Satisfaction with training opportunities in EU24

Sara-Izabella Geerdes, Anette Fasang, Klaus Schömann

All Jacobs Center on Lifelong Learning and Institutional Development, Jacobs University Bremen P.O. Box 750651, 28725 Bremen Germany.

Abstract

Strategies of lifelong learning build on "satisfied clients" of further training who engage in repeated training experiences over the life course. Is training supply matching the demand for training in the EU? This article analyzes satisfaction with training opportunities of employed persons interviewed in 2005 in a sample of 24 European Union member states. We apply theories of job satisfaction to this new field. We find that the structural perspective and the values-rewards approach fit our results best. Additionally, results indicate that the number of unemployment spells and the quality of the last job change are important in the context of satisfaction with training opportunities in European countries. The test for non-random selection into employment by including the Inverse Mill's Ratio did not show a significant effect.

1. Introduction

A large body of literature analyses various facets or dimensions of job satisfaction and overall job satisfaction (e.g. Kalleberg and Mastekaasa 2001; Warr 1999). Nevertheless, we still know little about satisfaction with training opportunities. Training opportunities are a particularly relevant facet of job satisfaction. The ability to develop new skills is gaining importance in knowledge intensive societies. The relevance of upgrading skills and reorienting skills will further increase with the ageing of the European workforce (Page and Hillage 2006). Access to training opportunities is a precondition for career advancement. Workers rate career opportunities highly compared to other job characteristics (Kalleberg and Vaisey 2005; Lacy, Bokemeier, and Shepard 1983; Morris and Villemez 1992), whereas poor career opportunities in professional life are linked to demoralization (Shields and Ward 2000). Moreover, satisfaction with training opportunities is related to overall job satisfaction and quits. There is evidence that management styles that support autonomy and learning opportunities increase overall

job-satisfaction (cf. Clark 2005: 393). Satisfaction with training opportunities enhances job performance and may decrease intentions to quit (Page and Hillage 2006).

In this paper we argue that beyond current job characteristics a more life course perspective (Elder 1995; Mayer 2005) is necessary to understand the mechanisms that produce satisfaction with training opportunities. Therefore, we include information on the previous job and unemployment spells as well as indicators for the whole career to integrate the impact of the dynamics produced by prior occupational mobility on satisfaction with training opportunities in the current job. By including the inverse Mill's ratio, we test whether the selection of persons into employment is crucial for estimating the impact of previous careers and quality of last job changes on satisfaction with training opportunities. We base our analysis on a sample of employed persons of the Eurobarometer 64.1 on geographic and job mobility 2005 for 24 European Union countries. Our analyses, addresses the following research questions:

- Do previous labour market careers (and quality of last job change) influence satisfaction with training opportunities?
- What are the most important factors that drive satisfaction with training opportunities in the EU?

The paper proceeds as follows: section two gives of how we theoretically conceptualize satisfaction with training opportunities, the relationship between previous labour market careers and satisfaction with training opportunities, and presents our hypotheses. Section three describes the data and sample the analyses is based on. Section four specifies the the ordinary least square regression models on the determinants of satisfaction with

training opportunities. Moreover, it describes the computation of the inverse Mill's ratio on the probability to be employed. Finally, we present the empirical results in section five and conclude in section six.

2. The formation of job-related satisfaction

According to the facet-specific approach of job satisfaction individuals assess the quality of jobs via specific dimensions of jobs (e.g. training opportunities, earnings, promotion opportunities etc.) and later combine them to an overall measure. The single dimension outcomes are weighted by the respective job values that indicate how important the single job aspects are to the individual (Clark 1997; cf. Clark 2005; Locke 1976).[i] We analyze one facet of job satisfaction – satisfaction with training opportunities – in our regression models and avoid incorrect relative weighting of different dimensions.[1] Satisfaction with training opportunities is one extrinsic facet of overall job satisfaction (cf. Rose 2003: 506).[ii] Therefore, the mechanisms explaining the formation of (job) satisfaction should also apply to the formation of satisfaction with training opportunities. Several different theoretical models on job satisfaction exist in social sciences, psychology and economics. From an economic perspective for instance, overall job satisfaction has been defined as a function of an individual's full wage or the sum of the monetary wage and monetary equivalents or non pecuniary aspects of the job (Bartel 1981; Borjas 1979).

Most of the remaining theoretical models represent 1) the situational or structural perspective or 2) the dispositional or individualistic perspective (Kalleberg and

1 There are several approaches on how to combine different facets to an overall measure of job quality, about the relative quantification of the different aspects in dimensions, and the relative weight of dimensions Kalleberg, Arne L. and Stephen Vaisey. 2005. "Pathways to a Good Job: Perceived Work Quality among the Machinists in North America." British Journal of Industrial Relations 43:431-454.

