneurial institutions. For the ease of interpretation of the interaction terms, the results are visualized in Figure 5. The estimations clearly suggest that the quality of entrepreneurial institutions increases the probability of being completely satisfied with one's job for employees of all firm sizes. The magnitude of this effect is most pronounced for employees in firms with less than 10 employees and it becomes smaller with increasing firm size; the lowest levels of job satisfaction as well as the smallest increase of this level with more entrepreneurship-facilitating institutional framework conditions are observed for people working in firms with 50 and more employees.

Figure 6: Predicted probability of being completely satisfied with one's own life

The results for life satisfaction presented in Table 4 (columns III and IV) and in Figure 6 are in a similar vein as the results for job satisfaction. The differences between the self-employed and paid employees in firms of different size are statistically significant but the magnitude of the effects is substantially lower. This is quite in line with the proposition that the procedural utility that people draw from their working activities should have a more pronounced effect on job satisfaction rather than on life satisfaction in general.

4.4 Personal income and well-being

In order to account for possible variations in the effects of the entrepreneurship-relevant properties of the regional environment for persons with different income levels, we perform our baseline regressions (as in column I and IV of Table 3) for four quartiles of the country-specific income distribution. The results are reported in Table A5 (for job satisfaction) and Table A6 (for life satisfaction) in the Appendix. Regarding job satisfaction (Table A5), we find that self-employed are more likely to be satisfied with their jobs than paid employees across all but the first income quartile

where the coefficient for the occupational status remains insignificant. This means that self-employed persons that are not economically successful do not experience higher levels of hob satisfaction than paid employees in the same income group. We also find that the negative interaction effect between self-employment status and the groups of Mediterranean and Eastern European-I countries holds across all income quartiles. Thus, lower well-being of entrepreneurs in these countries is more likely to be due to institutional factors rather than affected by individual characteristics, such as a person's financial situation.

With regard to life satisfaction (Table A6), the positive effect of self-employment status is only statistically significant for the lower income quartiles (columns I-IV). Thus, a high level of income is likely to contribute to greater life satisfaction independently of one's employment status. Moreover, being self-employed in the Mediterranean countries decreases the probability of reporting high levels of life satisfaction (with an exception of the fourth income quartile, for which we do not find any statistically significant effect).

For the Eastern European countries the results are quite ambiguous. In these countries only respondents in the lowest income quartile associate self-employment with a higher level of life satisfaction as compared to low income paid employees while this relationship is negative or not statistically significant for the higher income quartiles (columns V to VIII). It should be noted that this specific East European pattern is not observed for job satisfaction. An explanation could be the relatively high levels of necessity entrepreneurship in those countries (GEM 2017). Maybe many self-employed people with low incomes in East European countries feel higher life satisfaction because they have hardly any alternative of earning higher incomes in paid employment and value the autonomy and flexibility of being one's own boss.

4.5 Robustness checks: Using the Doing of Business (DoB) score

Using the DoB score as an alternative for the entrepreneurship facilitating quality of a country's institutional framework leads to rather similar results. Models I and II in Table 5) show a highly significant effect of the DoB scores on job- and life satisfaction. A main difference to the analyses with the GEI indicator is that the relationship between well-being in the two types of occupation and the DoB scores is less pronounced (see Table A7 and Figures A7 and A8 in the Appendix). The weaker relationship between well-being and the DoB scores may be regarded an indication that the GEI is better suited as measure of the entrepreneurship-facilitating quality of a country's institutional framework.

Table 5: Well-being and GDP per capita

	I	II	III	IV	V
			Job satisfaction		
Self-employed (yes=1; no=0)	0.110*** (0.017)	0.108*** (0.017)	0.0582*** (0.0169)	0.111*** (0.0168)	0.0955*** (0.0167)
GEI score	0.020*** (0.000)			0.0204*** (0.0006)	
DoB score		0.039*** (0.001)			0.0287*** (0.0009)
GDP per capita (ln)			0.334*** (0.0072)	-0.0144 (0.0119)	0.178*** (0.0086)
Log pseudolikelihood	-311291.03	-316690.82	-316992.87	-311290.32	-316470.91
Pseudo R²	0.0182	0.0170	0.0161	0.0182	0.0177
Number of observations	158,463	161,127	161,127	158,463	161,127
			Live satisfaction		
	I	II	III	IV	V
Self-employed (yes=1; no=0)	0.062*** (0.016)	0.054*** (0.016)	-0.0218 (0.0164)	0.0578*** (0.0163)	0.0298* (0.0163)
GEI score	0.035*** (0.000)			0.0337*** (0.0006)	

DoB score		0.063***			0.0398***
		(0.001)			(0.0009)
GDP per capita (ln)			0.618***	0.0453***	0.403***
			(0.0073)	(0.0122)	(0.0087)
Log pseudolikelihood	-285182.85	-291963.55	-291861.67	-285176	-290878.6
Pseudo R²	0.0556	0.0491	0.0495	0.0556	0.0527
Number of observations	157,185	159,849	159,849	157,185	159,849

Notes: Standard errors in parentheses. ***: statistically significant at the 1% level; ** statistically significant at the 5% level; * statistically significant at the 10% level. All control variables are included; results for these variables are omitted for brevity.

It might be argued that our result of a positive effect of the entrepreneurship-facilitating character of a country's institutional framework and well-being may be confounded by a relationship between the institutional framework and the welfare level. In particular, one may assume that countries that have high-quality entrepreneurial institutions may also enjoy higher levels of economic welfare, and that this effect may drive our results. We find indeed considerable correlation between GDP per capita and a country's GEI score (the correlation coefficient is 0.74) as well as with the DoB score (the coefficient is 0.51).

Including GDP per capita instead of the indicators for the institutional framework conditions in models for job- and work satisfaction (model III in Table 4), results in a highly significant coefficient for the wealth level. However, including GDP per capita *and* a measure for the institutional framework into one model leads to considerably lower coefficients for GDP per capita or even insignificance (models IV and V in Table 4). In these models the coefficients for the GEI remain largely unaffected while those for the DoB score become smaller but remain statistically significant. In addition, the models including GEI scores have higher pseudo R² than models including DoB scores or GDP. We conclude from these regressions that a country's welfare level may be an important source of peoples' well-being but that our main results about the role of entrepreneurship-facilitating institutions remain robust if this relationship is accounted for.

