Being independent raises happiness at work

Matthias Benz and Bruno S. Frey[*]

Summary

■ Self-employed people are substantially more satisfied with their work than the employed. We document this relationship for a large number of countries and investigate why the self-employed are happier with their jobs. The results indicate that differences in material outcomes, like higher pay or a lower number of working hours, as well as potential differences in personality cannot account for the observed job satisfaction differences. Rather, the higher job satisfaction among the self-employed can be directly attributed to the greater independence and autonomy they enjoy. "Being your own boss" seems to provide non-pecuniary benefits from work that point to the existence of "procedural utility": autonomy is valued beyond outcomes as a good decision-making procedure. Implications of the results for economic theory and economic policy are discussed.■

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In their working lives, people are often confronted with the decision-making procedure of hierarchy. Hierarchy means that production and employment are integrated into an organization, and decisions are characterized by some degree of authority. Besides the market mechanism, hierarchy is the most fundamental and widespread institution of the economy. Nowadays, most people in western developed countries work as employees for an organization based on at least some extent of hierarchical decision-making.

Still, a considerable share of employment is undertaken independently: around 10 percent of all gainfully employed people in western countries state that they are self-employed. In particular, the self-employed differ from employed people in that they are "their own bosses". As entrepreneurs, they are not subject to a hierarchy, but enjoy a large degree of independence and self-determination at work.

In this paper, we seek to answer three questions related to this basic distinction between self-employment and dependent employment. First, we revisit a fact now well established in the economics literature: self-employed people are considerably more satisfied with their work than people employed in organizations (see e.g. Blanchflower and Oswald, 1998; Blanchflower, 2000; Kawaguchi, 2002; Hundley, 2001). Drawing on our own previous work (Frey and Benz, 2002; Benz and Frey, 2003), we investigate the less explored question of *why* the self-employed are happier with their jobs. From a traditional economic point of view, one would suspect that material benefits associated with self-employment must be responsible for the higher satisfaction it provides, like higher pay or a lower number of working

hours. Our results, however, suggest that self-employed people do not reap more utility from their work so much because the material outcomes are different; if anything, the self-employed e.g. earn lower wages than employees. Exploiting panel data from Germany and UK, we can also rule out the explanation that job satisfaction differences between self-employed and employed people only reflect personality differences between the two groups; an increase in job satisfaction is found for the same people when they are observed to move from dependent employment into self-employment. Rather, we empirically show that the greater independence and autonomy of self-employed people are largely responsible for their particular job satisfaction; in Western European, North American and Eastern European countries, this *fully* explains the job satisfaction differential between self-employed and employed people. The findings thus confirm a widely held notion that greater freedom in the work environment, such as the opportunity to "be your own boss", is an important source of happiness at work.

In the second part of the paper, it is asked what are the implications of these results for *economic theory*. We argue that in a broader context, the reported findings can be interpreted as evidence for a novel concept called "procedural utility". Procedural utility means that people do not only care about instrumental outcomes, as is usually assumed in economics, but also value the processes and conditions leading to outcomes. It has been shown that procedural utility is an empirically relevant phenomenon in many areas of the economy, polity and society (Frey et al., 2003). Self-employment is an important application of the concept: being self-employed seems to be a great thing for the people involved, not because it is associated with superior instrumental outcomes, but rather because it is *procedurally* better to be independent and self-determined than being subject to a hierarchy. Self-employment can therefore be considered as a source of procedural utility.

Third, we address the question of what implications our results have for *economic policy*. We argue that following the findings reached here, governments should at least not restrict the self-employment opportunities. There seems to be a considerable pool of "latent entrepreneurs" in industrial countries (Blanchflower et al., 2001), i.e. people that say they would prefer being self-employed to being an employee (possibly because they anticipate the benefits of self-employment identified here). One potential means of promoting self-

employment would be to lower the barriers to entry (which are substantial in many countries, see e.g. Djankow et al., 2002), and reduce the general administrative regulations imposed on businesses. There might also be a case for financial state intervention, as insufficient access to credit seems to be an important reason why many people do not become self-employed (e.g. Lindh and Ohlsson, 1996; Blanchflower and Oswald, 1998; Van Praag, 2003). However, such programs also have costs that would have to be balanced against their potentially beneficial effects.

The paper is organized as follows: Section 1 begins by presenting evidence on the relationship between self-employment and job satisfaction from three renowned panel surveys in Europe; in Section 2, the analysis is extended to a dataset covering 23 countries from different geographical and cultural world regions, and the reasons behind the self-employment—job satisfaction differential are explored in detail. Section 3 discusses the relevance of the empirical results for economic theory, introducing the concept of procedural utility. In Section 4, policy consequences are presented, and Section 5 concludes.

1. Self-employment and job satisfaction: Evidence from European Panel Surveys

1.1. Data

The first part of the empirical analysis is based on investigations first presented in Frey and Benz (2002). In this paper, we analyzed differences in job satisfaction between self-employed and employed people, using three renowned panel datasets from Europe: the German Socio-Economic Panel Survey (GSOEP, 1984-2000), the British Household Panel Survey (BHPS, 1991-1999), and the Swiss Household Panel Survey (SHP, 1999). The three surveys can be considered as the most comprehensive sources of information on work related aspects, income, and other socio-economic variables in Europe.[1] Compared to other data sets previously used to test the effects of self-employment on job satisfaction (e.g. Blanchflower, 2000), these data

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[1] It is noteworthy, however, that the analyses presented here could be extended by data contained in the European Community Household Panel (ECHP), which covers 15 European countries.

sets have several advantages. On the one hand, they contain very detailed and carefully collected information on important work aspects, such as income, working hours, occupation, education, industry and other individual and firm-related characteristics, which makes it possible to hold a multitude of work characteristics constant when assessing job satisfaction differences between self-employed and employed people. On the other hand, two out of the three surveys have a panel structure that can be exploited in the empirical analysis. In the GSOEP and the BHPS, individuals can generally be observed over several waves, which allows us to investigate the important question of what happens to the job satisfaction of the same individuals when they move into or out of self-employment.

As the dependent variable in the empirical analysis, job satisfaction is used as a proxy for the utility people derive from their work. In the German GSOEP, job satisfaction is assessed using the following question: "How satisfied are you today with the following areas of your life: your job?" Individuals are asked to state their job satisfaction on a scale from 0 (totally unhappy) to 10 (totally happy). The question asked in the British BHPS is similar: "All things considered, how satisfied or dissatisfied are you with your present job overall?" The answers are here coded on a somewhat narrower scale from 1 (not satisfied at all) to 7 (completely satisfied). In Switzerland, the related question is "On a scale from 0 "not at all satisfied" to 10 "completely satisfied", can you indicate your degree of satisfaction with your job in general?" The question was only asked in 1999, which leaves one year of observation available for Switzerland.

In the empirical investigation, individual job satisfaction is related to several explanatory variables. As the main variable, information on the self-employment status of individuals is used. The dummy "self-employed" takes on the value of 1 when individuals state that they are self-employed in a given year, and is 0 when people in the workforce are employed by an organization.[2] Apart from self-employment status,

[2] In West Germany, an average 8.3 percent of the total workforce sampled in the GSOEP were self-employed in the years 1984-2000, and this ratio was relatively constant over the period (min 7.5 percent, max. 9.9 percent). In Britain, an average 12.0 percent of the workforce were self-employed during the years 1991-1999 (min. 11.0 percent, max 12.5 percent). In Switzerland, the ratio amounted to 10.5 percent in 1999. These self-employment ratios are comparable to those presented in other studies, e.g. Blanchflower, Oswald and Stutzer (2001), which indicate ratios of 10.1 percent for West Germany, 13.6 percent for Britain and 13.6 percent for Switzerland.

the three surveys contain detailed information on important control variables. Total personal income of an individual is used to account for effects of income on job satisfaction. The influence of working hours is measured using the total hours an individual works in an average week (including overtime hours). Moreover, information on tenure, age, gender, and education is included, as well as whether people work part-time or full-time, and in which occupation and industry they work. This creates a large and detailed set of control variables on objective aspects of work. In the GSOEP, for example, there is information on 7 categories of education, 88 categories of different occupations, and 45 industry categories. Similar sets of control variables are available for the BHPS and the SHP. Descriptive statistics for each of the three different data sets and the variables used are given in the appendix (Table A.1).

