

# Good, Better, Best. The Social Context of the Labour-Market Success\*

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**Abstract.** We extend recent work on relative utility functions to the context of promotions, whether expected or experienced. The expectation of a promotion or receiving a promotion is, as anticipated, associated with greater levels of job satisfaction. However, being successful on the labour market is not the only thing that matters. We consider the social context of promotions, by relating one's own promotion experience to that of salient others in the reference group. We show that others' good fortune may indeed have anything but a silver lining in terms of the individual's job satisfaction.

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# 1 Introduction

One of the key areas of interest in work on subjective well-being over recent years, and in Behavioural Economics in general, has been income comparisons, with well-being depending not only on my own income but also my income relative to some benchmark (see the survey in Clark and D'Ambrosio, 2015). Recent work has expanded the discussion of a relative utility function beyond income, considering comparisons in labour-market status, marital status and health, to name but three domains. In the labour market, which is the focus of our contribution, it has been shown, for example, that the negative well-being effect of unemployment is attenuated by higher regional unemployment rates, and indeed also by the unemployment status of the individual's partner (Clark, 2003).

This analysis has remained for the most part atemporal, in the sense that well-being at time  $t$  is correlated with some key explanatory variables (both own and others') measured at the same time  $t$ . There is however also widespread interest in the role of time across the social sciences, often making reference to the role that past events play in determining current well-being. This interest has sometimes specifically tested for adaptation to specific life events, finding that there is fairly fast adaptation to marriage, divorce and changes in income, for example, but not to unemployment or poverty (see Clark, 1999, Clark *et al.*, 2008, Clark *et al.*, 2014, and Di Tella *et al.*, 2010). Other work has analysed the effect of completed negative events in the past, such as a past unemployment or poverty spell, on current outcomes. In the labour market, this work originally looked at the 'scarring' effect of past unemployment on current wages (Jacobson *et al.* 1993, and Ruhm, 1991), before turning to the same kind of scarring effect on subjective well-being (Clark *et al.*, 2001, and Knabe and Rätzl, 2011). A third group of contributions has focussed on the well-being effects of the anticipation of future events. The empirical findings in De Witte (1999) suggest that the anticipation of unemployment is as harmful as unemployment itself.

Existing research has not to our knowledge put these three areas of research together and explicitly asked whether current individual well-being depends on comparisons, where the comparison is not in terms of levels but of entire profiles over time and of expectations. The work by D'Ambrosio and Frick (2012) goes some way in this direction by proposing a generalisation of Fehr and Schmidt's (1999) utility function over income distributions. In their framework, individual well-being depends not only on one's ranking in society in the past and at present, but also on the way in which rank has changed over time. In the present contribution we are interested in capturing the effect that expected and experi-

enced success in the labour market has on today’s job satisfaction, and then ask whether individuals make comparisons over these positive labour-market changes. While there is some little work on the well-being effect of promotions (which is perhaps unsurprisingly mostly found to be positive: see Clark, 1996, and Kosteas, 2011),<sup>1</sup> we here consider the social context of promotions, by relating one’s own promotion experience to that of salient others in the reference group.

This question echoes to a considerable extent ideas that have been around for many years. Stouffer *et al.* (1949) considered the relationship between workers’ evaluation of their jobs and promotion, in the context of the Armed Forces. They in particular compared workers in the Military Police to those in the Air Force. One of the key distinctions between the two is that promotions are only rare in the former but much more widespread in the latter. Nonetheless, reported job satisfaction was higher in the Military Police than in the Air Force. This can be understood by a relative utility argument, with the Military Police comparing their outcome to a reference group with only little promotion, while the reference group for those in the Air Force would include a far greater number of promotees. It is easy to imagine a parameterisation of the utility function in which a greater promotion rate will actually lead to lower average well-being at work. The negative externalities of others’ labour-market outcomes are highlighted by Runciman (1966, p.19), who writes that “*The more people a man sees promoted when he is not promoted himself, the more people he may compare himself to in a situation where the comparison will make him feel relatively deprived*”.

We here test for a possible externality effect from promotions using SOEP data from 1985 to 2012. We show that others’ good fortune may indeed have anything but a silver lining in terms of the individual’s job satisfaction.

The remainder of the paper is organised as follows. Section 2 briefly presents the idea of a relative utility function, but here with respect to changes in the individual’s labour-market position. We then describe the SOEP data and variables we use followed by the regression results in Section 3. Last, Section 4 concludes.

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<sup>1</sup>Johnston and Lee (2013) appeal to panel data from HILDA to show that promotions are associated with higher job satisfaction, but also with greater job stress and (eventually) lower mental health, which is argued to reflect this greater stress. Anderson and Marmot (2012) find that promotions reduce heart disease significantly in data from the Whitehall II study, using department-cohort differences in promotion rates as an instrument.