5. Discussion and conclusions

5.1 Research contributions

The most important result of our empirical analysis is that there is quite considerable variation in the job- and life satisfaction of self-employed people as compared to paid employees across countries and institutional contexts. While in most countries entrepreneurs experience higher levels of well-being, there are also countries where the opposite holds true. Lower levels of well-being of self-employed people as compared to paid employees are particularly found in the Mediterranean countries and in some of the formerly socialist countries of Eastern Europe, particularly in Bulgaria, Romania, and Serbia. This clearly shows that higher levels of well-being of entrepreneurs as compared to paid employees that has been found in previous research cannot be regarded as a stylized fact! Our results clearly suggest that differences of well-being between people in the two types of occupations are related to country-specific factors, particularly the entrepreneurship-facilitating properties of the respective entrepreneurship ecosystem. Institutional approval of entrepreneurship matters for the well-being that the self-employed perceive!

Another important finding is that not only the self-employed but also the paid employees report higher levels of well-being in countries with entrepreneurship-facilitating institutions as compared to countries where the institutions are less favorable. This indicates that promoting an entrepreneurship-friendly framework and the resulting well-being of entrepreneurs does not come at the cost of well-being among paid employees. On the contrary, well-being of people in both types of occupation seems to be positively related. This suggests that any policies aiming at promoting a more entrepreneurial society can be regarded as being pareto-optimal. Moreover, this suggests that promoting entrepreneurial institutions may have positive effects on working conditions within the enterprise, thereby increasing the procedural utility from being in paid employment.

5.2 Implications for theory development and for policy

A main implication of our results for theory is that the literature on well-being in different types of occupation and the literature focusing on the effect of institutions on entrepreneurship need to be integrated into a coherent framework. Such a framework could help to better understand how institutions affect job- and life satisfaction of self-employed as well as of paid employees. Another important question that could be analyzed in such a framework is the effect of institutions and well-being on individual behavior, particularly on the propensity to start an own business. A further main benefit of such a framework is that it could provide an appropriate basis for deriving policy implications for an appropriate design of institutions.

The main policy lesson that can be learnt from our study is that promoting entrepreneurial institutions may increase the levels of well-being in a society. The results of our analysis indicate that this is not to the detriment of employees, as paid workers in countries with entrepreneurship-facilitating institutions tend to also enjoy higher levels of well-being.

5.3 Limitations

One limitation of our study is that we do not have much information on the composition of entrepreneurship in the EU-SILC data. For instance, subjective well-being may differ for self-employed with or without employees (Sevä et al. 2016) and for necessity and opportunity entrepreneurs (Block and Koellinger 2009). However, comparing well-being of entrepreneurs and paid-employees along the income distribution suggests that the results are not driven by cross-country differences in quality of entrepreneurship. Another shortcoming is that we do not know how long the self-employed people have been in business. This may be important because institutions could be designed in a way that they protect incumbent self-employed while they alienate de novo entrants.

Although we have shown the relevance of institutional framework conditions for the well-being of self-employed as well as of dependently employed persons there is a number of issues that need to be tackled by further research. One of these issues is the measurement of institutions. Assessing institutional environments by classifying countries into several groups (Dilli, Elert, and Herrmann 2017) is obviously a rather rough approximation. Differences between the groups of countries may reveal some of the heterogeneity across the groups but do not tell us much about what types of institutions are most important for well-being of entrepreneurs and of paid employees. The DoB and particularly the GEI scores provide considerably better description of the entrepreneurship ecosystem of a country but could, of course, be improved. Better data may lead to more reliable results.

5.4 Avenues for further research

Generally, the relationship between the institutional framework of a society and the well-being of people is not well understood. Given our current state of knowledge, we can only speculate about the nature of the relevant links. This pertains particularly to the positive relationship that we have found between the entrepreneurship-facilitating character of a country's institutions and the well-being of the paid employees. To shed more light on these issues may particularly require research at the micro-level of individuals.

One important avenue for research of this type is to investigate the effect of single elements of the institutional framework on well-being of self-employed persons as well as of paid employees. Such investigations could be of great help to identify those parts of the framework that are most important for well-being. Moreover, it would be important to know more about the effect of single institutions on different kinds of people such as mainly necessity driven entrepreneurs, ambitious opportunity entrepreneurs, and of course different types of paid employees.

A related important field for future research concerns the effects of institutions and well-being on individual behavior. Our result that in some countries entrepreneurs may realize lower levels of job- and life satisfaction than paid employees raises the question why the respective persons remain in entrepreneurship. It might be that entrepreneurs continue in entrepreneurship because they are autonomy-seeking regardless of the relatively low level of well-being that they experience in entrepreneurship (Shir 2016; van Gelderen and Jansen 2006). This pattern could also explain why there have been self-employed people in some socialist societies at times where the framework condition for entrepreneurship have been rather hostile (for details, see Wyrwich 2015). Entrepreneurs may seek autonomy for its own sake. The pattern could be also explained by "over-confidence" of entrepreneurs (Koellinger et al. 2007) who hope that their well-being in

entrepreneurship increases in the long-run. Over-confident expectations of future income in entrepreneurship may also be an explanation why people remain in self-employment despite making financial losses.

6. Final remark

This study found a positive link between the entrepreneurship-facilitating character of a country's institutions and the job- and life satisfaction of self-employed as well as of paid employees. This implies that a shift to a more entrepreneurial society with more entrepreneurship-friendly institutions is a pareto-optimal strategy that is beneficial for both, the self-employed as well as the paid employees.

