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Preprint

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Suggested Citation: Stefan Schneck (2012) : Revisiting Procedural Utility: Evidence from European Survey Data, ZBW - Deutsche Zentralbibliothek für Wirtschaftswissenschaften, Leibniz-Informationszentrum Wirtschaft, Kiel und Hamburg

This Version is available at:

<https://hdl.handle.net/10419/57929>

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Revisiting Procedural Utility: Evidence from European Survey Data

Stefan Schneck*

May 15, 2012

Abstract

This research note presents cross-country evidence that job satisfaction is higher for self-employed than for employees. The examination, however, does not stop at this point and examines the reasons *why* this is the case. Using data on 25 European countries, we can show that individuals seem to derive utility from the way outcomes are achieved. In other words, our results are in line with procedural utility theory (Benz and Frey, 2004, 2008).

JEL-Classification: J81, L22, L29, M54

Keywords: Self-employment, job satisfaction, procedural utility

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1 Introduction

There is a broad consensus that the self-employed are more satisfied with their jobs than paid employees (see, e.g., Blanchflower and Oswald, 1998; Bianchi, 2012). The literature frequently explains this by independence or autonomy, respectively. Benz and Frey (2004, 2008) describe that individuals do not derive satisfaction purely by outcomes, but also by the way outcomes are achieved. The authors refer to this human behavior as *procedural utility*.¹

This paper aims to deliver new evidence about procedural utility by utilization of more current data when compared with the one applied in Benz and Frey (2004). We utilize data collected in the year 2010 which include 14,879 employees and 1,984 self-employed individuals aged between 18 and 65 in 25 European countries. Moreover, the applied survey includes an additional question that is expected to describe the procedural utility theory in more detail. Precisely, Benz and Frey (2004) heavily rely on the aspect of independence, while this paper additionally examines whether individuals like thinking about new ideas, being creative, and like to do things in an original way. This variable is expected to describe utility obtained from the way outcomes are achieved -i.e. procedural utility- more precisely than autonomy.

2 Data and methodology

We utilize the European Social Survey (ESS) in order to revisit the theory of procedural utility. Specifically, we apply the data from round 5 (integrated file, edition 2.0) which was surveyed in the year 2010. The ESS includes information on satisfaction in the job, employment status, as well as subjective importance of independence and creativity. In brief, the data is adequate for our analysis.

The variables of main interest are satisfaction with the main job, where zero means extremely dissatisfied and ten means extremely satisfied.² The indicators for procedural utility differ somewhat from the ones applied in Benz and Frey (2004). Our measures refer to:

- Thinking up new ideas and being creative is important to her/him. She/he likes to do things in her/his own original way. In the following referred to as creativity.
- It is important to her/him to make her/his own decisions about what she/he does. She/he

¹Comprehensive surveys of the literature can be found in Block and Koellinger (2009) or Fuchs-Schündeln (2009).

²In Benz and Frey (2004), job satisfaction is coded from one (completely dissatisfied) to seven (completely satisfied).

likes to be free and not depend on others.³ Henceforth abbreviated as autonomy.

Original data is based on a likert-scale from one to six, whereas value one indicates "very much like me" and value six means "Not like me at all".⁴ In the following analysis, we recode this information with the result that value one describes "Not like me at all" and value six corresponds to "Very much like me". This variable, then, presents an ordinal indicator for procedural utility, whereas higher values imply higher identification with autonomy or creativity. Self-employment is measured by a dummy variable, where value one means self-employment and zero indicates paid employment.

Our empirical methodology is similar to the one applied in Benz and Frey (2004). We account for the ordinal nature of the job satisfaction variable via an ordered logit model. Included variables and the corresponding descriptive statistics can be found in Table A1. Information about generation and coding can be found online (<http://ess.nsd.uib.no/ess/round5/>) in the freely available survey documentation files and in the fieldwork documents. Another similarity is that we compare the effects of the dummy variable describing self-employment across specifications in order to conclude about the impact of procedural utility in self-employment.

3 Results

Table 1 presents the average job satisfaction for employees and for the self-employed in columns 2 and 3. In most of the countries, self-employed individuals are more satisfied with their job than employees. This result is basically in line with the literature (see, e.g., Bianchi, 2012). In Eastern Europe, the differences in job satisfaction between employees and the self-employed are largest. Note that self-employed individuals are significantly more satisfied in western Europe and in eastern Europe at the 1% level. In Israel and in Cyprus, t-tests suggest significance at the 10% level. Columns 4 to 6 of Table 1 show the results for the ordered logit model with job satisfaction as dependent variable. All displayed coefficients are to interpret when holding the control variables constant. At first, we discuss the results of the baseline specification in column 4. The dummy variable for self-employment is significantly positive in western Europe, eastern Europe, and Cyprus, which is in line with Benz and Frey (2004). For Israel, our data suggests an

³See Appendix A6, Variables and questions, ESS5-2010 ed. 2.0 on <http://ess.nsd.uib.no/ess/round5/> (01.05.2012); questions Ha and Hk.

⁴Benz and Frey (2004) might apply a more reliable job-independence indicator because the authors refer to the self-assessment of "I can work independently". The variable is coded from one (strongly disagree) to five (strongly agree).

insignificantly positive impact, whereas Benz and Frey (2004) found a significant relationship.⁵

Table 1: Satisfaction with main job and results on procedural utility.