## 2 The Model and the Data

We here consider a relative utility function defined over promotions. This is inspired by the considerable literature on comparison effects with respect to the level of income, where the utility function is assumed to depend on not only the level of the individual  $i$ 's own income in some period  $t$ ,  $y_i^t$ , but also the level of some benchmark, reference or comparison income measured at the same time,  $\bar{y}^t$ . A common result from the empirical estimation of such models is that utility rises with own income but falls with comparison income. This latter acts in the same way as a price deflator: the higher is  $\bar{y}^t$ , the less good my own income feels. This is thought to reflect some instinctive process of comparison with others or ranking in the income scale, which may indeed reflect an evolutionary imperative (Rayo and Becker, 2007). The precise specification of this relative utility function differs from article to article, although log-linear specifications are often used (as in Clark and Oswald, 1996, and Luttmer, 2005).

A fair amount of work has now been carried out to extend the utility function to labour-market outcomes in general, or other domains of economic and social life. However, this literature has retained one key aspect, in that the analysis has not been specifically dynamic: utility is considered to depend only on the contemporaneous levels of some variable, both own and in terms of a benchmark.

We here wish to expand this empirical analysis, and specifically consider comparisons relating to changes over time in labour-market success. We do so because we think that time matters in terms of individual evaluations, whether of work or of other life domains. There are two different ways of introducing this temporal aspect into the utility function. The first is in terms of the present value of future prospects: the evaluation of the job today will in part likely reflect what might happen to it tomorrow in terms of its present discounted value. Hence the future is implicitly incorporated in the evaluation of today. This idea has in general only attracted limited empirical attention in the well-being literature.<sup>2</sup>

As an alternative, which is the approach we follow, own and others' labour-market success are modelled explicitly with the incorporation of expected or experienced promotions in the utility function. Let the incomes of a set  $N = \{1, \dots, n\}$  of  $n \geq 2$  individuals

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<sup>2</sup>Although there is something of an analogy here to Lévy-Garboua *et al.* (2007), who argue that the value that a worker puts on a job is given by its expected present value. It is the comparison of this value with that offered by alternative positions which determines their decision to stay in the current job or to quit. They test their model of quitting on SOEP data and argue that this forward-looking component of the job is indeed that which is germane for decision-making.

be recorded in an income distribution  $y^t = (y_1^t, \dots, y_n^t) \in \mathbb{R}_+^n$ , where  $\mathbb{R}_+^n$  is the set of  $n$ -dimensional vectors with non-negative components. And let the promotions (expected or experienced) from  $t - 1$  to  $t$  be collected in a vector  $p^t = (p_1^t, \dots, p_n^t) \in \mathbb{R}_+^n$ , where  $\bar{p}^t$  indicates the arithmetic mean. The utility function of individual  $i$ ,  $i = 1, \dots, n$ , at time  $t$ , is now:

$$U_i^t(y^t, p^t) = \alpha y_i^t + \vartheta p_i^t + \tau \bar{p}^t \quad (1)$$

where  $\vartheta$  and  $\tau$  are some parameters measuring the effects of promotions on utility at time  $t$ .

To estimate the well-being effect of own and others' promotions, we appeal to data from the 1985-2012 waves of the German Socio-Economic Panel (SOEP). We do not use the first 1984 wave, since some of the questions on income variables were asked differently there. As the research question we address specifically refers to the labour market, we retain observations on individuals of working age (16 to 64) who are employees (as it is arguably more difficult, although not impossible, to conceive of promotion for the self-employed). In our regression analysis, this restriction yields around 202,000 observations (on approximately 33,000 different individuals).

Our dependent variable, which will measure the effect of promotions on well-being, is individual job satisfaction. After an arguably rocky start, such simple measures are becoming increasingly accepted in Economics as providing information which is often difficult to pick up with only objective variables. Job satisfaction in the SOEP is measured on a 0 to 10 scale (where 0 denotes "not satisfied at all" and 10 corresponds to "completely satisfied"). Figure 1 shows the distribution of job satisfaction in our SOEP analysis sample. As can be seen, there is a fair amount of left-skew in the distribution of job satisfaction, which is very typical for many survey measures of individual well-being. There is no particular problem of top-coding though, as only 8.4% of individuals report a job satisfaction score of ten. The average satisfaction score is 7, as is the median.

We wish to relate worker job satisfaction to the promotions that they both expect and experience. In the first instance we will consider only the individual's own experience of labour-market success; then, in an attempt to provide an empirical counterpart to Runciman's claim, we shall introduce the analogous success variables experienced by salient others. The salient others here will be first the individual's partner, and then other workers in the same occupation-region-year cell.