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Appendix: Tables and Figures

Table A 1:   Correlation matrix

		1	2	3	4	5	6	7	8	9	10	11	12
1	Job satisfaction	1											
2	Life satisfaction	0.4846	1										
3	Self-employed	-0.04	-0.0394	1									
4	Age	-0.0014	-0.0832	0.0998	1								
5	Male	-0.018	0.0018	0.1112	0.0032	1							
6	Married	0.0261	0.0738	0.0577	0.2994	0.0368	1						
7	Primary degree	-0.0541	-0.094	0.0705	0.0983	0.0191	0.0457	1					
8	Secondary degree	-0.0775	-0.1155	0.0207	0.0023	0.063	-0.0138	-0.2472	1				
9	Tertiary degree	0.1007	0.1553	-0.0491	-0.0414	-0.072	-0.004	-0.1447	-0.923	1			
10	Working hours per week	0.004	-0.0226	0.2071	-0.0052	0.2861	0.0108	-0.0003	-0.0012	0.0014	1		
11	Job change since last year	-0.0211	-0.0235	-0.0334	-0.1293	0.002	-0.064	-0.0025	0.0074	-0.0066	-0.0282	1	
12	1st income quartile	-0.118	-0.1112	0.1671	-0.0988	-0.1607	-0.0639	0.0941	0.14	-0.1804	-0.2672	0.1423	1
13	2nd income quartile	-0.048	-0.0466	-0.0443	-0.0472	-0.0946	-0.0408	0.0246	0.1378	-0.1505	-0.0125	-0.0115	-0.3179
14	3rd income quartile	0.0341	0.0286	-0.0848	0.0157	0.0585	0.011	-0.0315	0.0039	0.0086	0.0774	-0.0562	-0.3233
15	4th income quartile	0.1269	0.1246	-0.0325	0.126	0.1898	0.0909	-0.0834	-0.2747	0.3137	0.1924	-0.0696	-0.326
16	Anglo-Saxon	0.0101	0.05	-0.0105	-0.018	-0.0183	-0.0215	-0.0347	-0.0552	0.0701	-0.0522	-0.0002	-0.0108
17	Nordic	0.1132	0.1499	-0.0099	0.0318	0.0123	-0.0335	-0.058	-0.0459	0.0699	-0.0083	-0.0581	-0.0095
18	Continental-I	0.0668	0.1366	-0.0539	0.0224	0.0085	-0.0296	-0.067	-0.0147	0.0416	-0.1006	0.0435	0.0006
19	Continental-II	0.0192	0.0428	-0.0401	-0.0306	-0.0214	-0.0435	0.053	-0.0665	0.0469	-0.049	-0.0081	0.0055
20	Mainly Mediterranean	-0.0875	-0.1113	0.0979	0.0041	0.0354	0.0471	0.1972	-0.041	-0.0365	0.0186	-0.0028	-0.0002
21	Baltic States	0.0095	-0.0679	-0.0428	0.0193	-0.0363	-0.0308	-0.0534	0.0117	0.0093	0.001	0.0091	0.0076
22	Eastern European-I	-0.1076	-0.1534	0.0378	-0.0002	0.0327	0.0407	-0.0339	0.0785	-0.0667	0.0777	-0.0511	-0.0161
23	Eastern European-II	-0.0072	-0.0314	-0.0043	-0.0275	-0.0237	0.0398	-0.0512	0.105	-0.0869	0.0911	0.0384	0.0148
24	GEI	0.1718	0.2809	-0.0922	0.0095	-0.022	-0.0824	-0.063	-0.1151	0.1425	-0.1351	0.0154	-0.0053
25	DoB score	0.1489	0.2202	-0.092	0.0193	-0.0292	-0.0674	-0.0753	-0.0949	0.1269	-0.1044	0.0055	-0.0055

Table A1 (cont.)

		13	14	15	16	17	18	19	20	21	22	23	24
13	2nd income quartile	1											
14	3rd income quartile	-0.3402	1										
15	4th income quartile	-0.3431	-0.3489	1									
16	Anglo-Saxon	-0.0018	0.0067	0.0055	1								
17	Nordic	0.0046	0.0014	0.0033	-0.0846	1							
18	Continental-I	0.0016	0.0016	-0.0039	-0.1185	-0.1432	1						
19	Continental-II	0.0017	-0.0001	-0.0069	-0.0821	-0.0992	-0.1389	1					
20	Mainly Mediterranean	-0.0055	0.0006	0.005	-0.1362	-0.1646	-0.2304	-0.1597	1				
21	Baltic States	0.0032	-0.0037	-0.0067	-0.078	-0.0943	-0.132	-0.0915	-0.1518	1			
22	Eastern European-I	0.0065	0.0055	0.0036	-0.0796	-0.0962	-0.1347	-0.0933	-0.1549	-0.0887	1		
23	Eastern European-II	-0.0059	-0.0082	-0.0003	-0.1383	-0.1672	-0.234	-0.1622	-0.2691	-0.1541	-0.1573	1	
24	GEI	0.003	0.0037	-0.0015	0.3163	0.3912	0.494	0.2336	-0.3881	-0.0495	-0.4896	-0.3304	1
25	DoB score	0.0029	0.0015	0.001	0.4626	0.5068	0.3098	-0.1203	-0.3697	0.1244	-0.4113	-0.2747	0.8209

Table A 2:   Descriptive statistics

	Mean	Median	Minimum	Maximum	Standard deviation
Job satisfaction	7.260	8	0	10	2.030
Life satisfaction	7.291	8	0	10	1.868
Self-employed	0.130	0	0	1	0.336
Age	44.008	45	18	65	10.912
Male	0.499	0	0	1	0.500
Married	0.606	1	0	1	0.489
Primary degree	0.037	0	0	1	0.190
Secondary degree	0.613	1	0	1	0.487
Tertiary degree	0.349	0	0	1	0.477
Working hours per week	39.042	40	1	99	10.028
Job change since last year	0.058	0	0	1	0.234
1st income quartile	0.232	0	0	1	0.422
2nd income quartile	0.250	0	0	1	0.433
3rd income quartile	0.257	0	0	1	0.437
4th income quartile	0.261	0	0	1	0.439
Anglo-Saxon	0.064	0	0	1	0.245
Nordic	0.091	0	0	1	0.288
Continental-I	0.164	0	0	1	0.370
Continental-II	0.086	0	0	1	0.281
Mainly Mediterranean	0.223	0	0	1	0.416
Baltic States	0.079	0	0	1	0.269
Eastern European-I	0.082	0	0	1	0.274
Eastern European-II	0.211	0	0	1	0.408
GEI	50.677	44.978	22.694	77.128	14.289
DoB score	72.602	71.61	60.46	85.63	6.466