Mastekaasa 2001, Gruenberg 1980). The first perspective – the situational or structural perspective – stresses that job rewards or external, environmental aspects of the work situation lead to the assessment of job satisfaction. This means: work situations and job characteristics which increase the chance to participate in training increase satisfaction with training opportunities. Then, factors that are influence the selectivity at the access to training matter for satisfaction with training opportunities. The main argument concerning employer's selectivity is based on human capital theory and relates to productivity (Becker 1993). Employers select individuals largely due to their expected productivity reflected in observable signals. This leads to higher selectivity at the entrance to training in favour of the high skilled and persons who already participated in training. Moreover, public sector employment, longer job duration, and larger firm sizes increase the probability to participate in training and, thus, satisfaction with training opportunities. The same is true for those with a permanent contract, with higher levels of education and younger age (Schömann and Leschke 2004, Arumpalam and Booth 1998, Becker 1991). Additionally, successful previous careers should matter for the probability to participate in training as they are a positive signal to employers. *We hypothesize that voluntary job changes prior to current employment increase satisfaction with training opportunities (H1)*.

In contrast, a higher number of unemployment spells *prior to current employment* serve as a negative signal to employers at the selection into the participation in training. *Thus, a higher number of unemployment spells should decrease the satisfaction with training opportunities of employees (H2)*.

The second perspective – the dispositional or individualistic perspective – assumes that the influence of work values, expectations or personality characteristics are most important for the formation of job-related satisfaction. This perspective argues that inner states, dispositions, or attitudes of individuals lead to the formation of job satisfaction. From this perspective, satisfaction with training opportunities should reflect stable individual differences in the value individuals attach to training. *Then, those who attach a higher value to training and education are more likely to be less satisfied with their training opportunities (H3).*

Many researchers implicitly assume as compromise between the situational and the dispositional perspective (e.g. Morris and Villemez 1992). Social characteristics and psychological predisposition are held responsible for the selection of workers into certain jobs that form responses to work (Miller 1980: 338). According to the values rewards approach, people's overall feelings about their jobs are a function of both, job characteristics or rewards and needs or values that workers attach to their jobs and organization (Kalleberg and Mastekaasa 2001: 188). The fit of job values and job rewards should make people most satisfied (Morris and Villemez 1992: 38). Thus, not only the factors that positively influence the probability to participate in training, but the interaction of a high value attached to training and factors that increase the probability to participate in training should lead to higher satisfaction with training opportunities.[iii] Accordingly, the interaction of high importance of training and work characteristics that increase participation in training should increase satisfaction with training opportunities. *We assume that people working in the public sector for whom training is important*

should be more satisfied (H4).

3. Data and sample

The Eurobarometer Mobility Survey 2005 (EB 64.1) consists of 24.643 individuals in 25 countries. The data set includes detailed information on work related as well as socio-demographic characteristics that we include as independent variables. We do not include the age groups 15-24 and over 65 to avoid bias because of apprentices among the group of young workers and the higher probability that high skilled stay in the labor market at higher age. Thus, 3.266 persons who are younger than 25 and 5.350 person at the age of 65 or older are not included in the final sample. 88.3% of both age groups are unemployed. Moreover, we do not include Malta due to low case numbers. Because we are interested in the mechanisms driving satisfaction with training opportunities in professional life, we restrict our sample to persons who were in employment at the time of the survey. The remaining sample consists of 7.696 persons.

Additionally, we test sample selection by using the inverse Mill's ratio. We assume that being employed alters how much and when a person participates in training and, therefore, has an effect on satisfaction with training opportunities. Furthermore, employed persons might be a nonrandom sample of the observed sample (Berk 1983; Amemiya 1985; Heckman 1979). First, employers obviously only select their employees to participate in training. Moreover, employed persons expect higher benefits from participation and therefore may self-select into work related training. Another possible explanation for sample selection may be that more motivated persons may be employed in the first place (cf. Winship and Morgan 1999: 666 ff.). Previous literature on job

satisfaction hints towards the relation between social and psychological criteria and selection into certain jobs and job conditions. Thus, our results could be highly misleading if selection processes on observed and unobserved variables in relation to employment status are not taken into account. The inverse of Mill's ratio is described as "a monotone decreasing function of the probability that an observation is selected into the sample" (Heckman 1979). Thus, a positive significant value of Lambda in the model could be related to a higher probability to be employed and to score high on the dependent variable. We obtain the value of the IMR from a probit regression of the dependent variable employment status employed or self-employed on age, gender, education, birth in a foreign country, with partner or not, number of kids younger than age ten, the number of unemployment spells and the change in unemployment rates between the years 2005 and 2000. With including the difference in unemployment rates we include a exclusion restriction to the first step equation. This variable affects the probability of being selected into employment, but has no effect on the main dependent variable. Then, we calculate the inverse Mills ratio (or also called Lambda) by dividing the normal density by the cumulative normal distribution of the predicted values.