Promotion opportunities are measured in three different ways in the SOEP, and in particular are sometimes measured qualitatively and sometimes quantitatively. Information on promotion opportunities mostly appears every second year. The initial question

used was qualitative, with individuals reporting the chance that they would be promoted in the next two years as “Definitely/Certainly”, “Probable”, “Improbable/Not Probable” and “Definitely not/Unlikely”. The question was asked in this format in 1985 to 1998, without 1986, 1988, 1995 and 1997. Perhaps unsurprisingly, under 2% of respondents say that they will definitely be promoted over the next two years. However, around 15% believe that promotion is probable. The remainder of the sample are split almost equally into “Improbable” and “Definitely not”.

In 2006 and 2011 individuals were asked if they felt that their chances of promotion were bad, with the possible answers being “Very much”, “A lot”, “Moderate” and “Not at all”. More than 25% of the answers were in the first two categories. Approximately 35% did not feel that their chances of promotions were bad at all. We reverse the scale of this variable in our regression to be consistent with the other two promotion variables, in that higher numbers mean better chances of promotion.

Starting in 1999, individuals instead evaluated their chances of promotion over the next two years on a percentage scale from zero to 100, at ten percentage point intervals.<sup>3</sup> Fully one half of SOEP employed respondents say that they have a zero percent chance of promotion over the next two years, with the figures reporting a 10, 20, 30 and 40 percent chance being ten, nine, seven and six percent respectively. Nine per cent of respondents opt for the focal percentage of 50, and another nine per cent give a percentage figure of over 50.

Analysing the relationship between job satisfaction and self-reported promotion chances might not be thought to be completely satisfactory, however. Some (see Hamermesh, 2004) may well object to the correlation of one subjective variable with another, pointing out the possibility that both reflect some unobserved omitted variable such as personality. While the use of individual fixed effects in panel data goes some way towards mitigating such worries, it does not go the whole way. In particular, any transient mood effect on both subjective variables will produce a correlation between them in panel analysis. This correlation will however not be causal, and it is causal relationships that interest us.

To go further in our analysis, we therefore also look at actual experienced promotions, as reported by the individual. The goal here is then to see, all else equal, whether someone who reports having been promoted over the past year is more satisfied with their job than someone who has not been promoted or whose labour income stayed the same. This analysis has the advantage of removing the subjective component from our

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<sup>3</sup>Geishecker (2009) discusses the same kind of switch from qualitative to quantitative measurement in the context of job insecurity.

key explanatory variable.

The variables described so far have only referred to the first half of the right-hand side of the utility function described above, picking up own labour-market outcomes. However, we are particularly interested in the relationship between own satisfaction and others' good fortune. The arguably most innovative part of our paper therefore introduces others' promotions. The key question here is: Who are the others? We appeal to two different reference groups: the individual's own partner, and then others in the individual's own occupational groups by German region (Lander) and year.

The empirical results described in the following section are consistent with own promotions increasing well-being, but also with there being comparison effects in terms of labour-market success. Doing well in the labour market, in terms of income changes and promotions, is good for job satisfaction. But in addition doing better than others in these respects is best.

### 3 Regression Results

To set the scene, Table 1 presents a standard job-satisfaction regression. The controls here include gross monthly labour income (in thousands of Euros),<sup>4</sup> annual hours of work, and sets of dummies for age, education, marital status, occupation, wave and region. We have around 202,000 observations here. The first column refers to ordered probit estimation of job satisfaction regressions on pooled data, while the second column controls for time-invariant individual fixed effects via a within regression. This latter is a linear estimation technique which assumes the cardinality of the dependent variable. Following Ferrer-i-Carbonell and Frijters (2004), we use this simple estimation technique rather than a more complicated ordinal panel estimation approach.

The results are to a large extent unsurprising, and reflect patterns often found in the job-satisfaction literature. In particular, the estimated coefficients are consistent with the premises of the indirect utility function, with satisfaction rising with labour income but falling with hours of work. There is an addition something of a U-shape with respect to age in the pooled estimates (see Clark *et al.*, 1996, and Blanchflower and Oswald, 2008), and men report significantly lower job satisfaction scores than do women, *ceteris paribus* (Nolen-Hoeksema and Rusting, 1999). The relative estimated coefficients on income and hours of work are similar in size across the pooled and panel estimates, although they

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<sup>4</sup>We can reproduce all of the results in this paper using net labour income instead.

cannot be directly compared as one results from linear estimation and the other is an ordered probit coefficient.