1.2. Empirical analysis: Basic results

Table 1 presents descriptive statistics on the differences in job satisfaction between self-employed and employed individuals, and it contains basic regressions on the effects of self-employment on job satisfaction. For all three countries considered, the raw differences show significantly higher job satisfaction for self-employed people. The difference is smallest in the case of West Germany (0.21 index points on a scale from 0-10) and reaches a similar magnitude in Britain (0.21 index points on a scale from 1-7) and Switzerland (0.41 index points on a scale from 0-10). These differences, however, might reflect a multitude of characteristics that distinguish self-employed individuals from employed people. For example, the self-employed might be more satisfied with their jobs just because they work in different industries than employed people. The multivariate regressions contained in Table 1 hold such differences in work characteristics constant. They include the control variables discussed above and are estimated using an ordered logit model, as job satisfaction is an ordinally scaled dependent variable. The weighting variables applied allow representative results on the subject level for the respective country.

Table 1. Self-employment and job satisfaction in West Germany, UK and Switzerland
(dependent variable: job satisfaction)

Variable	West Germany		UK		Switzerland	
	mean job satisf. (scale 0-10)	ordered logit regression	mean job satisf. (scale 1-7)	ordered logit regression	mean job satisf. (scale 0-10)	ordered logit regression
Self-employed	7.45** (.031)	.196** (.064)	5.61** (.017)	.278** (.056)	8.47** (.087)	.432** (.116)
Employed	7.24 (.008)	ref. group	5.40 (.006)	ref. group	8.06 (.031)	ref. group
Total net income (log)		.374** (.035)		.081** (.021)		.051 (.060)
Working hrs. per week		-.022** (.004)		-.007° (.004)		-.037** (.011)
(Working hrs)^2		.0001** (.0000)		.0001° (.0000)		.0004** (.0001)
Working part-time		-.035 (.032)		.401** (.064)		-.365** (.123)
Tenure		-.013** (.004)		-.029** (.006)		.009 (.012)
Tenure^2		.0003* (.0001)		.0007** (.0002)		-.0002 (.0003)
Age		-.035** (.009)		-.066** (.007)		-.038° (.020)
Age^2		.0004** (.0001)		.001** (.0001)		.0006** (.0002)
Sex (female)		.079* (.039)		.308** (.041)		.289** (.092)
Education		7 categ.		12 categ.		10 categ.
Job dummies		88 categ.		73 categ.		31 categ.
Industry dummies		45 categ.		10 categ.		14 categ.
Year dummies		17 categ.		9 categ.		-
No. of obs.		70229		52022		3431
No. of indiv.		11700		13380		3431
Time period		1984 - 2000		1991- 1999		1999
F		5.85**		13.84**		3.44**

Notes: Weighted ordered logit regressions. Robust standard errors in parentheses (corrected for repeated observations on individuals). Significance levels: ° $0.1 < p < 0.05$, * $0.01 < p < 0.05$, ** $p < 0.01$.
Source: Frey and Benz (2002); Data sources: GSOEP 1984-2000, BHPS 1991-1999, SHP 1999.

Moreover, in the case of the German and British panel, the estimated robust standard errors are corrected for repeated observations on the

individual level over time to correctly assess the statistical significance of the results.

The multivariate regressions confirm that the self-employed are more satisfied with their jobs than employees, even when a multitude of work aspects are controlled for. For all three countries, substantial and highly significant effects are found. Their size is comparable to the raw differences indicated in Table 1.[3] This, on the one hand, corroborates results previously reported in the literature. Higher job satisfaction among the self-employed has been consistently found in numerous European countries (see e.g. Blanchflower and Oswald, 1998; Blanchflower, 2000), in the United States (Kawaguchi, 2002; Hundley, 2001) and Canada (Finnie et al., 2002). The results, on the other hand, also extend previous findings by explicitly controlling for important instrumental aspects of work, like income and working hours. The self-employed do not seem be more satisfied with their jobs because they are materially better off, e.g. by having higher incomes or a lower number of working hours. This finding very much corresponds with the existing knowledge on self-employment. An influential study by Hamilton (2000), for example, shows that self-employed people on average earn lower wages than employees. Self-employed people have also been found to be confronted with higher income fluctuations (Carrington et al., 1996) and to accept lower risk-adjusted returns on their entrepreneurial investments (Moskovitz and Vissing-Jorgensen, 2002). If anything, self-employment thus seems to be associated with inferior material outcomes. A positive interpretation of this finding would, of course, be that people forego considerable material gains in order to be self-employed (in the sense of compensating wage and return differentials).[4]

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[3] Strictly, the results have to be interpreted by looking at the marginal effects for each variable, as the estimated coefficients of an ordered logit regression do not have any intuitive interpretation. The marginal effects for the variable "self-employed", indicating the change of the probability that an individual is more satisfied with work by one point when he or she is self-employed rather than employed, are 2.0 percent for Germany, 4.5 percent for UK and 8.7 percent for Switzerland (probability change for the highest score of the job satisfaction variable). The magnitude of the marginal effects can more easily be assessed, however, if, for simplicity, one uses an OLS estimator rather than ordered logit. The estimated coefficients for the variable "self-employed" from OLS-regressions are 0.22 for Germany, 0.16 for UK, and 0.28 for Switzerland.

[4] Studies that use a compensating wage differential approach to identify non-pecuniary benefits of being self-employed are often hampered by data problems.

1.3. Empirical analysis: Following people over time

A common concern with such results as those reported above is that an observed correlation between self-employment and job satisfaction does not necessarily reflect causality. It might, for example, be that the self-employed are a selection of generally optimistic people that have a natural tendency to be more satisfied with their jobs, irrespective of in what employment status they are. The estimated coefficients would then not reflect benefits from being self-employed, but merely personality differences between the two groups. As well, causality may run in the reverse direction if happier people are more likely to become self-employed. To rule out such concerns, two different methodologies are applied.

First, the panel structure of the GSOEP and the BHPS is exploited where people can be observed moving into or out of self-employment. This allows us to follow people over time and investigate how the job satisfaction of the same people changes when they change their self-employment status. Technically, regressions with individual fixed effects can be estimated that control for time-invariant personal characteristics. The results of such fixed-effects-regressions for West Germany and Britain indicate that the job satisfaction effects of self-employment are a robust phenomenon. Table 2 contains three different specifications for each country. In a first step, the same specifications as in Table 1 are estimated including individual fixed effects (model I).[5] The results show that people who either move in or out of self-employment are, on average, more satisfied with their jobs when they are self-employed. The estimated coefficients for the variable "self-employed" are of somewhat smaller magnitude than those reported in Table 1, but still statistically significant.

Often, the self-employed do not report their incomes in surveys, or do not report them in an accurate way. In the same vein, self-employed people have been found to avoid more taxes than employed people (Joulfaian and Rider 1998), which limits the usefulness of official income statistics for analysis. Nevertheless, there are studies that convincingly circumvent such data problems, in particular Hamilton (2000), who finds that the self-employed are willing to forgo income in order to be their own bosses.

[5] As ordered logit fixed effects estimators are not yet commonly available, the analysis is carried out using an ordinary least squares fixed effects estimator. A new ordered probit fixed effects estimator has e.g. been applied to the study of job satisfaction in recent papers by Ferrer-i-Carbonel and Frijters (2004) and D'Addio, Eriksson and Frijters (2003).

One aspect not captured by model I, however, is that it might make a difference whether one enters or leaves self-employment. Model II allows for such differences by splitting up changers into three subgroups: those who become self-employed and stay self-employed during the observation period ("in-movers"), those who leave self-employment and stay employed during the observation period ("out-movers"), and those who change more than once between employment and self-employment ("multiple changers"). This partitioning can also address further concerns about selection; arguably, the first group can be considered as those who become entrepreneurs and successfully stay so, while the second group might leave self-employment and stay employed for equally good reasons (e.g. because they somehow failed). The results from model II show that for both West Germany and Britain, the major part of the self-employment effect indeed stems from those people that become self-employed and stay so. "In-movers" report major and highly significant increases in job satisfaction after having moved into self-employment.[6] In contrast, "out-movers" become slightly more satisfied with their jobs after they have left self-employment (although not significantly). The estimates thus indicate that "in-movers" as well as "out-movers" improve their job situation after a change, but the first group much more so than the second, resulting in an average positive effect of being self-employed.

[6] "Multiple changers" also report somewhat higher job satisfaction when they are self-employed, although this result is only statistically significant for the British sample.