Table A 3: **Determinants of job- and life satisfaction**

	Job satisfaction			Life satisfaction		
	I	II	III	IV	V	VI
Paid employee (reference)						
Self-employed	0.122***	0.473***	-1.322***	0.0555***	0.183***	-0.451***
	(0.0167)	(0.0653)	(0.0522)	(0.0162)	(0.0607)	(0.0517)
Varieties of institutional contexts:						
Anglo-Saxon (reference)	0.530***	0.520***		0.766***	0.761***	
Nordic	(0.0238)	(0.0252)		(0.0230)	(0.0244)	
Continental-I: Austria, Germany, Netherlands,	0.161***	0.145***		0.408***	0.409***	
Switzerland	(0.0225)	(0.0237)		(0.0215)	(0.0227)	
Continental-II: Belgium, France, Luxembourg	-0.0675***	-0.0522**		0.0311	0.0459*	
	(0.0235)	(0.0248)		(0.0228)	(0.0241)	
Mediterranean	-0.405***	-0.277***		-0.599***	-0.537***	
	(0.0222)	(0.0235)		(0.0218)	(0.0233)	
Baltic States	-0.0204	0.0106		-0.357***	-0.344***	
	(0.0250)	(0.0262)		(0.0249)	(0.0262)	
Eastern European-I: Bulgaria, Serbia and	-0.619***	-0.480***		-1.094***	-1.055***	
Romania	(0.0264)	(0.0281)		(0.0267)	(0.0286)	
Eastern European-II: Hungary, Poland, Czech	-0.0695***	-0.0496**		-0.194***	-0.206***	
Republic, Slovakia, Slovenia, Croatia	(0.0224)	(0.0236)		(0.0222)	(0.0235)	
GEI 2013			0.0162***			0.0341***
			(0.000362)			(0.000369)
Interaction terms:						
Self-employed x Nordic		0.0639			0.0306	
		(0.0756)			(0.0709)	
Self-employed x Continental- I		0.267***			0.0294	
		(0.0754)			(0.0704)	
Self-employed x Continental-II		-0.0740			-0.123	
		(0.0812)			(0.0763)	
Self-employed x Mediterranean		-0.832***			-0.374***	
		(0.0701)			(0.0658)	
Self-employed x Baltic States		-0.236***			-0.0972	
		(0.0880)			(0.0824)	
Self-employed x Eastern European-I		-0.961***			-0.264***	

		(0.0812)			(0.0786)	
Self-employed x Eastern European-II		-0.194***			0.0862	
		(0.0733)			(0.0695)	
Self-employed x GEI			0.0292***			0.0105***
			(0.000990)			(0.000975)
Age	-0.0069***	-0.0070***	-0.0066***	-0.0115***	-0.0115***	-0.0116***
	(0.000456)	(0.000456)	(0.000459)	(0.000475)	(0.000475)	(0.000478)
Male	-0.0929***	-0.0892***	-0.107***	-0.0808***	-0.0802***	-0.0872***
	(0.0109)	(0.0109)	(0.0109)	(0.0110)	(0.0110)	(0.0110)
Married	0.128***	0.126***	0.132***	0.487***	0.485***	0.500***
	(0.00959)	(0.00959)	(0.00963)	(0.00959)	(0.00959)	(0.00965)
Secondary degree	-0.0534*	-0.0841***	0.0486*	0.160***	0.147***	0.275***
	(0.0289)	(0.0287)	(0.0285)	(0.0281)	(0.0282)	(0.0279)
Tertiary degree	-0.205***	-0.245***	-0.137***	0.207***	0.191***	0.278***
	(0.0309)	(0.0307)	(0.0306)	(0.0301)	(0.0302)	(0.0300)
Working hours per week	-0.000521	-0.000725	0.000599	-0.0069***	-0.0069***	-0.0055***
	(0.000578)	(0.000578)	(0.000575)	(0.000543)	(0.000545)	(0.000547)
Job change since last year	0.0457**	0.0432**	0.0242	-0.109***	-0.111***	-0.123***
	(0.0209)	(0.0210)	(0.0211)	(0.0202)	(0.0202)	(0.0203)
Total gross yearly working income: 2nd quartile	0.188***	0.179***	0.165***	0.171***	0.169***	0.148***
	(0.0144)	(0.0144)	(0.0145)	(0.0142)	(0.0143)	(0.0143)
Total gross yearly working income: 3rd quartile	0.406***	0.394***	0.379***	0.338***	0.333***	0.304***
	(0.0152)	(0.0152)	(0.0153)	(0.0151)	(0.0152)	(0.0152)
Total gross yearly working income: 4th quartile	0.668***	0.654***	0.644***	0.543***	0.536***	0.516***
	(0.0167)	(0.0167)	(0.0168)	(0.0166)	(0.0166)	(0.0167)
Health status				0.682***	0.683***	0.661***
				(0.00706)	(0.00706)	(0.00698)
Number of observations	161,127	161,127	158,463	159,849	159,849	157,185
Pseudo R-squared	0.0190	0.0207	0.0197	0.0554	0.0557	0.0558
Log Likelihood	-316027	-315509	-310827	-290055	-289957	-285124

Notes: Results of ordered logit regression. Dependent variable: 11-points scale measuring job and life satisfaction. Robust standard errors in parentheses. ***: statistically significant at the 1% level; ** statistically significant at the 5% level; * statistically significant at the 10% level. The number of observations in columns III and VI is lower than in other models, because GEI scores were not available for Malta, which is part of the Mediterranean group of countries.