One of the broad themes that is tackled in this paper is that time matters. With respect to individual job satisfaction, future prospects may well be important. We thus add promotion opportunities to the standard regression in Table 1: the pooled results appear in Table 2a and the panel results in Table 2b.

Both tables have three columns, referring to the different ways in which promotion opportunities have been measured in the SOEP since 1985. We show the estimated coefficients on promotion probability only, although all regressions include all of the explanatory variables which appeared in Table 1. The first two columns in each table refer to the two qualitative promotion-probability variables, and the third to the percentage probability of future promotion. All of three measures behave in the expected way, in that a greater probability of promotion is associated with higher job satisfaction. The estimated promotion coefficients in the panel regressions in Table 2b are notably larger than those in the pooled results in Table 2a. As such, individuals who are in jobs with better promotion possibilities are “less happy” types (in other words, the comparison of one individual with bad promotion opportunities to another with good promotion opportunities will produce a smaller satisfaction gap than that produced by switching a given individual’s promotion opportunities from bad to good).

It is perhaps also worth noting that the addition of promotion probabilities to the job satisfaction regression does not seem to make much difference to the size of the coefficient on own labour income. *A priori*, this suggests that the positive effect of own income in Table 1 does not just reflect that high income is a proxy for good future prospects (nor that those with good future prospects currently earn less, in a compensating differential way): the two variables seem to represent broadly separate dimensions of what makes a satisfying job. As such, conditional on the present, the future matters in the determination of the individual’s current job satisfaction: well-being at work is inter-temporal.

We now turn to the question of comparisons in terms of promotions: Are you more satisfied with your job when your partner has good future prospects, or do you rather compare your own promotion probabilities to theirs? We will address this issue in the first instance by introducing partner’s promotion into Table 2’s specification; we then introduce an interaction between own and partner’s promotion opportunities. To avoid having an unwieldy number of interactions between categorical promotion probabilities, we undertake this analysis only for the third, cardinal, promotion-probability variable. The results, for both pooled and panel estimation, appear in Table 3a. These regressions



obviously only refer to individuals who have a partner who provided an SOEP interview.

As in Table 2, own promotion probabilities are associated with higher levels of job satisfaction. This does not extend to partner’s promotion opportunities however (which attract negative significant coefficients in columns 2 and 5). The estimated coefficient on the interaction between own and partner’s promotion opportunities is positive (although not significantly so in the panel regressions in column 6). As such, the better your partner’s promotion opportunities, the more valuable are your own opportunities. At least in the cross-section results, both the main effect and the interaction are therefore suggestive of comparisons with respect to one’s partner.

Runciman’s original work was not about spouses of course, but rather about some larger reference group that is germane for the individual. We therefore consider the comparison of good fortune to an “external” reference group: other employees in the individual’s (one-digit) occupation by region and by year.<sup>5</sup> The format of Table 3b is the same as that of Table 3a, but now with this occupational reference group with respect to promotion probabilities. The results are of the same order as those in Table 3a. Own income and promotion probabilities remain positive. Occupational promotion probabilities attract negative estimated coefficients, which are however not systematically significant. Last, the interaction in columns 3 and 6 is positive and significant in the pooled estimates (so that my future possibilities are more important to me as others’ are higher), but positive and insignificant in the panel estimates. One way of reading column 2 of Table 3b is that others’ promotion prospects reduce my own job satisfaction when my own promotion prospects are poor, but increase them when my prospects are better. A simple calculation shows that the turning point occurs when my own promotion prospects are about 30%. According to the distribution of promotion probabilities in the SOEP, others’ promotion prospects then have a positive effect on well-being for about one quarter of employees.

Asking about individuals’ expectations of future events is certainly of interest. However, we would also like to know what happens when promotions actually occur. We can here use the yearly information available in the SOEP on job changes. For example, the question asked in 2007 is: “*Did you change your job or start a new one after December 31, 2005?*”. If this question is answered in the affirmative, the individual also reports what type of job change has occurred. This can refer to the individual’s first job, or to a new job in a different firm, for example. With respect to promotions, the response cat-

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<sup>5</sup>Brown (2001) shows that pay comparisons to co-workers are the most salient out of five types of pay comparisons proposed. Georgellis *et al.* (2014) consider occupational income comparisons and job satisfaction in BHPS data; an earlier contribution in the same vein is Cappelli and Sherer (1988).

egories that interest us are “Changed Job, Same Firm” and “Job with New Employer”. We therefore add a set of “Changed Job” dummies to Table 1’s standard job satisfaction regression to see if recent job changes are indeed associated with higher job satisfaction, conditional on the individual’s current labour income. The results of this regression on pooled and panel data are presented in Table 4.