**Table 2. Self-employment and job satisfaction:
Fixed effects regressions for Germany and UK
(dependent variable: job satisfaction)**

Variable	West Germany			UK		
	Model I	Model II	Model III	Model I	Model II	Model III
Self-employed (SE)	.111° (.058)			.162** (.035)		
In-Movers (1=periods when SE)		.347** (.098)	.405** (.099)		.350** (.060)	.369** (.060)
Out-Movers (1=periods when SE)		-.202 (.156)			-.059 (.069)	
Multiple changers (1=periods when SE)		.043 (.083)			.141* (.062)	
Job changers (1=periods at new firm)			.142** (.036)			.068** (.023)
Total net income (log)	.461** (.030)	.459** (.030)	.454** (.030)	.041** (.011)	.042** (.011)	.039** (.011)
Working hours per week	-.007* (.003)	-.006° (.003)	-.007** (.003)	-.0008 (.002)	-.0009 (.002)	-.0009 (.002)
(Working hours)^2	.0000 (.0000)	.0000 (.0000)	.0000 (.0000)	.0000 (.0000)	.0000 (.0000)	.0000 (.0000)
Working part-time	-.015 (.025)	-.014 (.025)	-.013 (.025)	.080* (.035)	.080* (.035)	.082* (.035)
Tenure	-.049** (.004)	-.049** (.004)	-.046** (.004)	-.056** (.003)	-.055** (.003)	-.054** (.003)
Tenure^2	.0008** (.0001)	.0008** (.0001)	.0008** (.0001)	.001** (.0001)	.001** (.0001)	.001** (.0001)
No. of obs.	70229	70229	70028	52022	52022	52022
No. of individ.	11700	11700	11668	13380	13380	13380
Avg. obs. per individual	6.0	6.0	6.0	3.9	3.9	3.9
F		14.24**	14.13**	14.32**	9.17**	9.18**	9.29**

Notes: OLS regressions with individual fixed effects. In addition to the variables shown, the regressions include the same variables for age, education, job, industry, and year as in Table 1. Significance levels: ° $0.1 < p < 0.05$, * $0.01 < p < 0.05$, ** $p < 0.01$.
Source: Frey and Benz (2002); Data sources: GSOEP 1984-2000, BHPS 1991-1999.

Model III addresses still another concern: the estimates for the "in-movers" might just reflect a successful change in the job situation, an effect possibly also experienced by people who simply change jobs. To rule this alternative explanation out, model III compares "in-movers" to a group of employed people that changes exactly once to

a new firm during the observation period. These "job changers" are likely to be a suitable comparison group because they successfully change jobs, sticking with their new employer. The results from model III show that "job changers" indeed report significantly increased job satisfaction after moving to a new firm. Nevertheless, the positive effects are much smaller than those for people who become self-employed (the coefficients on the variables "in-movers" and "job changers" are significantly different at any conventional levels).[7] Thus, for both West Germany and Britain, we find robust evidence that people moving into self-employment enjoy higher utility from their work, even when unobserved individual heterogeneity, the effects of a shift in the job situation, and changes in instrumental outcomes are controlled for.

1.4. Empirical analysis: A "natural experiment" on self-employment creation

The second approach applied here to study the job satisfaction effects of self-employment takes advantage of a unique situation that created a sort of "natural experiment" on self-employment creation. After the fall of the Berlin wall in 1989, East Germany experienced a fundamental and largely unexpected change in the structure of its economy. Notably, the situation changed dramatically with respect to self-employment: for the first time, it became a realistic option for East Germans. Self-employment was severely restricted under the socialist regime in the German Democratic Republic, because it did not fit into a socialist economic system. As a consequence, the ratio of self-employment in the workforce is estimated at a low 2.1 percent for the last year of the GDR (Lechner and Pfeiffer, 1993). East Germans were first sampled in the GSOEP in 1990 and every year thereafter. The GSOEP thus offers the unique possibility to observe the developments in self-employment and its consequences in the ex-GDR regions after 1989.

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[7] Note also that the coefficients for the "out-movers" (model II) are of similar size as the coefficients for "job changers", i.e. people moving out of self-employment do not improve their job satisfaction more than employed people who change jobs.

Table 3. Self-employment and job satisfaction—results from a natural experiment in East Germany (dependent variable: job satisfaction)

Year	1989	1990	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Fixed effects
Ratio self-empl./ workforce	2.1%	3.4%	3.4%	5.3%	6.1%	7.2%	7.3%	7.5%	8.0%	8.6%	8.2%	8.4%	8.0%	–
Self-empl. (SE)		.853** (.256)	–	.287 (.273)	.698** (.266)	.462° (.271)	.371 (.263)	.406° (.239)	.546* (.239)	.442° (.243)	.245 (.224)	.376° (.227)	.425° (.225)	.656** (.116)
Was SE before "Wende"		–	.708* (.290)											
Became SE after "Wende"		–	1.446** (.432)											
Total income (log)		.354* (.142)	.367** (.142)	.585** (.139)	.925** (.137)	.609** (.145)	1.031** (.160)	.965** (.137)	.913** (.161)	.556** (.152)	.575** (.117)	.542** (.118)	.613** (.119)	.367*** (.050)

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Table 3. Continued....

Year	1989	1990	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Fixed Effects
Working week hr./		-.038° (.021)	-.038° (.021)	.079** (.018)	-.010 (.023)	.008 (.023)	-.070** (.027)	-.015 (.019)	-.004 (.024)	.007 (.024)	-.018 (.018)	.003 (.016)	-.015 (.022)	.027** (.008)
(Working hr.)^2		.0006* (.0002)	.0006** (.0002)	-.0007** (.0002)	.0002 (.0002)	.0000 (.002)	.0008** (.0003)	.0002 (.0002)	.0000 (.0003)	-.0002 (.0002)	.0001 (.0002)	-.0001 (.0002)	-.0000 (.0002)	-.0002* (.0001)
Life satisf. 5 ys. before		–	.112** (.015)											
No. of obs.	–	2675	2675	2077	1917	1720	1633	1716	1600	1581	1767	1732	1646	20064
Chi^2	–	250.9**	310.4**	262.4**	290.7**	267.6**	219.4**	267.0**	202.7**	213.9**	182.8**	176.2**	191.7**	–

Notes: Ordered logit regressions. Standard errors in parentheses. The fixed effects regression is OLS. In addition to the variables shown, the regressions include variables on age, age squared, sex, and dummies for education, job, industry, and year, as in Table 1 for West Germany. Significance levels: ° $0.1 < p < 0.05$, * $0.01 < p < 0.05$, ** $p < 0.01$.
Source: Frey and Benz (2002); Data source: GSOEP 1990-2000.

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Table 3 summarizes the results from this natural experiment on self-employment creation.[7] It can be observed that the sudden absence of restrictions on self-employment indeed created a steady and substantial rise in the ratio of self-employed people in the workforce. Already in 1990, the ratio had risen from 2.1 percent to 3.4 percent, and it grew to 7.3 percent in the three years until 1993. Afterwards, the ratio approached a stable 7.5-8.5 percent, approximately converging to the ratios of self-employment found in West Germany at this time. What were the effects on job satisfaction experienced by the people flowing into self-employment? The results presented in Table 3 indicate that they are substantial. The ordered logit regressions for the East German workforce presented contain the same variables as the one for West Germany in Table 1 and are run separately for every year. For the first year 1990, the group of self-employed people is split into those in self-employment already before 1989, and those that became self-employed right after the lifting of the iron curtain.[8] For the years after, only the net effect for all self-employed people is presented. The effects of becoming self-employed can most strikingly be illustrated by those people who moved into self-employment in 1990. Their job satisfaction is by a magnitude higher than that of employed East Germans at the time (the estimated coefficient of 1.340 amounts to approx. 1.5 index points on a job satisfaction scale from 0-10). Note that this effect is not due to a generally low job satisfaction among the employed in East Germany working in still mainly socialist firms; in fact, the average job satisfaction in the East German work force in 1990 was as high as in West Germany (7.20 vs 7.25); it only dropped sharply afterwards (probably because of the onset of privatizations and tougher economic conditions like rising unemployment). Moreover, it is not the case that intrinsically more satisfied people were more likely to become self-employed after the fall of the Berlin wall. The 1990 regression includes a variable on the "life satis-

[7] Note that the fall of the Berlin Wall did not create a natural experiment in the sense that people were randomly chosen to become self-employed. Rather, the term is here used to depict an exogenous change in restrictions on self-employment.

[8] This is possible because in the first wave of the GSOEP that sampled East Germans (1990), they were asked some questions about their past in the GDR. Most importantly, it is known whether individuals had become self-employed only after December 1989, or were self-employed already before. In 1990, about 25 percent of all self-employed had moved into self-employment after the lifting of the iron curtain.

faction five years ago"; it captures the answers of East Germans to the question of how they rated their general satisfaction with life back in the GDR times in 1985. If only intrinsically satisfied (or dissatisfied) people had become self-employed after the fall of the iron curtain, the inclusion of this variable would lower the estimated coefficient on the "newly self-employed" to zero.[9] Table 3 furthermore indicates that, for every year, a positive and mostly significant coefficient of being self-employed is estimated; this shows that the large share of people moving into self-employment indeed enjoyed higher subsequent job satisfaction than their counterparts who had remained employed over the period (over and above objective outcomes like income or working hours). The results also hold if a fixed effects model for the whole period from 1990-2000 is estimated (which again only considers observed "changers" from employment into self-employment in the estimation of the self-employed coefficient).