Table A 4:   Individual well-being and firm size

	Job satisfaction		Life satisfaction	
	I	II	III	IV
Self-employed (reference)				
Paid employee, less than 10 employees	-0.0149	0.882***	-0.0253	0.200***
	(0.0208)	(0.0704)	(0.0205)	(0.0707)
Paid employee, 11-19 employees	-0.0542***	1.041***	-0.0357*	0.325***
	(0.0188)	(0.0619)	(0.0185)	(0.0619)
Paid employee, 20-49 employees	-0.107***	1.385***	-0.0349*	0.479***
	(0.0198)	(0.0660)	(0.0197)	(0.0666)
Paid employee, 50 and more employees	-0.208***	1.565***	-0.101***	0.630***
	(0.0182)	(0.0576)	(0.0178)	(0.0574)
GEI 2013	0.0202***	0.0455***	0.0354***	0.0447***
	(0.000352)	(0.000937)	(0.000357)	(0.000921)
Interaction terms:				
Paid employees, less than 10 employees x GEI		-0.0187***		-0.0048***
		(0.00134)		(0.00133)
Paid employees, 11-19 employees x GEI		-0.0225***		-0.0070***
		(0.00120)		(0.00118)
Paid employees, 20-49 employees x GEI		-0.0302***		-0.0104***
		(0.00124)		(0.00123)
Paid employees, 50 and more employees x GEI		-0.0353***		-0.0144***
		(0.00107)		(0.00106)
Age	-0.0062***	-0.0067***	-0.0113***	-0.0115***
	(0.000467)	(0.000467)	(0.000487)	(0.000487)
Male	-0.116***	-0.104***	-0.0910***	-0.0855***
	(0.0111)	(0.0111)	(0.0112)	(0.0112)
Married	0.132***	0.132***	0.503***	0.503***
	(0.00980)	(0.00979)	(0.00982)	(0.00981)
Secondary degree	0.0897***	0.0547*	0.282***	0.267***
	(0.0293)	(0.0291)	(0.0286)	(0.0286)
Tertiary degree	-0.0837***	-0.124***	0.287***	0.271***
	(0.0314)	(0.0312)	(0.0307)	(0.0307)
Working hours per week	0.00100*	0.000915	-0.0053***	-0.0053***
	(0.000585)	(0.000582)	(0.000554)	(0.000554)
Job change since last year	0.0238	0.0226	-0.132***	-0.133***
	(0.0215)	(0.0216)	(0.0207)	(0.0208)
Total gross yearly working income: 2nd quartile	0.177***	0.173***	0.146***	0.144***
	(0.0148)	(0.0148)	(0.0146)	(0.0147)
Total gross yearly working income: 3rd quartile	0.401***	0.395***	0.306***	0.303***
	(0.0156)	(0.0156)	(0.0156)	(0.0156)
Total gross yearly working income: 4th quartile	0.678***	0.667***	0.523***	0.517***
	(0.0172)	(0.0173)	(0.0172)	(0.0172)
Health status			0.663***	0.665***
			(0.00711)	(0.00711)
Number of observations	153,337	153,337	152,080	152,080
Pseudo R-squared	0.0181	0.0201	0.0553	0.0557
Log Likelihood	-300836	-300211	-275276	-275161

Notes: Results of ordered logit regression. Dependent variable: 11-points scale measuring job satisfaction (models I and II) and life satisfaction (models III and IV). Robust standard errors in parentheses. ***: statistically significant at the 1% level; ** statistically significant at the 5% level; * statistically significant at the 10% level.

Table A 5:   **Determinants of job satisfaction by income level**

	I	II	III	IV	V	VI	VII	VIII
Variables	1st income quartile	2nd income quartile	3rd income quartile	4th income quartile	1st income quartile	2nd income quartile	3rd income quartile	4th income quartile
Self-employed (yes=1; no=0)	0.0324	0.139***	0.105***	0.185***	0.123	0.560***	0.483***	0.347**
	(0.0290)	(0.0352)	(0.0392)	(0.0337)	(0.102)	(0.129)	(0.164)	(0.140)
Varieties of institutional contexts:								
Nordic	0.410***	0.555***	0.537***	0.521***	0.374***	0.573***	0.524***	0.498***
	(0.0521)	(0.0495)	(0.0468)	(0.0440)	(0.0597)	(0.0526)	(0.0485)	(0.0461)
Continental-I: Austria, Germany, Netherlands, Switzerland	0.144***	0.184***	0.100**	0.137***	0.124**	0.176***	0.0840*	0.0923**
	(0.0488)	(0.0472)	(0.0440)	(0.0416)	(0.0549)	(0.0501)	(0.0454)	(0.0432)
Continental-II: Belgium, France, Luxembourg	-0.160***	-0.0641	-0.0859*	-0.0613	-0.152***	-0.0228	-0.0816*	-0.0738
	(0.0515)	(0.0484)	(0.0461)	(0.0445)	(0.0579)	(0.0512)	(0.0476)	(0.0462)
Mediterranean	-0.804***	-0.446***	-0.306***	-0.185***	-0.631***	-0.301***	-0.208***	-0.122***
	(0.0487)	(0.0469)	(0.0440)	(0.0414)	(0.0555)	(0.0500)	(0.0456)	(0.0433)
Baltic States	-0.462***	-0.134**	0.0729	0.328***	-0.482***	-0.0916*	0.0915*	0.352***
	(0.0538)	(0.0523)	(0.0497)	(0.0472)	(0.0601)	(0.0552)	(0.0512)	(0.0489)
Eastern European-I: Bulgaria, Serbia and Romania	-1.493***	-0.805***	-0.489***	0.0913*	-1.483***	-0.754***	-0.436***	0.165***
	(0.0592)	(0.0540)	(0.0518)	(0.0503)	(0.0747)	(0.0570)	(0.0531)	(0.0519)
Eastern European-II: Hungary, Poland, Czech Republic, Slovakia, Slovenia, Croatia	-0.582***	-0.212***	-0.0210	0.420***	-0.633***	-0.182***	-0.000337	0.427***
	(0.0495)	(0.0474)	(0.0441)	(0.0418)	(0.0560)	(0.0503)	(0.0456)	(0.0434)
Interaction terms:								
Self-employed x Nordic					0.168	-0.0685	0.135	0.118
					(0.119)	(0.156)	(0.185)	(0.159)
Self-employed x Continental-I					0.207*	0.221	0.329*	0.444***
					(0.120)	(0.149)	(0.186)	(0.159)
Self-employed x Continental-II					-0.0310	-0.318*	0.0793	0.0993
					(0.127)	(0.167)	(0.195)	(0.173)
Self-employed x Mediterranean					-0.616***	-0.951***	-0.932***	-0.490***
					(0.111)	(0.138)	(0.175)	(0.150)

Table A5 (cont.)