Most job changes are associated with higher job satisfaction. These include changes that lead to the individual being with a new employer (First Job, and Job with New Employer). This is reminiscent of the honeymoon effect of new jobs highlighted by Chadi and Hetschko (2013). Changing job within the same company will pick up promotions (but also those who have been moved sideways in the company). The estimated coefficient on “Changed Job, Same Firm” is positive and significant in the panel estimates, but insignificant in the pooled estimates. As in the results for individuals’ perceptions of promotion, those with better outcomes seem to be inherently “less happy” types. In the panel results, the estimated coefficient on “Changed Job, Same Firm” is around the same size as those on the other “new job” variables (the largest estimated coefficient, perhaps reflecting Chadi and Hetschko (2013), is on “Job with New Employer” in both the pooled and the panel regressions).

Our last take on labour-market success changes track somewhat. Instead of collecting subjective evaluations of promotion opportunities, or inferring actual promotions from having changed job within the same firm, we consider a direct measure of labour-market success, via labour income: you are promoted if you earn more. This last approach has the advantage of being well-defined in the data at least. As a first step, we consider the role of partner’s labour income in determining individual job satisfaction. The results appear in Tables 5a and 5b, for the pooled and panel results respectively.

In column 1, we introduce partner’s labour income. This attracts a negative significant coefficient in both the pooled regressions and panel regressions. This is consistent with individuals comparing their income to that of their partner (although other stories about bargaining power or joint leisure are also possible).

We are most interested in columns 2 through 4. Here we add a dummy variable for earning more than one’s partner. As in Clark (1996b), this attracts a positive significant coefficient: individuals are more satisfied with their job when they earn more than their partner. This holds in both pooled and panel estimates, and is markedly stronger for men than for women.

Table 6 moves on from the comparison of levels of income to the comparison of changes in income between  $t - 1$  and  $t$ . A change in income is arguably a good proxy for a

promotion having taken place. We distinguish between rises in income and falls in (or constant) income. Rises in income are always, but not always significantly, associated with higher job satisfaction. Spousal comparison effects in income are not confined to the level of labour income in Table 5: Table 6 shows that they are also found with respect to changes over the past year, which we here are taking to be synonymous with improvements in the individual’s job position. In Table 6, those whose change in labour income was larger than that of their spouse report higher job satisfaction scores. This holds in both pooled and panel estimation; as in Table 5, this comparative result within the household seems to be stronger for men than for women.

Our last table considers the comparison of income changes at the broader level of the individual’s occupation by region and by year. Table 7 presents the results. In the first three columns of Table 7, the occupational yearly wage change is significantly negatively correlated with individual job satisfaction for men, but not for women. The last column of Table 7 shows, analogously to Table 6, that own income change is significantly positively associated with job satisfaction as long as that income change is larger than the occupational average. These results hold in both the pooled and panel estimations. The fact that the estimated coefficients in Table 7 for occupational comparisons are larger than those in Table 6 for the comparison to one’s spouse might be thought to reflect some degree of altruism within the household.<sup>6</sup>

## 4 Conclusion

This paper has endeavoured to extend the analysis of relative outcomes beyond contemporaneous level comparisons, and suggests that changes in labour-market success are evaluated relatively too. In particular, while there is now a fair amount of work that suggests that individuals assess their income at least partly relatively, the results here are consistent with (expected and realized) promotions, or more generally changes in income, having a relative component as well.

We have considered two types of reference group: the first is a cell mean with respect to occupation, region and year; the other is the individual’s spouse. The results from both types of reference group are similar. At face value, this is not consistent with altruism within the household. However, it is wise to be circumspect about this conclusion. While the results may indeed reflect envy with respect to one’s partner, they are also

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<sup>6</sup>It is also possible that occupation and spouse are fundamentally different as reference groups, as any future good fortune of the latter may well be shared within the household

consistent with the partner acting as a proxy for broader labour-market conditions, with an omitted variable (for example, the joint use of leisure) and with relative incomes determining bargaining power within the household (as much of the collective labour-supply literature has found). Last, as noted above, the coefficients are sometimes stronger at the occupational than at the spousal level. Identifying the relevant channel of influence between spouses would seem to be important for the correct understanding of household behaviour.

We have here only modelled average effects over the whole sample. There is however likely to be heterogeneity in individuals' propensity to carry out comparisons. The results for men and women are not identical in the current paper, but it may well be true that the salience of comparisons also depends on personality type, for example.

Last, taking these results at face value, not only is income at least partly relative, but so are promotions and changes in income. This would suggest that tournaments may lose their power as they become more widespread. This extension of personnel Economics to include such behavioural considerations is arguably a useful programme for future research.