1.5. Evaluation

To summarize the results so far, the "fixed effects" and the "natural experiment" approaches presented lead us to conclude that self-employed people are indeed more satisfied with their jobs. Moreover, this cannot be attributed to material benefits from work, as the regressions control for important material outcomes like income or working hours. Rather, self-employment seems to be an attractive form of employment because it is associated with non-material benefits.

Do the results presented so far suggest that self-employment is "for everyone", i.e. that any individual picked at random from the population of employees would enjoy higher job satisfaction as a self-employed person? It is important to stress that this is not necessarily the case. The fixed-effects methodology applied here only rules out that the self-employed are more satisfied with their jobs because they have a natural tendency to be more satisfied. But it could still be the case that only those actively seeking self-employment actually value its characteristics. Indeed, the literature on self-employment tends to view the self-employed as individuals with different personality traits. For example, they are seen as having a strong need for self-determination, a pronounced belief in their ability to control life, and

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[9] The results on the self-employment variables remain qualitatively very similar when the variable on "life satisfaction 5 years ago" is not included in the regression.

a relatively low risk-aversion (see e.g. DeWit, 1993). The average employee might not have these personality traits that are important for the make-up of an entrepreneur. As a consequence, he or she might not experience higher satisfaction in self-employment, but would rather prefer to remain an employee.

In contrast to this view, we will argue in Section 4 that there is a considerable pool of "latent entrepreneurs" in industrial countries, i.e. people that say they would prefer being self-employed to being an employee. The fact that so many employees view self-employment as something attractive suggests that the characteristics of self-employment might not be valued by the self-employed only. Indeed, in Frey and Benz (2002), we show that also the average employee values work characteristics that are closely associated with self-employment, and in Section 2.2 of this paper, we discuss some further evidence related to this point. While the self-employed might have a particularly strong preference for being self-employed, there is reason to believe that also employees attach a considerable value to the aspects that make self-employment attractive (but their respective preferences may indeed be weaker).

But what exactly are the benefits of being self-employed? The following section explores in more detail what the reasons behind the self-employment—job satisfaction differential are, and, at the same time, extends the analysis to a sample of 23 countries from different geographical and cultural world regions.

2. Why are the self-employed happier with their jobs? Evidence from a sample of 23 countries

2.1. Data

Section 2 draws on material first presented in Benz and Frey (2003). In this paper, we conducted an empirical analysis based on the International Social Survey Program 1997 (ISSP97), a survey of roughly 16000 individuals in 23 countries. Although the ISSP97 is less comprehensive than established panels, such as the German Socio-Economic Panel or the British Household Panel Survey used above, it has other advantages that make it an interesting data source for analysis.

First, the ISSP97 includes a much broader set of countries than investigated in previous studies, combining data from different geo-

graphical and cultural regions. It covers countries from Western Europe (Denmark, France, Germany, Italy, Norway Portugal, Sweden, Switzerland, UK), North America (Canada ,US), Eastern Europe (Bulgaria, Czech Republic, Hungary, Poland, Russia, Slovenia) and a residual group of "non-western" countries (Cyprus, Japan, New Zealand, Israeli Jews and Arabs, and the less developed countries Bangladesh and the Philippines).[10] Second, the ISSP97 contains information on all the basic variables required for the empirical analysis. Self-reported job satisfaction is again used in the empirical analysis as the dependent variable. It is assessed on a scale from 1 ("completely dissatisfied") to 7 ("completely satisfied") with the question "How satisfied are you in your (main) job?". Self-employment status is measured with a dummy "self-employed" that takes on the value of 1 when individuals state that they are self-employed, and is 0 when people in the workforce are employed by an organization ("In your (main) job, are you an employee or self-employed?"). The ISSP97 moreover includes information on some important control variables: personal work income (assessed as income categories or as absolute values, depending on the country), the average number of hours worked per week (including overtime), education (measured in years of schooling), and the age and gender of individuals. Third, and most importantly, the ISSP97 contains a set of unique survey questions that can be used to perform a direct empirical test of the reasons behind the self-employment—job satisfaction relationship. Both self-employed and employed individuals are asked to rate several important dimensions of their work: "For each of the following statements about your main job, how much do you agree or disagree that it applies to your job?": (i) "my job is secure", (ii) "my income is high", (iii) "my opportunities for advancement are high", (iv) "my job is interesting", (v) "I can work independently", (vi) "in my job I can help other people" and (vii) "my job is useful to society". Individuals give an evaluation for each of these work aspects on a scale from 1 ("strongly disagree") to 5 ("strongly agree").

The respective answers are here used to investigate the reasons for the higher job satisfaction among the self-employed. In a first step, job satisfaction regressions are estimated as in Section 1, including the variable on self-employment and control variables. In a second step,

[10] The ISSP97 originally included two more countries, Spain and the Netherlands, which cannot be used in the empirical analysis because information on self-employment status is missing.

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there is an examination of how the (presumably positive) coefficient on the variable "self-employed" changes when individuals' evaluations of the different job aspects are entered into the regression. If, for example, the inclusion of the variable on "job security" leaves the size and the significance of the self-employment coefficient unaffected, it follows that differences in perceived job security are not responsible for the differences in job satisfaction between self-employed and employed people. If, in contrast, the coefficient is lowered to zero, one is led to conclude that differential job security is important in explaining why the self-employed are more satisfied with their jobs. The same procedure can be applied to every job aspect, indicating which work characteristics account for higher job satisfaction among the self-employed.[11]

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[11] Note that individual heterogeneity is unlikely to bias this empirical test. If e.g. intrinsically optimistic people report higher job satisfaction regardless of their employment situation, and at the same time are more likely to be self-employed, a positive relationship between self-employment and job satisfaction might merely reflect personality differences, as discussed in Section 1. However, it would then also seem likely that self-employed people evaluate every characteristic of their work in a positive way, i.e., that the higher job satisfaction of the self-employed is explained by every single aspect of their job. The empirical test applied here importantly hinges on the idea that some work characteristics explain the self-employment—job satisfaction differential, while others do not. In Section 2.2. below, we also discuss the related argument that the self-employed might have different preferences for certain work characteristics than employees.

**Table 4. Self-employment and job satisfaction in 23 countries
(dependent variable: job satisfaction)**

Region / Country	Job satisfaction (means)		Coefficient on the variable "self-employed" (ordered-logit-regressions)	
	Self-employed	Employed	Model I	Model II
Western Europe				
Germany	5.52 (N=93)	5.12 (N=892)	0.746** (N=888)	0.701** (N=911)
UK	5.40 (N=82)	5.08 (N=485)	0.514° (N=504)	0.579* (N=560)
France	5.50 (N=34)	5.06 (N=653)	0.957** (N=656)	0.796* (N=687)
Italy	5.45 (N=142)	5.06 (N=321)	0.895** (N=289)	0.700** (N=460)
Portugal	5.24 (N=226)	5.14 (N=662)	0.267 (N=846)	0.122 (N=853)
Switzerland	5.87 (N=228)	5.43 (N=1505)	0.682** (N=1442)	0.773** (N=1725)
Denmark	5.84 (N=45)	5.68 (N=593)	0.584 (N=581)	0.349 (N=635)
Norway	5.43 (N=157)	5.20 (N=1456)	0.374* (N=1304)	0.335* (N=1395)
Sweden	5.70 (N=86)	5.20 (N=728)	1.049** (N=728)	0.968** (N=768)
North America				
US	5.63 (N=112)	5.32 (N=714)	0.405° (N=713)	0.414* (N=822)
Canada	5.44 (N=98)	5.06 (N=528)	0.500* (N=470)	0.512* (N=516)
Eastern Europe				
Hungary	5.05 (N=93)	4.77 (N=525)	0.041 (N=510)	0.462* (N=618)
Czech Republic	5.63 (N=54)	5.06 (N=467)	1.026° (N=360)	0.889** (N=516)
Poland	5.20 (N=149)	5.08 (N=392)	0.267 (N=479)	0.296 (N=517)
Bulgaria	5.53 (N=53)	4.96 (N=405)	0.873** (N=400)	0.978** (N=448)
Slovenia	5.08 (N=49)	4.95 (N=458)	0.116 (N=395)	0.235 (N=486)
Russia	4.95 (N=86)	4.84 (N=773)	0.306 (N=671)	0.216 (N=817)

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Table 4. Continued….