4. Model specification

The dependent variable is satisfaction with training opportunities.[iv] It is measured on a scale ranging from one (not satisfied at all) to four (very satisfied). We calculated ordinary least square models including the inverse Mill's ratio.

The first step of the model includes demographic variables like age, gender, level of education and, whether the individual has a partner or not. As we assume a u-shape for

age we include the square of age in the analysis. Additionally, the inverse Mill's ratio tests for sample selection is applied in the first step of the model. We also add job characteristics that are supposed to influence participation in training: occupational status (manager, self-employed, manual worker, other white collar), sector of employment (service, public, production), and type of contract. Additionally, we include job tenure and the quadratic term of job tenure as we expect a u-shape relationship between satisfaction with training opportunities and job tenure.

As culture influences individuals' evaluation of different job values, we control for country dummies in step four. Workers may not estimate training opportunities equally important in all 24 European Union countries. Moreover, the institutional design of countries additionally influences investment in training and market failure by (not) setting incentives for employers and employees. Consequently, we cannot assume that the observations in countries are independent. As this is of special importance because national averages are relevant for assessing our main independent variable satisfaction with training opportunities, we implement robust standard errors and correct for the effect of intra-class correlation in the country clusters in our data.[v]

The strong advantage of the Eurobarometer data is the possibility to include several variables on previous labour market careers and the quality of the last job change.[vi] The inclusion of those variables allows us to account for situational, and dispositional determinants of satisfaction with training opportunities. In the fifth step of the model, we include information on previous labour market careers with number of unemployment spells and employer changes. We include the quality of the last move: the change in application of skills, reasons for job change, and distance of move. We classified

voluntary moves as moves with the reasons ‘found a better job’ and ‘did not like previous job’, whereas non-voluntary moves have been related to ‘was made redundant’, ‘my contract expired’, and ‘wanted to create own business’.[vii] The variable interregional job change indicates whether the previous job was ‘in a different region/EU country or non EU country’.

The second step includes the importance of training for the individual influences satisfaction with training opportunities, recent participation in training and respondents’ cooperation. A person for whom training is not important may not participate and be satisfied with few training courses offered. In accordance with the theoretical idea of the job values and rewards hypothesis, we try to capture how a person values training and the motivation, and commitment towards training by a variable asking whether the life domain ‘knowledge, education and training’ is relevant. Additionally, we include the importance of training through a variable on ‘training and learning new skills are necessary nowadays to stay employed’ measured on a scale from one (totally disagree) to four (totally agree). We split the variable at Median and included it as a dummy variable.

Because the evaluation of satisfaction is affective and may correlate positively with the mood of respondents, we introduced ‘good respondent’s cooperation’ as an approximation of mood. Moreover, persons who recently participated in training may assess their training opportunities quite differently from the persons who did not. Thus, we take recent participation in training into account when measuring satisfaction with training opportunities.

In the third step, we include interaction terms of importance of training and learning new skills with factors that should increase the satisfaction with training opportunities: public

sector employment, managerial position and voluntary last job change.

5. Findings

First, we turn to some descriptive findings and then present our models satisfaction with training opportunities. Generally people report a comparably high level of satisfaction with their work (Kahn 1972) and possibly with different aspects of work. The fact that people who are not satisfied with their training opportunities and other aspects of their job may quit supports the following findings. On EU 24 level, 24,3% report to be very satisfied, 47,3% to be fairly satisfied, 20,2% satisfied and 8,2% to not be satisfied at all with their training opportunities.

We find a positive effect of the mean centered variable age squared in all steps of the model. This indicates a u-shaped relationship between age and satisfaction with training opportunities. Thus, younger and older individuals are more satisfied with their training opportunities. With regard to older persons this is surprising as they are less likely to receive training (OECD 2008). As we control for the value a person attaches to training, the result seems not to be due to a 'grinding down' of expectations with age because older workers demand less from their jobs (Wright and Hamilton 1978).

We do not find significant differences for gender with regard to satisfaction with training opportunities. This finding may reflect the fact that gender differences in participation rates in training are less pronounced. While, males are more likely to spent more hours in than females, females with tertiary educational attainment are more likely to participate

in non-formal job-related education and training (OECD 2008). Additionally, by including job characteristics and importance of training into the model we may control for the factors of female jobs that lead to the finding that women are more satisfied in their jobs (Bender et al. 2005).

The Lambda is not significant. Thus, we do not find any indication of sample selectivity with regard to selection into employment.