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## Tables and Figure:

**Table 1: Basic Job Satisfaction Regressions: Pooled and Panel.**

	<b>OP</b>	<b>FE</b>
Gross monthly labour income (€000)	0.053*** (0.002)	0.071*** (0.006)
Annual hours of work/100	-0.005*** (0.000)	-0.010*** (0.001)
Age 16-20	0.251*** (0.024)	0.566*** (0.053)
Age 21-30	0.152*** (0.008)	0.433*** (0.023)
Age 31-40	0.061*** (0.006)	0.269*** (0.015)
Age 51-60	-0.039*** (0.007)	-0.369*** (0.015)
Age 61-65	0.112*** (0.016)	-0.493*** (0.035)
Male	-0.015*** (0.006)	
Married	0.056*** (0.007)	-0.064*** (0.023)
Widowed	0.104*** (0.021)	-0.192*** (0.069)
Divorced	0.014 (0.011)	-0.067** (0.034)
Separated	0.115*** (0.017)	0.069* (0.040)
Wave Dummies	Yes	Yes
Region Dummies	Yes	Yes
Education dummies	Yes	Yes
Occupational dummies	Yes	Yes
Observations	202,329	202,329

\*significant at 10%; \*\* at 5%; \*\*\* at 1%. (Standard errors in parentheses).

**Table 2a: Job Satisfaction and Promotion Prospects: Pooled Results.**

	<b>Prom1</b>	<b>Prom2</b>	<b>Prom3</b>
Gross monthly labour income (€000)	0.037*** (0.010)	0.088*** (0.007)	0.063*** (0.004)
Chances of Promotion: Improbable	0.343*** (0.046)		
Chances of Promotion: Probable	0.635*** (0.042)		
Chances of Promotion: Definitely	0.820*** (0.043)		
Expected Promotion: Improbable		0.088*** (0.011)	
Expected Promotion: Probable		0.380*** (0.015)	
Expected Promotion: Definitely		0.581*** (0.037)	
Promotion probability (0 to 1)			0.325*** (0.020)
Observations	10,131	49,865	50,992

\*significant at 10%; \*\* at 5%; \*\*\* at 1%. (Std. err. in par). All regressions include all of Table 1's other control variables.



**Table 2b: Job Satisfaction and Promotion Prospects: Panel Results.**

	Prom1	Prom2	Prom3
Gross monthly labour income (€000)	-0.064 (0.062)	0.257*** (0.021)	0.074*** (0.014)
Chances of Promotion: Improbable	0.512*** (0.153)		
Chances of Promotion: Probable	1.097*** (0.148)		
Chances of Promotion: Definitely	1.004*** (0.155)		
Expected Promotion: Improbable		0.302*** (0.023)	
Expected Promotion: Probable		0.720*** (0.033)	
Expected Promotion: Definitely		0.806*** (0.078)	
Promotion probability (0 to 1)			0.739*** (0.043)
Observations	10,131	49,865	50,992

\*significant at 10%; \*\* at 5%; \*\*\* at 1%. (Std. err. in par). All regressions include all of Table 1's other control variables.

**Table 3a: Job satisfaction: own and spouse's promotion probabilities.**

	Prom3 Pooled	Prom3 Pooled	Prom3 Pooled	Prom3 Panel	Prom3 Panel	Prom3 Panel
Gross monthly labour income (000)	0.075*** (0.006)	0.075*** (0.006)	0.075*** (0.006)	0.096*** (0.023)	0.095*** (0.023)	0.094*** (0.023)
Promotion probability (0 to 1)	0.271*** (0.029)	0.296*** (0.030)	0.200*** (0.038)	0.616*** (0.067)	0.630*** (0.068)	0.557*** (0.084)
Sp. Promotion probability (0 to 1)		-0.145*** (0.029)	-0.240*** (0.037)		-0.136** (0.067)	-0.209** (0.083)
Prom prob* Sp. Prom prob (0 to 1)			0.435*** (0.105)			0.319 (0.215)
Observations	23,658	23,578	23,578	23,658	23,578	23,578

\*significant at 10%; \*\* at 5%; \*\*\* at 1. (Std. err. in par). All regressions include all of Table 1's other control variables.