Region / Country	Job satisfaction (means)		Coefficient on the variable "self-employed" (ordered-logit-regressions)	
	Self-employed	Employed	Model I	Model II
Other, "non-western" countries				
Japan	5.17 (N=195)	4.74 (N=517)	0.391° (N=559)	0.382* (N=679)
New Zealand	5.32 (N=66)	5.44 (N=236)	-0.173 (N=276)	-0.107 (N=283)
Cyprus	6.08 (N=153)	5.50 (N=423)	1.225** (N=557)	1.182** (N=564)
Israel (Jews)	5.91 (N=93)	5.24 (N=364)	0.602* (N=383)	1.004** (N=454)
Israel (Arabs)	5.72 (N=46)	5.36 (N=134)	1.091* (N=158)	0.951** (N=174)
Developing countries				
Bangladesh	5.43 (N=53)	5.17 (N=421)	0.799* (N=463)	0.897** (N=474)
The Philippines	5.71 (N=307)	5.51 (N=300)	0.142 (N=482)	0.306° (N=595)
Personal income			yes	no
Working hours			yes	no
(Working hours)^2			yes	no
Education			yes	Yes
(Education)^2			yes	yes
Age			yes	yes
(Age)^2			yes	yes
Gender			yes	yes

Notes: Numbers in the two left-hand columns are unweighted sample means; the two right-hand columns contain estimated coefficients on the variable "self-employed" from unweighted ordered-logit-regressions. Model I is estimated including variables on personal work income (dummy variables for income categories or log(income), depending on the country), average weekly hours worked and hours worked squared. In model II, these three variables are dropped from the analysis. Significance levels: ° $0.1 < p < 0.05$, * $0.01 < p < 0.05$, ** $p < 0.01$.
Source: Benz and Frey (2003); Data Source: ISSP97, Module on "Work Orientations".

2.1. Empirical analysis: Basic results

Table 4 presents the basic results on the relationship between self-employment and job satisfaction in the 23 countries considered. In the two left-hand columns of the table, descriptive statistics are re-

ported for each country, indicating the differences in average job satisfaction between self-employed and employed people. In the two right-hand columns, the effects of self-employment on job satisfaction are evaluated in multivariate ordered-logit-regressions. Besides the dummy "self-employed", for which the estimated coefficient is reported in Table 4, a first specification also includes control variables on work income, weekly hours worked, weekly hours worked squared, education, education squared, age, age squared and gender ("model I"). In a second specification, the same regressions are run without the variables on income and working hours ("model II"). The reason for this is mainly that information on work income is missing for many individuals in the ISSP97, particularly for self-employed people. The sample sizes for the second specification can thus be substantially higher, which may reduce potential estimation biases, but also allows us to assess the robustness of the estimated results.

The results in Table 4 confirm the findings reported in Section 1: self-employed people enjoy higher job satisfaction than employees in essentially all 23 countries covered by the ISSP97. The raw differences indicate a positive relationship between self-employment and job satisfaction for every country, except for New Zealand, where the self-employed are slightly less happy with their jobs than employed people (although not significantly so). The findings are confirmed in the regression analysis. Positive and sizeable coefficients on the variable "self-employed" are found for Western European and North American countries in particular. Also in Eastern European and non-western countries, self-employment in general is associated with higher job satisfaction, but the estimated coefficients do not reach statistical significance in every case (the number of self-employed individuals in the samples is often quite small). As factors like income or working hours are held constant in the first regression specification, it can be ruled out that the differences in job satisfaction are due to differences in the material situation of self-employed and employed individuals.[12]

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[12] The results in Table 4 moreover remain qualitatively very similar when a dummy variable "farming" is included in the regressions, capturing whether an individual is working in the agricultural sector. In some of the countries considered, agriculture makes up a considerable share of the economy, and the traditionally high incidence of self-employment in this sector could potentially bias the results. Unfortunately, there is no occupational information available for Bangladesh, where the rate of agricultural employment is particularly high.

2.2. Empirical analysis: Causes of higher job satisfaction among the self-employed

In a next step of the empirical analysis, potential explanations for the observed self-employment—job satisfaction relationship are examined. For that purpose, the variables on different work aspects described in the data section are used. It is tested how the coefficient on the self-employment variable changes when the individuals' evaluation of a particular job aspect is entered into the regression. As the ISSP97 includes seven such aspects, a separate analysis for every country would lead to a large set of results. The analysis is therefore conducted for groups of countries: Western European countries, North American countries, and Eastern European nations are pooled together, whereas "non-western" countries continue to be analyzed separately, because this residual category appears too heterogeneous to form a single group.[13]

Table 5 gives an overview of the respective results. In the first column, a "basic" coefficient on the self-employment variable is reported for each group of countries, estimated by an ordered-logit-regression, including a set of control variables (as in model II above) and country-fixed effects where appropriate. In accordance with the findings on single countries, a positive relationship between self-employment and job satisfaction is estimated for every geographical and cultural region. In the columns that follow, it is shown how the coefficient on the variable "self-employed" is affected when individuals' evaluations of the different work characteristics are included in the regression. These are, in turn, the assessments of the job dimensions "I can work independently", "my job is interesting", "my job is secure", "my income is high", "my opportunities for advancement are high", "in my job I can help other people" and "my job is useful to society".

The results in Table 5 clearly show that the higher job satisfaction of self-employed people can be directly attributed to the greater autonomy they enjoy, at least in western countries. In Western Europe, North America and Eastern Europe, the greater autonomy of the self-employed *fully* explains the job satisfaction differential be-

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[13] Moreover, the "non-western" country New Zealand is dropped from the analysis, as it is the only country where the self-employed are not more satisfied with their work than employed people, and hence an analysis of job satisfaction differences cannot sensibly be made.

tween self-employed and employed people; when individuals' evaluation of the extent to which they "can work independently" is entered into the regression, the coefficient on the variable "self-employed" is essentially reduced to zero and loses statistical significance. To a considerable extent, also work perceived as more interesting accounts for the higher job satisfaction among the self-employed. In contrast, other work dimensions like pay, job security or advancement opportunities do not seem to differ sufficiently between the two groups to explain why the self-employed are happier with their jobs. The picture is somewhat more mixed for the residual group of "non-western" countries. Here, it is not possible to fully relate the self-employment—job satisfaction effect to one of the work dimensions considered. Nevertheless, also in non-western countries like Japan, Israel, Cyprus and the less developed countries Bangladesh and the Philippines, perceived autonomy overall emerges as the work aspect that explains the higher job satisfaction among the self-employed the best.

In addition to the results presented in Table 5, the same regressions were also run separately for the two groups of employed and self-employed people (results not shown). This analysis can help address a further issue: Are the self-employed more stisfied with their jobs because they have more autonomy ("institutional" explanation), or because they value autonomy more ("preference-based" explanation)? A preference-based explanation would be supported, for example, if a larger coefficient on the variable "job independence" is estimated for the group of self-employed people than for the group of employees. This would indicate that autonomy at work affects the job satisfaction of the self-employed more than the job satisfaction of employees. The results, however, do not support this view. In general, having autonomy at work and an interesting job turns out to be as important for employed people as for the self-employed; the coefficients of the respective variables on job satisfaction are very similar for the two groups in most cases. Self-employed and employed people do thus not seem to have strongly different preferences for self-determination at work; rather, self-employment appears to be genuinely associated with more independence and autonomy, a work characteristic also valued by the average employee.

Table 5. Causes of higher job satisfaction among the self-employed (dependent variable: job satisfaction)

Estimated coefficients on the variable "self-employed" (ordered-logit-regressions)

Region / country	Basic regression	Regression incl. eval. of autonomy	Regression incl. eval. of "work is interesting"	Regression incl. eval. of job security	Regression incl. eval. of income	Regression incl. eval. of advancement opportunities	Regression incl. eval. of possibility to help others	Regression incl. eval. of use for society
Western Europe (N=7994)	0.539** (0.109)	0.053 (0.100)	0.168 (0.101)	0.616** (0.138)	0.565** (0.130)	0.513** (0.084)	0.474** (0.109)	0.474** (0.107)
North America (N=1338)	0.467** (0.142)	0.142 (0.147)	0.132 (0.147)	0.462** (0.144)	0.379** (0.144)	0.258° (0.148)	0.448** (0.144)	0.451** (0.144)
Eastern Europe (N=3402)	0.411** (0.119)	0.001 (0.143)	0.271* (0.112)	0.412** (0.090)	0.156 (0.097)	0.334* (0.085)	0.378* (0.109)	0.419* (0.122)
Japan (N=679)	0.382* (0.176)	0.271 (0.179)	0.206 (0.178)	0.271 (0.180)	0.340* (0.177)	0.315° (0.186)	0.345° (0.180)	0.405* (0.181)
Israel (Jews) (N=454)	1.004** (0.219)	0.691** (0.230)	1.063** (0.227)	0.987** (0.221)	0.818** (0.226)	0.924** (0.227)	1.006** (0.224)	1.044** (0.223)
Israel (Arabs) (N=174)	0.951** (0.344)	0.710° (0.365)	0.904* (0.365)	0.860* (0.348)	0.872* (0.353)	0.989** (0.351)	0.935** (0.347)	0.875* (0.347)

Table 5. Continued....