Some job characteristics that positively influence the participation in training also increase satisfaction with training opportunities. Expectedly, high levels of education are significant at the 5% level (step 1). However, the effect turns insignificant after recent participation in training and importance of training have been taken into account. Self-employed and managers are more satisfied with their training opportunities than persons in other white collar employment. Employees in managerial positions are indeed more likely to receive training. Although self-employed may not receive as much training as employees because usually employers pay the large percentage of training. However, self-employed can be assumed to be a group that takes personal initiatives. They may use different or more informal types of training than other employees. Moreover, they themselves determine the content and amount of training they engage in. Then, their high level of satisfaction with training opportunities reflects the fit of values and rewards with regard to their training opportunities. With regard to sector of employment, satisfaction seems to reflect the chances to participate in training. Furthermore, employees in the public sector are more satisfied with their training opportunities. On the one hand, high skilled receive more training. On the other hand, persons with higher occupational status are more likely to achieve higher levels of satisfaction in general because they have

appropriate resources and abilities (cf. Hadjar 2008).

Manual workers are less satisfied with their training opportunities (only in step 1).

The data supports hypothesis 2 as persons with a higher number of unemployment spells are less satisfied with their training opportunities. In contrast, hypothesis 1 is not supported as voluntary last job changes have no significant influence. Nevertheless, forced changes decrease the satisfaction with training opportunities. The same applies to job changes that lead to the application of less or different skills in current jobs as compared to the last job. The use of higher skills incresases satisfaction (only significant in step 1).

Hypothesis 3 is not supported by the data. The evaluation of training and education as a relevant life domain seems to decrease the satisfaction with training opportunities, however the coefficient fails to reach significance. On the other hand, the more people think that training and learning new skills will help them to keep their job, the more satisfied they are with their training opportunities (step 2).

Step 3 supports hypothesis four by showing that persons in the public sector who think that training and learning new skills are important, are more satisfied.

6. Summary and conclusions

The analyses in this paper identified several important “drivers” of satisfaction with training opportunities. Persons who participated in further training during the last year reported higher satisfaction with training opportunities. This supports the potential of lifelong learning strategies to work, if only persons can be convinced to embark on a learning trajectory parallel to their working life. The self-employed are also consistently

more satisfied with training opportunities as there are the masters of their own fate without any intermediaries like supervisors or training budgets in firms.

It is also very plausible that persons who work in a job now that uses fewer skills than their last job report higher dissatisfaction with training opportunities. The "blame" to now work in less skilled job seems to be put on a lack of training opportunities in the previous job. Hence this group of dissatisfied persons appears to be at a high risk of downward job mobility, and, if not assisted by targeted public policy might have to face the consequences of a lack of sufficient training opportunities.

As satisfaction with training opportunities is a facet of job-satisfaction, we hypothesized that the mechanisms that explain job satisfaction can be applied. Based on the structural perspective and selectivity at the access to training we hypothesized that successful last job changes and previous labour market careers lead to higher satisfaction with training opportunities. The data confirmed that unsuccessful careers in terms of forced job changes and including more unemployment spells decreased satisfaction.

The fact that higher value attached to training lead to higher satisfaction contradicted the individualistic perspective. However, we found some support for the values-rewards hypothesis (Morris and Villemez 1992). The matching of importance of training and work situations benefit the participation in training and subsequently increase satisfaction with training opportunities.

The inverse Mill's ratio correcting for sample selection bias of employment and participation in training did not turn significant in the models. Thus, selectivity into employment did not bias the results. This finding might underlines the quality of previous labor market careers and job matches as decisive elements for employment and

participation in training. Moreover, labor market careers may mirror heterogeneity of workers in social skills or other unobserved variables. In the light of this result, the question appears if the methodological option of correcting for sample selection bias has strong empirical support from large employee samples offering a full range of controls.

Results for age or gender, however, do not confirm the mechanisms and previous findings with regard to job satisfaction in the context of satisfaction with training opportunities. The findings show no age or gender differences in satisfaction with opportunities. The fit of job values and job rewards, the individualistic or structural perspectives may not always predict long-run job-related satisfaction because adaptation processes can occur (cf. Lykken and Tellegen 1996). Two main, possibly interacting, adaptation processes exist. First, persons may evaluate their satisfaction using a 'reference group' as a comparison point (Hyman 1968; Merton and Kitt 1950; Ng, Sorensen, Eby, and Feldman 2007). Individuals would then compare themselves to persons with perceived similarity and similar (job related) social status and determine their satisfaction levels relative to average achievement in this group. Their satisfaction would highly depend on available information regarding their current job, its training opportunities and available information on outside opportunities and training opportunities in other companies. The subjective judgment of job quality and training opportunities also depends on previous job and career experiences. Utility-maximizing workers evaluate the expected utility of their current job in comparison with the expected utility associated with outside opportunities. This implies that a considerable part of satisfaction with different aspect of the job may arise from comparisons and the

perception of relative deprivation (Clark and Oswald 1996)