**Table 3b: Job satisfaction: own and occupation's promotion probabilities.**

	Prom3 Pooled	Prom3 Pooled	Prom3 Pooled	Prom3 Panel	Prom3 Panel	Prom3 Panel
Gross monthly labour income (€000)	0.063*** (0.004)	0.063*** (0.004)	0.063*** (0.004)	0.074*** (0.014)	0.074*** (0.014)	0.074*** (0.014)
Promotion probability (0 to 1)	0.325*** (0.021)	0.325*** (0.021)	0.086 (0.062)	0.739*** (0.041)	0.740*** (0.042)	0.668*** (0.098)
Occ. Promotion probability (0 to 1)		-0.000 (0.126)	-0.349** (0.154)		-0.082 (0.213)	-0.193 (0.266)
Prom prob* Occ. Prom prob (0 to 1)			1.211*** (0.295)			0.368 (0.444)
Observations	50,992	50,992	50,992	50,992	50,992	50,992

\*significant at 10%; \*\* at 5%; \*\*\* at 1. (Std. err. in par). All regressions include all of Table 1's other control variables.

**Table 4: Job satisfaction and actual promotions.**

	<b>OP</b>	<b>FE</b>
Gross monthly labour income (€000)	0.054*** (0.002)	0.068*** (0.006)
First Job	0.076*** (0.023)	0.240*** (0.045)
Job After Break	-0.010 (0.012)	0.252*** (0.023)
Job With New Employer	0.087*** (0.009)	0.365*** (0.016)
Company Taken Over	-0.007 (0.023)	0.192*** (0.042)
Changed Job, Same Firm	-0.013 (0.030)	0.232*** (0.053)
Observations	198,807	198,807

\*significant at 10%; \*\* at 5%; \*\*\* at 1. (Std. err. in par). All regressions include all of Table 1's other control variables.

**Table 5a. Job satisfaction and Partner Income: Pooled.**

	<b>(1) All</b>	<b>(2) All</b>	<b>(3) Men</b>	<b>(4) Women</b>
Gross monthly labour income (€000)	0.061*** (0.003)	0.047*** (0.004)	0.057*** (0.004)	0.038*** (0.007)
Spouse's Gross monthly labour income (€000)	-0.005* (0.003)	0.011*** (0.003)	0.009 (0.007)	0.006 (0.004)
Earn more than Spouse		0.140*** (0.010)	0.183*** (0.015)	0.090*** (0.015)
Observations	94,050	94,050	47,320	46,730

\*significant at 10%; \*\* at 5%; \*\*\* at 1. (Std. err. in par). All regressions include all of Table 1's other control variables.

**Table 5b. Job satisfaction and Partner Income: Panel.**

	<b>(1) All</b>	<b>(2) All</b>	<b>(3) Men</b>	<b>(4) Women</b>
Gross monthly labour income (€000)	0.083*** (0.011)	0.072*** (0.011)	0.076*** (0.014)	0.065*** (0.022)
Spouse's Gross monthly labour income (€000)	-0.029*** (0.011)	-0.017 (0.011)	0.000 (0.021)	-0.029** (0.014)
Earn more than Spouse		0.093*** (0.024)	0.173*** (0.033)	0.015 (0.035)
Observations	94,050	94,050	47,320	46,730

\*significant at 10%; \*\* at 5%; \*\*\* at 1. (Std. err. in par). All regressions include all of Table 1's other control variables.

**Table 6a: Job satisfaction and Income Changes Compared to Partner: Pooled.**

	(1) All	(2) Men	(3) Women	(4) All
Gross monthly labour income (000)	0.064*** (0.005)	0.076*** (0.006)	0.059*** (0.009)	0.063*** (0.005)
Yearly Change in Gross monthly labour income if positive	0.050*** (0.012)	0.016 (0.014)	0.109*** (0.023)	0.044*** (0.012)
Yearly Change in Gross monthly labour income if negative	0.002 (0.013)	0.005 (0.015)	-0.003 (0.025)	0.002 (0.013)
Own Change > Spouse's Change	0.015* (0.008)	0.018 (0.012)	0.010 (0.012)	0.022** (0.009)
Spouse's Gross monthly labour income				0.001 (0.004)
Spouse Yearly Change in Gross monthly labour income if positive				0.039*** (0.012)
Spouse Yearly Change in Gross monthly labour income if negative				-0.019 (0.013)
Observations	68,572	34,382	34,190	68,572

\*significant at 10%; \*\* at 5%; \*\*\* at 1. (Std. err. in par). All regressions include all of Table 1's other control variables.