Country	Mean satisfaction with main job (observations)		Estimated coefficients for dummy variable describing self-employment ^c (robust std. errors)		
	Employees	Self-employed	baseline specification	including "autonomy"	including "creativity"
Western Europe ^a	7.558 (8,672)	7.870 (1,318)	0.434*** (0.0617)	0.414*** (0.0618)	0.393*** (0.0619)
Eastern Europe ^b	6.889 (5,379)	7.624 (537)	0.638*** (0.0843)	0.591*** (0.0846)	0.586*** (0.0842)
Cyprus	7.654 (257)	8.031 (64)	0.485** (0.221)	0.463** (0.222)	0.414* (0.226)
Israel	7.207 (571)	7.708 (65)	0.371 (0.296)	0.282 (0.295)	0.327 (0.288)
				+++	+++

a) Belgium, Denmark, Finland, France, Germany, Great Britain, Greece, Ireland, Netherlands, Norway, Spain, Sweden, Switzerland.

b) Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Poland, Russian Federation, Slovakia, Slovenia, Ukraine.

c) Ordered logit model: Self-employment=1; Employee=0.

Control variables: gender (male=1), partner (lives with husband/wife/partner=1), ESS generated country-specific percentile of household's total net income (dummy variables), age, age squared, hours worked (hours you do/did normally work a week (in your main job), including any paid or unpaid overtime), hours worked squared, education (ISCED-codes), regional dummy variables.

Importance to be free ("autonomy"): ordinal likert-scale from 1 to 6.

Like to do things in own original way ("creativity"): ordinal likert-scale from 1 to 6.

Significance level for coefficient for self-employed: *** p<0.01, ** p<0.05, * p<0.1.

Coefficient for procedural utility:

positive coefficient: +++ p<0.01, ++ p<0.05, + p<0.1

positive coefficient: 0 p>0.1

In column 5 of Table 1, the baseline regression is enhanced by the indicator for autonomy. The coefficients for the dummy variable for self-employment decrease in size, which implies that autonomy explains part of the higher job satisfaction for the self-employed. This is to interpret as evidence in favor of procedural utility theory. The result is also in line with the ones presented in Benz and Frey (2004), but autonomy does not *fully* explain the higher job satisfaction of the self-employed because the dummy variable describing self-employment remains significantly positive in case of significant coefficients in the baseline specification.⁶ Note that the impact of autonomy is highly significant and positive in western Europe, eastern Europe, and Israel, which suggests

⁵In comparison to Benz and Frey (2004), we do not distinguish between Arabs and Jews in Israel.

⁶This result might also be due to different measurement of autonomy in Benz and Frey (2004).

that autonomy, on average, increases satisfaction with the main job.

Finally, we examine the subjective importance of individuals who like to do things in an own original way in column 6 of Table 1 in the context of procedural utility theory. Again, the coefficients for self-employment decrease when compared with the baseline specification. In western Europe, eastern Europe, and Cyprus, the corresponding decrease in job satisfaction is larger when compared with the specification including autonomy. This suggests that creativity and the taste for doing things in an own original way explains more of the difference in job satisfaction between the self-employed and employees than autonomy. Again, we find support for the theory that individuals value conditions and processes leading to outcomes.

4 Conclusion

The findings suggest that the self-employed are significantly more satisfied with their jobs than employees in most European countries. Our data, thus, is in line with the literature on job satisfaction and self-employment (see, e.g, Bianchi, 2012; Blanchflower and Oswald, 1998). This paper also contributes new evidence to procedural utility theory. We can not confirm that procedural utility frequently explains the difference in job satisfaction *completely* as suggested in Benz and Frey (2004). Our findings, however, are not purely bad news for the procedural utility theory. In fact, the estimates suggest that autonomy and creativity explain an important part of the difference in job satisfaction between paid employees and the self-employed.

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Appendix

Table A1: Descriptive statistics.

Variable	Mean	Std. Deviation
Satisfaction with main job	7.363	1.935
Dummy variable describing self-employment	0.118	0.322
Dummy variable describing paid employee	0.882	0.322
Autonomy (1 "Not like me at all"; 6 "Very much like me")	4.844	1.063
Creativity (1 "Not like me at all"; 6 "Very much like me")	4.518	1.191
Male	0.511	0.500
Living together with partner	0.682	0.466
Country-specific household's net income percentile 1	0.030	0.171
Country-specific household's net income percentile 2	0.061	0.240
Country-specific household's net income percentile 3	0.081	0.273
Country-specific household's net income percentile 4	0.096	0.295
Country-specific household's net income percentile 5	0.110	0.313
Country-specific household's net income percentile 6	0.123	0.328
Country-specific household's net income percentile 7	0.132	0.339
Country-specific household's net income percentile 8	0.130	0.336
Country-specific household's net income percentile 9	0.115	0.319
Country-specific household's net income percentile 10	0.121	0.326
Age	42.276	11.273
Age squared	1914.313	957.330
Total hours worked (incl. overtime)	41.044	12.022
Total hours worked (incl. overtime) squared	1829.106	1112.373
ISCED 1	0.029	0.169
ISCED 2	0.085	0.279
ISCED 3	0.420	0.494
ISCED 4	0.060	0.238
ISCED 5	0.394	0.489
ISCED 6	0.011	0.103
Number of observations	16,863	