Estimated coefficients on the variable "self-employed" (ordered-logit-regressions)

Region / country	Basic regression	Regression incl. eval. of autonomy	Regression incl. eval. of "work is interesting"	Regression incl. eval. of job security	Regression incl. eval. of income	Regression incl. eval. of advancement opportunities	Regression incl. eval. of possibility to help others	Regression incl. eval. of use for society
Cyprus (N=564)	1.182** (0.190)	0.947** (0.209)	1.088** (0.197)	1.155** (0.193)	0.932** (0.196)	1.262** (0.208)	1.202** (0.205)	1.241** (0.205)
Less developed countries (N=1069)	0.315* (0.138)	0.151 (0.143)	0.240 (0.148)	0.359* (0.149)	0.305* (0.140)	0.164 (0.150)	0.293* (0.145)	0.290* (0.148)

Notes: Unweighted ordered-logit-regressions. Standard errors in parentheses (robust in the case of Western and Eastern Europe). Western Europe includes the countries Germany, UK, France, Italy, Portugal, Switzerland, Denmark, Norway, and Sweden; North America consists of the United States of America and Canada; Eastern Europe includes Hungary, Czech Republic, Poland, Bulgaria, Slovenia and Russia; the less developed countries are Bangladesh and the Philippines. New Zealand is dropped from the analysis. The sample sizes indicated refer to the "basic regression" and can be slightly lower in the other specifications. In addition to the self-employment variable reported, the regressions include variables on education, education squared, age, age squared, gender and country-fixed effects where appropriate. Significance levels: ° 0.1 < p < 0.05, * 0.01 < p < 0.05, ** p < 0.01.

Source: Benz and Frey (2003); Data Source: ISSP97, Module on "Work Orientations".

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2.3. Discussion

The results presented in this section are, in our view, novel in three respects. First, they give a clear answer to the question of why the self-employed are happier with their jobs: the self-employed enjoy considerable utility from the opportunity of "being their own boss". The value of autonomy essentially explains the whole job satisfaction differential between self-employed and employed people, at least in western countries. Second, seen from a different angle, the results document for the first time, to our knowledge, that autonomy constitutes an important non-pecuniary work benefit.[14] Autonomy is appreciated because it is associated with the possibility of working independently, but the self-employed also seem to enjoy considerable utility from their work because they perceive their jobs as more interesting. This latter aspect is not necessarily in contradiction with the first; arguably, interesting work is strongly connected with autonomy of choice, in the sense that the self-employed are freer to select tasks they find interesting, and that they can determine the variety of their tasks. Both aspects can probably best be subsumed under the term "self-determination". Third, our results show that the autonomy associated with self-employment is particularly valued in western countries, but not exclusively so. This stands in contrast to "culturalist" theories stating that autonomy of choice may be important to people in "individualistic" western cultures, like the United States, but not in more "collectivistic" non-western cultural contexts, like Asia (e.g. Iyengar and Lepper, 1999; Schwartz, 2000; Markus and Kitayama, 1991). We find that self-employed people are more satisfied with their jobs in essentially all countries considered, also in Asian countries like Japan, and in former communist countries of Eastern Europe, where

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[14] We are aware of one study that reaches similar results, but only for a single country. Hundley (2001) shows that the higher job satisfaction of self-employed individuals in the United States is strongly related to their greater autonomy. It is nevertheless interesting that also authors investigating compensating wage and return differentials refer to the potential value of autonomy in interpreting their results. Hamilton (2000, p. 628) e.g. finds that the self-employed earn lower wages than the employees and concludes: "For most entrepreneurs, the empirical evidence [...] is consistent with the notion that self-employment offers significant non-pecuniary benefits, such as "being your own boss"." Moskovitz and Vissing-Jorgensen (2002: 772f.) regard the value of autonomy as a potential explanation of their finding that entrepreneurs accept lower risk-adjusted returns on their entrepreneurial investments than those they could earn on the capital market.

great importance used to be attached to collectivist decision-making. The analysis moreover indicates that also in non-western countries, the higher job satisfaction of the self-employed is to a considerable extent based on the fact that individuals value the autonomy associated with self-employment. Thus, the results thus do not support a culturalist view. Rather, autonomy of choice seems to be of value in many cultures for individuals that choose self-employment.

These arguments already indicate that an analysis of the self-employment—job satisfaction relationship may not only be interesting in itself, but can also inform economics in a broader sense. This is illustrated in the following two sections.

3. Implications for economic theory

We submit that the findings reported in this paper have more general implications for economic theory. They can be interpreted as evidence of a novel concept called "procedural utility". Procedural utility means that people do not only care about instrumental outcomes, but also value the processes and conditions leading to outcomes. Procedural utility thus represents a completely different approach to human well-being than the standard approach applied in economics. The economic concept of utility as generally applied today is outcome-oriented: individual utility is seen as a result of the benefits and costs associated with instrumental outcomes. In contrast, procedural utility focuses on people's preferences for *how* instrumental outcomes are generated.

This is not to doubt the importance of outcomes; obviously, individuals care a lot about outcomes, and economics has derived a powerful model of human behavior based on this insight (e.g. Becker, 1976; Frey, 1999; Lazear, 2000). But in economic analysis, the notion that outcomes are not the only source of human utility and not the only driving force behind human behavior has become almost completely lost. The concept of procedural utility seeks to reintegrate human concerns into economics that go beyond instrumental outcomes. Elsewhere, we have shown that procedural utility is an empirically relevant phenomenon in many areas of the economy, polity and society, and that it can enrich standard economic theory and empirical research (Frey et al., 2003).

Procedural utility may come from two sources. First, there is the procedural utility people get from institutions. People have prefer-

ences about how allocative and redistributive decisions are taken. They get utility from living and acting under particular institutions over and above outcomes. Second, it may be argued that procedural utility is involved in the interaction between people. People evaluate actions towards them not only based on the consequences, but also on how they feel treated by others. An individual is, for example, emotionally affected in a negative way by an action when he or she attributes the actor with a criminal rather than a neutral motive, quite irrespective of the outcome. This aspect of procedural utility is generally referred to as procedural justice or procedural fairness, and it has spawned a large literature in the social sciences outside economics (see e.g. Thibaut and Walker, 1975; Lind and Tyler, 1988; Tyler, 1990).

For economists, procedural utility is particularly interesting because of its relationship with institutions. Institutions are the rules or procedures with which decisions are taken in society. The price system (the market), democracy, hierarchy, and bargaining are generally seen as the most important formal systems for reaching decisions (Dahl and Lindblom, 1953). Economics is often concerned with the comparative analysis of institutions, like, e.g., the advantages of the market in allocating goods compared to hierarchical, bureaucratic systems. Procedural utility submits that institutions are not only important because they shape outcomes, but also because individuals value institutions as such. Previous research has shown this to be the case for the institution of democracy. A large literature in the social sciences, especially in psychology, political science and sociology, attributes a positive value to democratic participation, as it enhances individuals' perception of self-determination (for an extensive survey, see Lane 2000, Ch. 13). The rights to participate in political decisions are a crucial characteristic of any democratic institution, ranging from voting in elections, launching and voting on referenda, to running for a seat in parliament. Citizens may reap procedural utility from such participation rights over and above the outcome generated in the political process, because they provide a feeling of being involved and having political influence, as well as a notion of inclusion, identity and self-determination. For the case of Switzerland, Frey and Stutzer (2002) empirically show that citizens indeed reap such procedural utility from extended democratic participation rights.

Self-employment is an important application of the procedural utility concept to the economic realm: it reflects the difference between

the two fundamental decision-making procedures of the economy. Whereas the self-employed are their own bosses and act as independent contractors on the *market*, employed people are subject to the institution of *hierarchy*. The findings presented in this study suggest that self-employed people attach a substantial value to their independence, and not because it is associated with superior material outcomes, like higher pay or a lower number of working hours. Rather, autonomy is preferred because it is *procedurally* better than being subject to the institution of hierarchy. Put differently, the relative freedom provided by the market is valued by the self-employed as a source of procedural utility.[15] This view of the market sharply contrasts with the traditional economic one, where the market is normally seen as advantageous because it produces (outcome) efficiency.

4. Implications for economic policy

Besides the implications for economic theory, the results also have consequences for economic policy. Following the findings reached here, governments should at least not restrict the self-employment opportunities. The case for supporting entrepreneurship rests, on the one hand, on the fact that being self-employed provides individuals with added, procedural utility from work. On the other hand, there seem to be many barriers to self-employment that keep individuals from becoming entrepreneurs. Economic policies aiming at lowering such barriers can, in principle, increase the number of people that enjoy the benefits of being independent.