Self-employed x Baltic States					0.172	-0.296	-0.179	-0.332*
					(0.136)	(0.184)	(0.221)	(0.187)
Self-employed x Eastern European-I					-0.0601	-0.471***	-0.917***	-0.983***
					(0.127)	(0.175)	(0.236)	(0.196)
Self-employed x Eastern European-II					0.199*	-0.209	-0.287	-0.116
					(0.114)	(0.148)	(0.185)	(0.156)
Age	-0.0055***	-0.0067***	-0.0056***	-0.004***	-0.0055***	-0.0068***	-0.0056***	-0.0040***
	(0.000858)	(0.000892)	(0.000940)	(0.000995)	(0.000860)	(0.000893)	(0.000940)	(0.000994)
Male	-0.0896***	-0.134***	-0.103***	-0.0235	-0.0959***	-0.133***	-0.104***	-0.0199
	(0.0236)	(0.0227)	(0.0216)	(0.0213)	(0.0236)	(0.0227)	(0.0216)	(0.0213)
Married	0.142***	0.138***	0.116***	0.107***	0.139***	0.138***	0.117***	0.106***
	(0.0206)	(0.0190)	(0.0186)	(0.0194)	(0.0206)	(0.0190)	(0.0186)	(0.0194)
Secondary degree	0.0675	-0.188***	-0.150**	0.112	0.0361	-0.205***	-0.178***	0.0809
	(0.0414)	(0.0494)	(0.0686)	(0.111)	(0.0412)	(0.0489)	(0.0679)	(0.110)
Tertiary degree	-0.0786	-0.373***	-0.311***	0.0357	-0.123**	-0.404***	-0.349***	-0.00141
	(0.0480)	(0.0543)	(0.0716)	(0.113)	(0.0480)	(0.0538)	(0.0709)	(0.111)
Working hours per week	0.00717***	0.00115	-0.0039***	0.000103	0.00750***	0.000800	-0.0042***	4.04e-05
	(0.000860)	(0.00127)	(0.00147)	(0.00133)	(0.000868)	(0.00127)	(0.00147)	(0.00133)
Job change since last year	0.0625**	-0.0112	0.0752	0.0845	0.0624**	-0.0163	0.0751	0.0805
	(0.0302)	(0.0418)	(0.0496)	(0.0528)	(0.0303)	(0.0420)	(0.0497)	(0.0530)
Number of observations	37,348	40,360	41,422	41,997	37,348	40,360	41,422	41,997
Pseudo R-squared	0.0282	0.0178	0.0114	0.00927	0.0296	0.0191	0.0128	0.0104
Log Likelihood	-77,632	-80,517	-79,268	-76,581	-77,522	-80,408	-79,157	-76,495

Notes: Results of ordered logit regression. Dependent variable: 11-points scale measuring job satisfaction. Robust standard errors in parentheses. ***: statistically significant at the 1% level; ** statistically significant at the 5% level; * statistically significant at the 10% level. Source: EU-SILC 2013.