Second, in line with adaptive behavior theory, workers adjust their expectations to conditions or opportunity structures of their jobs (Miller 1980; Harlan 1989; Merton 1968). Workers are likely to orientate their values in accordance with the current job situation because culturally valued goals and opportunities differing for individuals in society shape their expectations. The mechanisms may be the following. Individuals set an aspiration level that they regard as satisfactory. If this satisfaction level is not achieved, either a decision or strategy will be altered to achieve it, or the aspiration level will be adjusted downward – a strategy called 'satisficing' (Simon 1982).[2] Thus, while the first adaptation to a reference group takes place on the individual level, the latter puts forward that adaptation processes depend on the environment (Frederick and Loewenstein 1999). The values-rewards perspective of job satisfaction slightly differs from adaptation approaches by assuming that values are socially induced by education and social background and that they are independent from the work situation. Hence, a continued push for lifelong learning strategies in Europe is likely to succeed eventually. If learning distant groups are provided with adequate training opportunities, the demand for training can pick up. However, for some countries it remains a long road to reach the Lisbon targets.

2 An example is the 'gender paradox': women show higher levels of job satisfaction than men, although their position on the labor market is objectively disadvantaged in terms of gender wage gaps and they exhibit lower promotion opportunities (Brückner 2004; Clark and Oswald 1996; European Commission 2002; Sloane and Williams 2000). Moreover, workers with different educational levels may adapt to different aspiration 'ideologies' (Morris and Villemez 1992). For instance, workers in jobs that offer high opportunities concerning training may internalize a success ideology that makes them expect better training opportunities. Similarly, other workers with few promotion opportunities who are located in a strong organizational culture of mobility, might solve this contradiction by withdrawing from the organizational frame as a reference and decreasing their expectations.

7. References

Acemoglu, Daron. 1997. "Training and Innovation in an Imperfect Labour Market." *Review of Economic Studies* 64:445-464.

Allen, Jim and Rolf van der Velden. 2001. "Educational mismatches versus skill mismatches: effects on wages, job satisfaction, and on-the-job-search." *Oxford Economic Papers* 3:434-452.

Amemiya, T. . 1985. *Advanced Econometrics*. Cambridge, MA Harvard University Press.

Arumpalam, W. and A.L. Booth (1998). Training and Labour market flexibility: Is there a trade-off? British Journal of Industrial Relations, 36, 521-536.

Bartel, Ann P. 1981. "Race differences in job satisfaction: a reappraisal." *The Journal of Human Resources* 16:294-303.

Becker, Gary S. 1964. *Human Capital A Theoretical and Empirical Analysis, with Special Reference to Education*. New York and London: Columbia University Press.

Bender, K.A., Donaohue (2005). "Job satisfaction and gender segregation". Oxford economic papers 57, 479-496.

Becker, Rolf (1991): Berufliche Weiterbildung in West- und Ostdeutschland. Zeitschrift für Arbeitsmarktforschung 2, 73-126.

Berk, Richard A. 1983. "An Introduction to Sample Selection Bias in Sociological Data." *American Sociological Review* 48:386-398.

Borjas, George J. 1979. "Job satisfaction, Wages and Unions." *Journal of Human Resources* 14:21-40.

Brückner, Hannah. 2004. *Gender Inequality in the Life Course: Social Change and Stability in West Germany, 1975-1995*. Hawthorne, NY: Aldine DeGruyter.

Büchel, Felix and Markus Pannenberg. 2004. "Berufliche Weiterbildung in West- und Ostdeutschland." *Zeitschrift für Arbeitsmarktforschung* 37:71-126.

Clark, A. E. 1997. "Job Satisfaction and Gender: Why Are Women So Happy at Work." *Labour Economics* 4:189-217.

—. 2005. "Your Money or Your Life: Changing Job Quality in OECD Countries." *British Journal of Industrial Relations* 43:377-400.

Clark, A. E. and A. J. Oswald. 1996. "Satisfaction and Comparison Income." *Journal of Public Economics* 61:359-381.

Deci, Edward L. and Richard M. Ryan. 1985. *Intrinsic Motivation and Self-Determination in Human Behavior*. New York: Plenum.

Elder, Glen H. 1995. "The Life Course Paradigm: Social Change and Individual Development." Pp. 101-139 in *Examining Lives in Context: Perspectives on the Ecology of Human Development*, vol. APA Science Volumes, edited by P. Moen, J. G. H. Elder, and K. Lüscher. Washington: APA Press.

European Commission. 2002. *Employment in Europe 2002, Recent trends and prospects*. Luxemburg: Office for official publications of the European Communities.

—. 2006. "European Year of Workers' Mobility, the importance of the mobility of workers to the implementation of the Lisbon strategy " *MEMO/05/229*.