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[15] It should be noted that the market mechanism, is, of course, not associated with complete freedom; rather, freedom is relative, in the sense that choices are less constrained for the self-employed acting on markets than for employees within a hierarchy. Without doubt, this relative freedom also comes at a cost to the self-employed. As repeatedly mentioned above, the self-employed seem to partly "pay" for their independence with, on average, lower wages (Hamilton, 2000), higher income risk (Carrington, McCue and Pierce, 1996), and higher investment risk (they have often invested their total wealth, in the form of financial and human capital, in their own enterprises, see Moskovitz and Vissing-Jorgensen, 2002).

Table 6. Latent entrepreneurship across nations

Country	Self-employment (%)	% people who prefer to be self-employed (all respondents)	% people who prefer to be self-employed (only working)	Difference in %
Poland	30.2	79.9	82.5	52.3
Portugal	26.2	73.3	76.7	50.5
USA	14.0	70.8	71.7	57.7
Switzerland	13.6	64.5	65.1	51.5
New Zealand	22.7	64.2	63.7	41.0
W. Germany	10.1	64.0	61.7	51.6
Italy	30.4	63.3	68.2	37.8
Canada	16.6	57.5	60.6	44.0
East Germany	6.1	56.6	57.1	51.0
Hungary	13.9	49.8	58.7	44.8
UK	15.6	45.1	45.0	29.4
France	9.1	41.8	40.9	31.8
Japan	28.7	40.9	46.4	17.7
Spain	(25.0)	38.9	43.1	18.1
Sweden	11.1	38.8	38.5	17.4
Czech Rep.	10.7	36.8	42.9	32.2
Netherlands	n/a	36.0	35.0	-
Denmark	6.7	29.7	27.5	20.8
Norway	9.9	26.9	27.4	17.5

Notes: All numbers are taken from Blanchflower, Oswald and Stutzer (2001), except those in the third column, which are based on own calculations based on the ISSP97 Module on Work Orientations. The first column includes actual self-employment rates for OECD countries.
Source: Blanchflower et al. (2001); Data Source: ISSP97, Module on Work Orientations.

How large is the pool of people who wish to become self-employed, but nevertheless remain employees? Interesting evidence on this "latent entrepreneurship" is presented by Blanchflower et al. (2001). They exploit a question asked in the ISSP97 on attitudes towards self-employment, where individuals were simply asked: "Suppose you were working and could choose between different kinds of jobs. Which would you prefer: (i) being an employee or (ii) being self-employed?" Although such survey questions have to be interpreted with caution (because they e.g. do not point to relevant restrictions associated with self-employment, like lower incomes), the answers

nevertheless reveal a striking picture across the over 20 countries considered. The share of people preferring self-employment to dependent employment is in every country considerably higher than the actual rate of self-employment in the economy. In some countries, like e.g. West Germany or Switzerland, over 60 percent of the individuals say that they would prefer to be self-employed, compared to approximately 10 percent who actually are. Table 6 reproduces an international league table on "latent entrepreneurship" from Blanchflower, Oswald and Stutzer (2001). The share of latent entrepreneurs in the workforce ranges from 17.4 percent in Sweden to 57.7 percent in the United States of America (as indicated in the right-hand column of Table 6).

These numbers naturally raise the question of why so many people do not become entrepreneurs. In the economic literature, several factors have been identified that keep individuals from becoming self-employed. An important barrier to entry seems to be the problem of start-up finance. A considerable number of studies have shown that people wishing to set up their own enterprise face difficulties in obtaining the necessary capital (see e.g. Evans and Leighton, 1989; De Wit, 1993; Lindh and Ohlsson, 1996; Blanchflower and Oswald, 1998; Van Praag, 2003). Van Praag (2003: 2f.) summarizes this literature as follows:

> "The general conclusion from this type of research is that capital constraints bind: a significant proportion of individuals willing to enter the entrepreneurial population is hampered by a lack of sufficient capital. [...] Capital markets are no doubt not efficient nor market clearing for the segment of new firms (Fazzari et al., 1988). Personal savings and loans from friends and relatives is by far the largest source of capital in newly started firms."

Thus, a potential starting-point for economic policy could be to provide (state-financed) capital to prospective entrepreneurs. However, as often with policy proposals that involve state expenditures, a closer analysis casts doubt on whether direct financing interventions are indeed recommendable. First, programs to provide start-up capital involve costs that have to be charged up against their potential benefits (accruing to the additional entrepreneurs as well as to the economy as a whole). Second, most countries already have some sort of start-up financing program, and there is little evidence that these programs are particularly effective (see e.g. OECD, 2000, p. 25-38; Carling and Gustafson, 1999). And third, the theoretical literature on start-up financing evaluates direct state interventions rather negatively

(for a survey, see e.g. Boadway and Tremblay, 2003). Indeed, it seems questionable why state bureaucracies should be better at overcoming asymmetric information problems on credit markets than private actors.

In any event, there are reasons to expect that problems of start-up financing will become less prevalent and less important in the future. To the extent that the role of physical capital in the production process declines in the "knowledge economy", it will become less costly for individuals to enter self-employment, because smaller amounts of capital are needed to set up a business. In addition, increasing possibilities to lease the relevant equipment may lower the barriers to entry also in sectors where physical capital remains important. Thus, it can be hypothesized that self-employment will increase in the future as a result of changes in technology and the organization of production.

If direct state interventions do not appear to be recommendable, an important piece of policy advice still remains to be given: governments should at least not restrict the self-employment opportunities. In many countries, the situation is quite the opposite. Djankow et al., (2002) e.g. show for a large sample of nations that the administrative and regulative barriers to entering self-employment are often high, making it costly for citizens to set up their own businesses. It has also been documented for a sample of European countries that the extent of regulatory barriers to entry negatively affects the creation of new firms (Desai et al., 2003). Lowering the barriers to entry thus seems to be a simple means of promoting self-employment, providing individuals with added, procedural, utility.[16] Moreover, also general regulations imposed on businesses could be reduced, and new regulations avoided, to make entrepreneurship more attractive. The upshot of these arguments is that economic policies should preserve the individual freedom to become and be active as an entrepreneur.

In the end, however, there remains a more fundamental question: on which empirical measures can policy implications be based? In this paper, we have only investigated the effects of self-employment on job satisfaction. But it can plausibly be argued that policy advice should not be based on job satisfaction alone, but on more inclusive measures of human well-being, like overall life satisfaction. Here, the

[16] Djankow et al. (2002) moreover show that high barriers to entry are not beneficial from the viewpoint of society, but rather are an example for inefficient regulation. Lowering the barriers of entry would thus not only promote self-employment, but is likely to have positive effects also in other respects.

existing empirical evidence is indeed more mixed. Positive effects of self-employment on life satisfaction have been found for UK (Blanchflower and Oswald, 1998), for a sample of 12 OECD countries (DiTella et al., 2002, Table 1A), and to some extent also for Switzerland (Stutzer, 2003, p. 104). In contrast, the self-employed in West Germany seem to be significantly less satisfied with their lives than employees (see e.g. Stutzer and Frey, 2003, Table 1). Thus, more research on the consequences of self-employment seems necessary in order to arrive at a better understanding of when and how self-employment should be promoted. Blanchflower (2004) presents interesting new evidence that the self-employed are generally more satisfied with their lives in many countries, but that self-employment is often also associated with some negative consequences, like more work related stress or work-family conflicts.

5. Conclusions

In this paper, it has been shown that self-employed people are more satisfied in their work than employees, mainly because they enjoy greater autonomy and independence. The respective results have been derived using a variety of data sources and employing a wide range of empirical approaches, in our view underscoring the validity of the findings for many different countries and contexts. In a broader sense, we submit that the results can inform economics by showing the relevance of procedural utility. Procedural utility is a concept that extends the outcome-oriented approach to human well-being in economics; it proposes that people do not only value outcomes, but also have preferences about how outcomes are generated. Self-employment is an important application of the concept, because the self-employed seem to value their relative autonomy as independent contractors on the market for purely procedural reasons, i.e. not because it makes them materially better off than employees who are subject to the institution of hierarchy. The findings also have implications for economic policy, mainly that governments should keep the administrative and regulative burdens on being and becoming self-employed low, thereby making self-employment a less costly option for people who wish to be independent.

References

Becker, G.S. (1976), The Economic Approach to Human Behavior, Chicago University Press, Chicago.

Benz, M. and Frey, B.S. (2003), The value of autonomy: Evidence from the self-employed in 23 countries, Working Paper 173, Institute for Empirical Research in Economics, University of Zurich.

Blanchflower, D.G. (2000), Self-employment in OECD countries, Labour Economics 7, 471-505.

Blanchflower, D.G. (2004), Self-employment: More may not be better, Swedish Economic Policy Review, this volume.