Table A 6:   **Determinants of overall life satisfaction by income level**

	I	II	III	IV	V	VI	VII	VIII
	1st income quartile	2nd income quartile	3rd income quartile	4th income quartile	1st income quartile	2nd income quartile	3rd income quartile	4th income quartile
Self-employed (yes=1; no=0)	0.0764***	0.0801**	0.0132	0.0401	-0.00626	0.360***	0.124	0.0141
	(0.0289)	(0.0343)	(0.0365)	(0.0335)	(0.0972)	(0.128)	(0.155)	(0.118)
Varieties of capitalism:								
Nordic	0.663***	0.867***	0.793***	0.716***	0.633***	0.886***	0.786***	0.688***
	(0.0510)	(0.0472)	(0.0442)	(0.0428)	(0.0588)	(0.0500)	(0.0457)	(0.0450)
Continental-I: Austria, Germany, Netherlands, Switzerland	0.290***	0.385***	0.399***	0.508***	0.272***	0.395***	0.392***	0.490***
	(0.0475)	(0.0445)	(0.0416)	(0.0400)	(0.0542)	(0.0469)	(0.0428)	(0.0419)
Continental-II: Belgium, France, Luxembourg	-0.0873*	0.0423	0.0476	0.0879**	-0.0847	0.0654	0.0515	0.0851*
	(0.0502)	(0.0470)	(0.0442)	(0.0429)	(0.0572)	(0.0494)	(0.0455)	(0.0448)
Mediterranean	-0.801***	-0.597***	-0.584***	-0.468***	-0.725***	-0.526***	-0.545***	-0.438***
	(0.0480)	(0.0453)	(0.0429)	(0.0409)	(0.0558)	(0.0482)	(0.0445)	(0.0432)
Baltic States	-0.580***	-0.404***	-0.354***	-0.112**	-0.625***	-0.371***	-0.347***	-0.112**
	(0.0536)	(0.0512)	(0.0494)	(0.0485)	(0.0604)	(0.0535)	(0.0508)	(0.0505)
Eastern European-I: Bulgaria, Serbia and Romania	-1.650***	-1.139***	-1.077***	-0.666***	-1.992***	-1.104***	-1.054***	-0.625***
	(0.0596)	(0.0546)	(0.0518)	(0.0514)	(0.0763)	(0.0574)	(0.0532)	(0.0534)
Eastern European-II: Hungary, Poland, Czech Republic, Slovakia, Slovenia, Croatia	-0.398***	-0.243***	-0.256***	0.0881**	-0.494***	-0.212***	-0.258***	0.0639
	(0.0491)	(0.0463)	(0.0432)	(0.0415)	(0.0564)	(0.0487)	(0.0445)	(0.0436)
Interaction terms:								
Self-employed x Nordic					0.110	-0.137	0.0864	0.249*
					(0.117)	(0.147)	(0.173)	(0.141)
Self-employed x Continental-I					0.0362	-0.0290	0.140	0.192
					(0.115)	(0.148)	(0.175)	(0.137)
Self-employed x Continental-II					-0.0929	-0.146	-0.0143	0.0374
					(0.121)	(0.163)	(0.189)	(0.153)
Self-employed x Mediterranean					-0.254**	-0.491***	-0.340**	-0.172
					(0.107)	(0.137)	(0.166)	(0.131)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Self-employed x Baltic States					0.168	-0.284	-0.0690	0.0162
					(0.131)	(0.177)	(0.205)	(0.168)
Self-employed x Eastern European-I					0.721***	-0.311*	-0.384*	-0.536***
					(0.126)	(0.179)	(0.221)	(0.189)
Self-employed x Eastern European-II					0.393***	-0.260*	0.0183	0.231*
					(0.111)	(0.148)	(0.175)	(0.139)
Age	-0.0117***	-0.0122***	-0.0110***	-0.00888***	-0.0113***	-0.0123***	-0.0109***	-0.00888***
	(0.000896)	(0.000933)	(0.000972)	(0.00105)	(0.000899)	(0.000934)	(0.000972)	(0.00105)
Male	-0.121***	-0.0832***	-0.0948***	-0.00333	-0.130***	-0.0818***	-0.0951***	-0.00206
	(0.0240)	(0.0229)	(0.0218)	(0.0215)	(0.0240)	(0.0229)	(0.0218)	(0.0215)
Married	0.509***	0.494***	0.488***	0.443***	0.509***	0.494***	0.489***	0.442***
	(0.0205)	(0.0192)	(0.0186)	(0.0195)	(0.0205)	(0.0192)	(0.0186)	(0.0195)
Secondary degree	0.221***	0.0214	0.196***	0.292***	0.204***	0.0134	0.184***	0.268**
	(0.0417)	(0.0502)	(0.0650)	(0.107)	(0.0416)	(0.0503)	(0.0651)	(0.106)
Tertiary degree	0.297***	0.0245	0.231***	0.373***	0.281***	0.0105	0.215***	0.347***
	(0.0480)	(0.0550)	(0.0681)	(0.108)	(0.0480)	(0.0551)	(0.0682)	(0.107)
Working hours per week	-0.00419***	-0.00897***	-0.00644***	-0.00334***	-0.00313***	-0.00923***	-0.00648***	-0.00326***
	(0.000823)	(0.00121)	(0.00139)	(0.00126)	(0.000830)	(0.00122)	(0.00140)	(0.00126)
Job change since last year	-0.104***	-0.131***	-0.0846*	-0.0182	-0.108***	-0.132***	-0.0853*	-0.0206
	(0.0299)	(0.0397)	(0.0494)	(0.0514)	(0.0300)	(0.0397)	(0.0494)	(0.0515)
Health status	0.667***	0.676***	0.676***	0.714***	0.667***	0.677***	0.677***	0.715***
	(0.0136)	(0.0139)	(0.0142)	(0.0150)	(0.0136)	(0.0139)	(0.0142)	(0.0150)
Number of observations	37,051	40,028	41,129	41,641	37,051	40,028	41,129	41,641
Pseudo R-squared	0.0602	0.0523	0.0476	0.0445	0.0613	0.0525	0.0478	0.0449
Log Likelihood	-71,212	-74,162	-73,497	-70,218	-71,127	-74,143	-73,478	-70,189

Notes: Results of ordered logit regression. Dependent variable: 11-points scale measuring overall life satisfaction. Robust standard errors in parentheses. ***: statistically significant at the 1% level; ** statistically significant at the 5% level; * statistically significant at the 10% level. Source: EU-SILC 2013.

Table A 7:   Job and life satisfaction and the DoB score

	(1)	(2)
	Job satisfaction	Life satisfaction
Self-employed (yes=1; no=0=1)	-4.079***	-1.782***
	(0.1568)	(0.1522)
DoB score	0.0314***	0.0597***
	(0.0008)	(0.0008)
Self-employed (yes=1; no=0=1) * DoB score	0.0583***	0.0255***
	(0.0022)	(0.0021)
Age	-0.00634***	-0.0104***
	(0.0005)	(0.0005)
Male	-0.0849***	-0.0369***
	(0.0108)	(0.0109)
Married	0.115***	0.461***
	(0.0095)	(0.0096)
Secondary degree	0.0161	0.220***
	(0.0284)	(0.0279)
Tertiary degree	-0.156***	0.239***
	(0.0304)	(0.0300)
Working hours per week	-0.000202	-0.00749***
	(0.0006)	(0.0005)
Job change since last year	0.0403*	-0.0979***
	(0.0209)	(0.0200)
Total gross yearly income from employment: 2nd quartile	0.169***	0.150***
	(0.0144)	(0.0143)
Total gross yearly income from employment: 3rd quartile	0.375***	0.295***
	(0.0152)	(0.0151)
Total gross yearly income from employment: 4th quartile	0.626***	0.475***
	(0.0167)	(0.0166)
Health status		0.689***
		(0.0069)
Log pseudolikelihood	-316282.43	-291884.86
Pseudo R²	0.0183	0.0494
Number of observations	161,127	159,849

Notes: Results of ordered logit regression. Dependent variable: 11-points scale measuring job and life satisfaction. Robust standard errors in parentheses. ***: statistically significant at the 1% level; ** statistically significant at the 5% level; * statistically significant at the 10% level.