Fasang, Anette, Sara-Izabella Geerdes, Liuben Siarov, and Klaus Schömann. 2006, forthcoming. "Which type of job mobility makes you happy? Evidence from 25 European countries."

Frederick, Shane and George Loewenstein. 1999. "Hedonic adaptation." in *Well-Being: The Foundations of Hedonic Psychology*, edited by D. Kahnemann, E. Diener, and N. Schwarz. New York: Russel Sage Foundation.

Greenhalgh, Christine and George Mavrotas. 1994. "The role of career aspirations and financial constraints in individual access to vocational training." *Oxford Economic Papers* 46:579-604.

Gruenberg, B. 1980. "The Happy Worker: An Analyssis of Educational and Occupational Differences in Determinants of Job Satisfaction". 86, 2, p.247-271.
Hadjar, A., Haunberger, S. and Schubert, F. 2008. "Bildung und subjektives Wohlbefinden im Zeitverlauf, 1984-2002. EIne Mehrebenenanalyse". BJFS 18, 3: 370-400.
Hamermesh, D.S. 2001. "The Changing Distribution of Job Satisfaction." *Journal of Human Resources* 36:1-30.
Harlan, Sharon L. 1989. "Opportunity and attitudes towards job advancement in a manufacturing firm." *Social Forces* 67:766-788.
Heckman, James J. 1979. "Sample Selection Bias as a Specification Error." *Econometrica* 47:153-162
Hicks, William D. and Richard J. Klimoski. 1987. "Entry into Training Programs and its Effects on Training Outcomes: a Field Experiment." *Academy of Management Journal* 30:542-552.
Hyman, H. H. 1968. "Introduction." Pp. 3-21 in *Readings in Reference Group Theory and Research*, edited by H. H. Hyman and E. Singer. New York: The Free Press.
Kahn, R.L. 1972. "The Meaning of Work: Interpretation and Proposals for Measurement." in *The Human Meaning of Social Change*, edited by A. Campbell and P. Converse. New York: Russell Sage Foundation.
Kailis, Emmanuel and Spyridon Pilos. 2005. "Lifelong Learning in Europe." *Statistics in Focus*.
Kalleberg, Arne L. and Arne Mastekaasa. 2001. "Satisfied Movers, Committed Stayers." *Work and Occupations* 28:183-209.
Kalleberg, Arne L. and Stephen Vaisey. 2005. "Pathways to a Good Job: Perceived Work Quality among the Machinists in North America." *British Journal of Industrial Relations* 43:431-454.
Kohn and Schooler (1973). "Occupational Experience and Psychological functioning: An Assessment of Reciprocal Effects". American Sociological Review. 38, 97-118.
Kohli, M., M. Rein, A.-M. Guillemard, and H. van Gunsteren. 1991. *Time for retirement: Comparative studies of early exit from the labor force*. Cambridge/New York: Cambridge University Press.
Lacy, William B., Janet L. Bokemeier, and Jon M. Shepard. 1983. "Job attribute preferences and work commitment of men and women in the United States." *Personnel Psychology* 36:315-329.
Locke, E. A. 1976. "The nature and causes of job satisfaction." Pp. 11297-1349 in *Handbook of Industrial and Organizational Psychology*, edited by M. D. Dunnette. Chicago: Rand McNally.
Lykken, David and Auke Tellegen. 1996. "Happiness is a Stochastic Phenomenon." *Psychological Science* 7:186-189.
Mayer, Karl Ulrich. 2005. "Life Courses and Life Chances in a Comparative Perspective." in *Analyzing Inequality: Life chances and social mobility in comparative perspective*, edited by S. Svallfors: Stanford University Press.
Merton, R. K. and A. S. Kitt. 1950. "Contributions to the Theory of Reference Group Behaviour." Pp. 40–106 in *Studies in the Scope and Method of The American Soldier*, edited by R. K. Merton and P. F. Lazarsfeld. Glencoe: The Free Press.
Merton, Robert K. 1968 *Social Theory and Social Structure*, vol. enlarged, Edited by R. K. Merton. New York: Free Press (enlarged edition).
Miller, Joanne. 1980. "Individual and Occupational Determinants of Job Satisfaction." *Sociology of Work and Occupations* 7:337-366.
Mincer, Jacob. 1993. *Studies in Human Capital*. Cheltenham: Eward Elgar.
Morris, Joan M. and Wayne J. Villemez. 1992. "Mobility Potential and Job Satisfaction." *Work and Occupations* 19:35-58.
Ng, Thomas W.H., Kelly L. Sorensen, Lillian T. Eby, and Daniel C. Feldman. 2007.

"Determinants of job mobility: A theoretical integration and extension." *Journal of Occupational and Organizational Psychology* 80:363.