Blanchflower, D.G. and Oswald, A.J. (1998), What makes an entrepreneur?, Journal of Labor Economics 16, 26-60.

Blanchflower, D.G., Oswald, A.J. and Stutzer, A. (2001), Latent entrepreneurship across nations, European Economic Review 45, 680-691.

Boadway, R. and Tremblay, J.F. (2003), Public economics and startup entrepreneurs, CESifo Working Paper 877, the Center for Economic Studies at the University of Munich.

Carling, K. and Gustafson, L. (1999), Self-employment grants vs. subsidized employment: Is there a difference in the re-unemployment risk?, IFAU Working Paper 1999:6, Institute for Labor Market Policy Evaluation, Uppsala.

Carrington, W.J., McCue, K. and Pierce, B. (1996), The role of employer/employee interactions in labor market cycles: Evidence from the self-employed, Journal of Labor Economics 14, 571-602.

D'Addio, A.C., Eriksson, T. and Frijters, P. (2003), An analysis of the determinants of job satisfaction when individuals' baseline satisfaction levels may differ, Working Paper 2003-16, Centre for Applied Microeconometrics, University of Copenhagen.

Dahl, R.A. and Lindblom, C.E. (1953), Politics, Economics and Welfare: Planning and Politico-Economic Systems Resolved into Basic Social Processes, Harper, New York.

De Wit, G. (1993), Determinants of Self-Employment, Physica Verlag, Heidelberg.

Desai, M., Gompers, P. and Lerner, J. (2003), Institutions, capital constraints and entrepreneurial firm dynamics: Evidence from Europe, NBER Working Paper 10165, National Bureau of Economic Research.

DiTella, R., MacCulloch, R. and Layard, R. (2002), Income, happiness and inequality as measures of welfare, Manuscript, Harvard Business School.

Djankow, S., La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2002), The regulation of entry, Quarterly Journal of Economics 117, 1-37.

Evans, D.S. and Leighton, L.S. (1989), Some empirical aspects of self-employment, American Economic Review 79, 519-535.

Fazzari, S.M., Hubbard, R.G. and Petersen, B.C. (1988), Financing constraints and corporate investment, Brookings Papers on Economic Activity 1, 141-195.

Ferrer-i-Carbonell, A. and Frijters, P. (2004), How important is methodology for the estimates of the determinants of happiness?, Economic Journal, forthcoming.

Finnie, R., Laporte, C. and Rivard, M. C. (2002), Setting up shop: Self-employment amongst Canadian college and university graduates, Working Paper 183, Statistics Canada Research Paper Series.

Frey, B.S. (1999), Economics as a Science of Human Behaviour. Towards a New Social Science Paradigm, Extended Second Edition, Kluwer, Dordrecht.

Frey, B.S. and Benz, M. (2002), Being independent is a great thing: Subjective evaluations of self-employment and hierarchy, CESifo Working Paper 959, the Center for Economic Studies at the University of Munich.

Frey, B.S. and Stutzer, A. (2002), Beyond outcomes: Measuring procedural utility, Working Paper 63, Berkeley Olin Program in Law & Economics, University of California, Berkeley.

Frey, B., Benz, M. and Stutzer, A. (2003), Introducing procedural utility: Not only what, but also how matters, Journal of Institutional and Theoretical Economics, forthcoming.

Hamilton, B.H. (2000), Does entrepreneurship pay? An empirical analysis of returns to self-employment, Journal of Political Economy 108, 604-632.

Hundley, G. (2001), Why and when are the self-employed more satisfied with their work?, Industrial Relations 40, 293-317.

Iyengar, S.S. and Lepper, M.R. (1999), Rethinking the value of choice: A cultural perspective on intrinsic motivation, Journal of Personality and Social Psychology 76, 349-366.

Joulfaian, D. and Rider, M. (1998), Differential taxation and tax evasion by small business, National Tax Journal 51, 675-687.

Kawaguchi, D. (2002), Compensating wage differentials among self-employed workers: Evidence from job satisfaction scores, Discussion Paper 568, Institute of Social and Economic Research, Osaka University.

Lane, R.E. (2000), The Loss of Happiness in Market Economies, Yale University Press, New Haven and London.

Lazear, E.P. (2000), Economic imperialism, Quarterly Journal of Economics 115, 99-146.

Lechner, M. and Pfeiffer, F. (1993), Planning for self-employment at the beginning of a market economy: Evidence form individual data of East German workers, Small Business Economics 5, 111-128.

Lind, E.A. and Tyler, T.R. (1988), The Social Psychology of Procedural Justice, Plenum Press, New York.

Lindh, T. and Ohlsson, H. (1996), Self-employment and windfall gains: Evidence from the Swedish lottery, Economic Journal 106, 1515-1526.

Markus, H.R. and Kitayama, S. (1991), Culture and the self: Implications for cognition, emotion, and motivation, Psychological Review 98, 224-253.

Moskovitz, T.J. and Vissing-Jorgensen, A. (2002), The returns to entrepreneurial investment: A private equity premium puzzle?, American Economic Review 92, 745-778.

OECD (2000), The OECD Small and Medium Enterprise Outlook, OECD, Paris.

Schwartz, B. (2000), Self-determination: The tyranny of freedom, American Psychologist 55, 79-88.

Stutzer, A. (2003), Eine ökonomische Analyse menschlichen Wohlbefindens, Shaker, Aachen.

Stutzer, A. and Frey B.S. (2003), Stress that doesn't pay: The commuting paradox, Working Paper 151, Institute for Empirical Research in Economics, University of Zurich.

Thibaut, J. and Walker, L. (1975), Procedural Justice: A Psychological Analysis, Erlbaum, Hillsdale, NJ.

Tyler, T.R. (1990), Why People Obey the Law: Procedural Justice, Legitimacy, and Compliance, Yale University Press, New Haven.

Van Praag, M. (2003), Initial capital constraints hinder entrepreneurial venture performance: An empirical analysis, CESifo Working Paper 887, the Center for Economic Studies at the University of Munich.

Appendix

Table A.1. Descriptive statistics

Variable	Germany — West Empl	Germany — West Self-Empl.	Germany — East Empl.	Germany — East Self-Empl.	UK Empl.	UK Self-Empl	Switzerland Empl.	Switzerland Self-Empl.
Job satisfaction (see *remarks*)	7.24 (2.01)	7.45 (1.92)	6.84 (2.12)	7.12 (2.12)	5.40 (1.37)	5.61 (1.31)	8.06 (1.71)	8.47 (1.77)
Log of total income (see *remarks*)	8.05 (0.57)	8.20 (0.91)	7.70 (0.58)	7.88 (0.79)	6.84 (0.75)	6.57 (1.45)	10.67 (0.85)	10.75 (1.09)
Working hours per week	39.19 (10.03)	48.41 (17.96)	42.77 (9.14)	52.23 (15.84)	36.98 (14.90)	44.62 (19.47)	35.81 (13.65)	43.30 (17.08)
Working part-time	0.23	0.24	–	–	0.24	0.19	0.36	0.28
Tenure	10.56 (9.06)	11.31 (11.29)			4.30 (5.85)	8.46 (9.24)	7.74 (8.56)	11.02 (10.57)

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Table A.1. Continued....

Variable	Germany — West			Germany — East			UK			Switzerland		
	Empl		Self-Empl	Empl		Self-Empl	Empl		Self-Empl	Empl		Self-Empl
Age	39.12 (11.09)	39.55 (11.80)	43.31 (11.21)	39.33 (10.62)	39.46 (10.57)	41.96 (9.30)	36.93 (12.36)	37.71 (12.51)	43.45 (12.12)	38.73 (11.73)	39.24 (11.89)	43.77 (12.26)
Sex (female)	0.39	0.38	0.30	0.47	0.47	0.36	0.51	0.49	0.29	0.49	0.48	0.35
Education		7 categ.			7 categ.			12 categ.			10 categ.	
Job dummies		88 categ.			88 categ.			73 categ.			31 categ.	
Industry dummies		45 categ.			45 categ.			10 categ.			14 categ.	
No. of obs.	66314	70229	3915	19029	20064	1035	45834	52022	6188	3081	3431	350
No. of individ.	10580	11700	1120	3930	4254	324	11359	13380	2021	3081	3431	350
Time period		1984 - 2000			1990- 2000			1991 - 1999			1999	

Notes: Unweighted means. Standard deviations in parentheses. Job satisfaction is measured on a scale from 0 to 10 in Germany, 1 to 7 in UK, and 0 to 10 in Switzerland. The total income variable consists of gross monthly income in Germany, net monthly income in UK, and net yearly income in Switzerland. Data on tenure and part-time work is missing for East Germany.
Source: Frey and Benz (2002); Data sources: GSOEP 1984-2000; BHPS 1991-1999; SHP 1999.

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