Figure A 1: **Distribution of job satisfaction values**

Figure A 2: **Distribution of life satisfaction values**

Figure A 3: **Country-specific distribution of mean values for job satisfaction (GEI score is divided by 10 for a convenient graphical illustration)**

Figure A 4: **Country-specific distribution of mean values for life satisfaction (GEI score is divided by 10 for a convenient graphical illustration)**

Figure A 5: **Difference between self-employed and paid employees in the predicted probability of reporting 7 and more points on an 11-points scale measuring satisfaction with one's own job.**

Figure A 6: **Difference between self-employed and paid employees in the predicted probability of reporting 7 and more points on an 11-points scale measuring satisfaction with life**
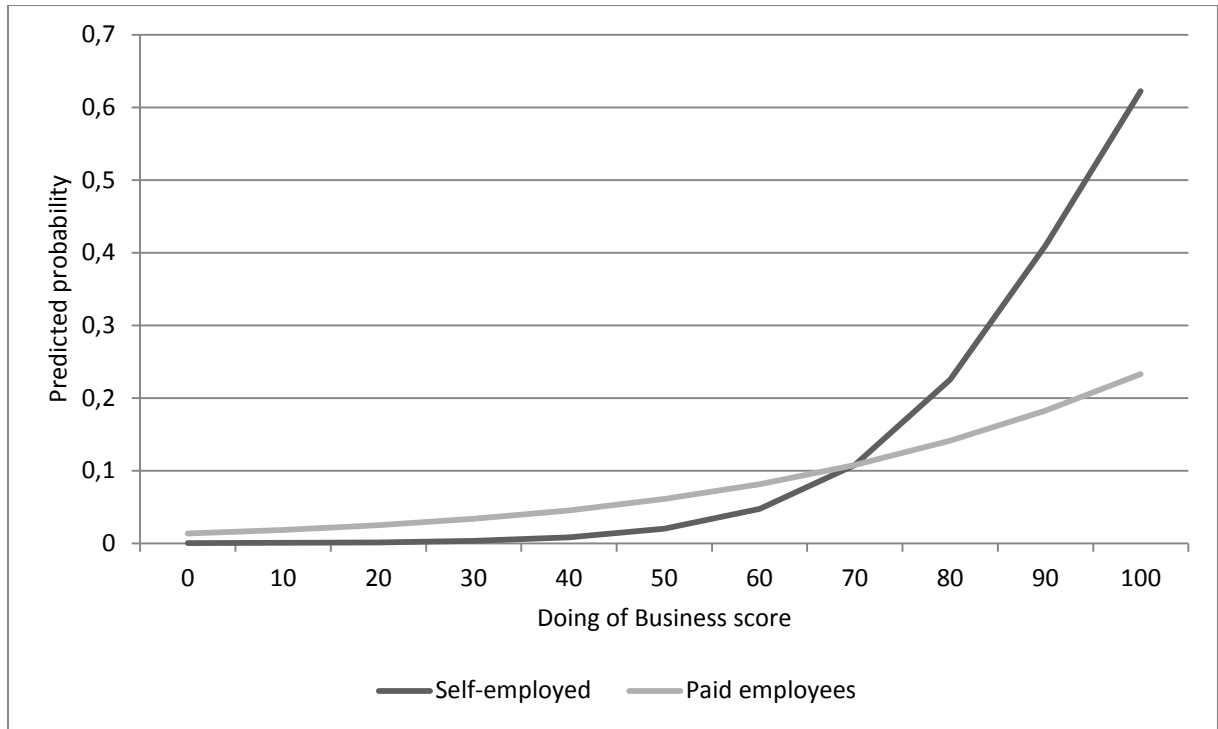
Figure A 7: Predicted probability of being completely satisfied with one's own job. Marginal effects based on estimations from Table A7, column 1.
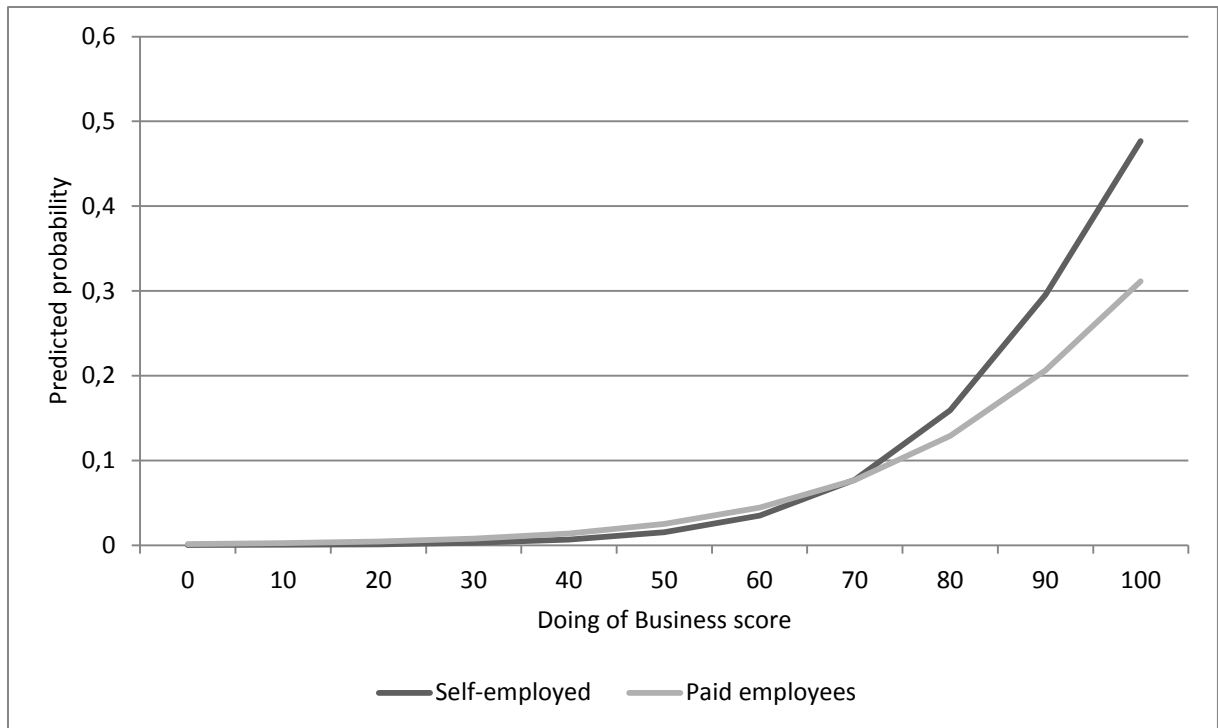

Figure A 8: Predicted probability of being completely satisfied with one's own life. Marginal effects based on estimations from Table A7, column 2.