OECD (2008). "Education at a Glance"

Page, Rosie and Jim Hillage. 2006. "Vocational education in Training in the UK." *WZB discussion paper*.

Rose, Michael. 2003. "Good deal, bad deal? job satisfaction in occupations." *Work, employment and society* 17:503-530.

Schömann, Klaus and Liuben Siarov. 2005. "Market failure as a source of underinvestment in further training."

Schömann, K. and Leschke, Janine (2004): Lebenslanges Lernen und soziale Inklusion - der Markt alleine wirds nicht richten. In: R. Becker and W. Lauterbach (Eds.), Bildung als Privileg? Erklärungen und Befunde zu den Ursachen der Bildungsungleichheit. p.335-391. Wiesbaden: VS Verlag.

Shields, Michael A. and Melanie E. Ward. 2000. "Retention in the british national health service: the impact of job satisfaction on intentions to quit." *IZA DP*.

Simon, H.A. 1982. *Models of bounded rationality*, vol. 2. Cambridge, MA.: MIT Press.

Sloane, P.J. and H. Williams. 2000. "Job Satisfaction, Comparison Income, and Gender." *Labour* 14:473-502.

Spence, A.M. 1973. "Job Market Signaling." *Quarterly Journal of Economics* 83:355-377.

Warr, P.B. 1999. "Wel-being and the workplace." Pp. 392-412 in *The Foundations of Hedonic Psychology*, edited by D. Kahnemann, E. Diener, and N. Schwarz. New York: Russel Sage Foundation.

Winship, Christopher and Stephen L. Morgan. 1999. "The estimation of causal effects from observational data." *Annual Review of Sociology* 25:659-706.

Wright, J. and Hamilton, R. (1978). "Work satisfaction and Age: Some Evidence From the Job Change Hypothesis", Social Forces 56, 1140-1158.

8. Appendix A

Tabelle 1 Stepwise OLS on satisfaction with training opportunities

	Step 1	Step 2	Step 3
Age	0,0036	0,0046	0,0046
	(0,003)	(0,002)	(0,002)
Age²	0,00034*	0,00037*	0,00037*
	(0,000)	(0,000)	(0,000)
Male (ref. female)	0,045	0,048	0,047
	(0,037)	(0,033)	(0,034)
Low level of educ. (ref.medium)	0,00091	0,025	0,026
	(0,054)	(0,054)	(0,054)
High level of education	0,092*	0,043	0,042
	(0,035)	(0,036)	(0,036)
With partner	0,020	0,0071	0,0063
	(0,025)	(0,022)	(0,022)
Lambda	0,016	0,042	0,039
	(0,102)	(0,085)	(0,085)
Self-employed (ref. other white collar)	0,19***	0,22***	0,21***
	(0,045)	(0,045)	(0,045)
Manager	0,11**	0,066*	0,044*
	(0,030)	(0,029)	(0,033)
Manual worker	-0,084*	-0,058	-0,059
	(0,034)	(0,031)	(0,031)
Service sector (ref. production)	0,025	0,014	0,014
	(0,039)	(0,037)	(0,037)
Public	0,18***	0,10*	0,045
	(0,047)	(0,042)	(0,042)
Permanent job (ref. other)	0,079	0,067	0,067
	(0,040)	(0,038)	(0,038)
Job tenure	0,00041	0,00033	0,00029
	(0,002)	(0,001)	(0,001)
No. of employer changes	-0,0024	-0,0044	-0,0043
	(0,004)	(0,004)	(0,004)
No. of unemployment spells	-0,048***	-0,040***	-0,040***
	(0,009)	(0,009)	(0,009)
Last job change: interregional	-0,018	-0,042	-0,042
	(0,032)	(0,029)	(0,029)

Last job change: voluntary	0,045	0,039	0,0064
	(0,026)	(0,026)	(0,042)
Last job change: forced	-0,087**	-0,081**	-0,082**
	(0,024)	(0,025)	(0,025)
Usage of less skills after last job change	-0,46***	-0,43***	-0,42***
	(0,054)	(0,052)	(0,053)
Usage of more skills after last job change	0,096**	0,031	0,033
	(0,031)	(0,033)	(0,033)
Usage of different skills after last job change	-0,079*	-0,11*	-0,11*
	(0,038)	(0,042)	(0,043)
Respondents' cooperation		0,11	0,10
		(0,068)	(0,067)
Recently participated in training		0,44***	0,44***
		(0,041)	(0,041)
Educ./training: important life domains		-0,013	-0,012
		(0,028)	(0,028)
Training/learning new skills necessary to keep job		0,080***	0,037
		(0,018)	(0,044)
Training necessary*public sector employment			0,084*
			(0,041)
Training necessary*managerial position			-0,084
			(0,053)
Training necessary*voluntary move			0,048
			(0,054)
Belgium (ref. Germany)	0,080***	0,069***	0,071***
	(0,017)	(0,018)	(0,018)
Denmark	0,21***	0,22***	0,22***
	(0,023)	(0,022)	(0,023)
Spain	0,035	0,085***	0,084***
	(0,018)	(0,019)	(0,019)
Greece	-0,18***	-0,072***	-0,074***
	(0,019)	(0,018)	(0,018)
Finland	0,033	-0,014	-0,015
	(0,016)	(0,016)	(0,016)
France	-0,13***	-0,11***	-0,11***
	(0,016)	(0,018)	(0,018)
Ireland	0,20***	0,22***	0,22***
	(0,009)	(0,009)	(0,010)
Italy	-0,17***	-0,100***	-0,098***
	(0,018)	(0,014)	(0,014)
Luxemburg	0,061**	0,10***	0,10***
	(0,017)	(0,016)	(0,016)
The Netherlands	0,061**	0,078***	0,076***

	(0,018)	(0,020)	(0,020)
Austria	0,24***	0,17***	0,17***
	(0,013)	(0,018)	(0,018)
Portugal	-0,28***	-0,18***	-0,18***
	(0,022)	(0,022)	(0,021)
Sweden	-0,039*	-0,055*	-0,056*
	(0,019)	(0,021)	(0,021)
U.K.	0,21***	0,18***	0,18***
	(0,013)	(0,015)	(0,015)
Cyprus	-0,082***	-0,067***	-0,071***
	(0,013)	(0,013)	(0,013)
Czech Rep.	0,20***	0,16***	0,16***
	(0,015)	(0,015)	(0,015)
Estonia	0,028	0,0042	0,0051
	(0,014)	(0,014)	(0,014)
Hungary	-0,36***	-0,34***	-0,34***
	(0,006)	(0,007)	(0,008)
Latvia	-0,31***	-0,31***	-0,31***
	(0,011)	(0,011)	(0,011)
Lithuania	-0,17***	-0,13***	-0,13***
	(0,014)	(0,015)	(0,015)
Poland	-0,52***	-0,51***	-0,51***
	(0,012)	(0,012)	(0,012)
Slovakia	-0,028*	-0,051***	-0,052***
	(0,011)	(0,011)	(0,011)
Slovenia	-0,10***	-0,080***	-0,080***
	(0,012)	(0,011)	(0,011)
_cons	2,50***	2,18***	2,21***
	(0,083)	(0,102)	(0,108)
N	5705	5705	5705
R-sq	0,1318	0,1898	0,1906

* p<0.05, ** p<0.01, *** p<0.001

i An analysis based on the Eurobarometer 64.1 data set found that ten different aspects of job satisfaction form three main dimensions and satisfaction with training opportunities is included in the factor ‘satisfaction with quality of position’ Fasang, Anette, Sara-Izabella Geerdes, Liuben Siarov, and Klaus Schömann. 2006, forthcoming. "Which type of job mobility makes you happy? Evidence from 25 European countries.".

ii Our study has a somewhat explorative character as most studies deal with overall job satisfaction or some dimensions and facets of it, but most of them neglect satisfaction with training opportunities specifically.

iii Higher levels of education are no good indicator here, as they are likely to channel a high value individuals attach to education and training.

iv The according question was: "Generally speaking, when you think about your professional life, could you tell me whether you are very satisfied, fairly satisfied, fairly dissatisfied or not satisfied at all satisfied with your training opportunities?" (qa48) to the opportunities in their current job or their complete professional life. We assume that persons generally tend to evaluate the situation they are in, i.e. the training opportunities of their current job. 'Training opportunities' are complex: they can diverge from each other by (1) financing: employer funded or privately financed (2) organization: in or out of company training or cooperated between companies (3) incentive structure: stimulated by employers (e.g. through job rotation models) or public policy (e.g. learning accounts, training taxes) and (4) freedom of choice and (5) information about training possibilities. There may be interpersonal variance in the perception of different forms of 'training opportunities', which could then lead to different satisfaction levels. We assume that individual heterogeneity, e.g. personal preferences for typical forms of training, are randomly distributed within countries. Moreover, studies discovered that bias stemming from individual heterogeneity is negligible because individual's job satisfaction statements imply a substantial core of rationality when assessing satisfaction with their job. Findings based on longitudinal data found that individuals adjust their early life course expectations in later life steps. This means that apart from individual noise an rather objective measure is employed when comparing the own job to others (Hamermesh 2001; Rose 2003: 506).

v We computed the robust standard errors using the Stata command robust cluster().

vi Unfortunately, we lack information on personality characteristics, wages, firm characteristics, and the extent of pecuniary and non-pecuniary benefits associated with job in the Eurobarometer data set.

vii As multiple answers were possible to that question, we included one dummy for each category.