**Table 6b: Job satisfaction and Income Changes Compared to Partner: Panel.**

	(1) All	(2) Men	(3) Women	(4) All
Gross monthly labour income (€000)	0.072*** (0.016)	0.090*** (0.020)	0.037 (0.029)	0.073*** (0.016)
Yearly Change in Gross monthly labour income if positive	0.061*** (0.022)	0.022 (0.027)	0.143*** (0.041)	0.054** (0.023)
Yearly Change in Gross monthly labour income if negative	0.050** (0.022)	0.014 (0.026)	0.133*** (0.044)	0.046** (0.022)
Own Change > Spouse's Change	0.025* (0.013)	0.056*** (0.019)	-0.010 (0.019)	0.036** (0.015)
Spouse's Gross monthly labour income (€000)				-0.023 (0.016)
Spouse Yearly Change in Gross monthly labour income if positive				0.046** (0.022)
Spouse Yearly Change in Gross monthly labour income if negative				0.020 (0.023)
Observations	68,572	34,382	34,190	68,572

\*significant at 10%; \*\* at 5%; \*\*\* at 1. (Std. err. in par). All regressions include all of Table 1's other control variables.

**Table 7a: Job satisfaction and Income Changes Compared to Occupation: Pooled.**

	(1) All	(2) Men	(3) Women	(4) All
Gross monthly labour income (€000)	0.056*** (0.003)	0.055*** (0.006)	0.064*** (0.004)	0.056*** (0.003)
Yearly Change in Gross monthly labour income if positive	0.048*** (0.011)	0.095*** (0.018)	0.024* (0.013)	0.017 (0.011)
Yearly Change in Gross monthly labour income if negative	-0.001 (0.007)	-0.011 (0.018)	0.002 (0.007)	-0.018** (0.007)
Occupational Yearly Change in Gross monthly labour income	-0.034 (0.030)	-0.099* (0.051)	-0.006 (0.036)	0.039 (0.031)
Own yearly change > occupational yearly change				0.063*** (0.007)
Observations	164,323	70,454	93,869	164,323

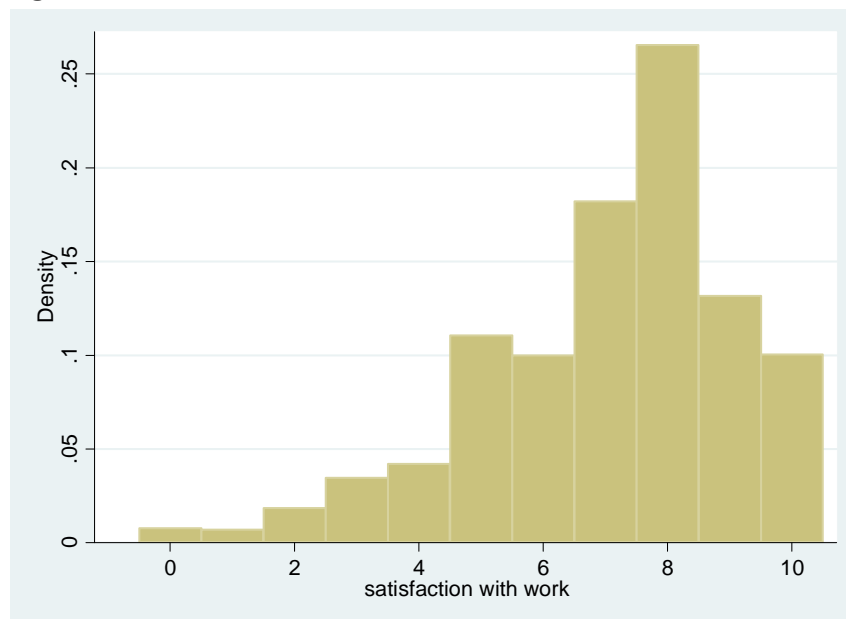
\*significant at 10%; \*\* at 5%; \*\*\* at 1. (Std. err. in par). All regressions include all of Table 1's other control variables.

**Table 7b: Job satisfaction and Income Changes Compared to Occupation: Panel.**

	(1) All	(2) Men	(3) Women	(4) All
Gross monthly labour income (€000)	0.075*** (0.009)	0.076*** (0.018)	0.073*** (0.011)	0.079*** (0.009)
Yearly Change in Gross monthly labour income if positive	0.055*** (0.015)	0.078*** (0.028)	0.048*** (0.017)	0.000 (0.015)
Yearly Change in Gross monthly labour income if negative	0.016 (0.013)	0.082*** (0.031)	-0.001 (0.014)	-0.012 (0.012)
Occupational Yearly Change in Gross monthly labour income	-0.035 (0.046)	-0.141* (0.079)	0.019 (0.053)	0.089* (0.047)
Own yearly change > occupational yearly change				0.106*** (0.010)
Observations	164,323	70,454	93,869	164,323

\*significant at 10%; \*\* at 5%; \*\*\* at 1. (Std. err. in par). All regressions include all of Table 1's other control variables.

**Figure 1: The Distribution of Job Satisfaction in the SOEP.**



Satisfaction is measured on a 11-point scale from 0=completely dissatisfied to 10=completely satisfied. The numbers here refer to our estimation sample.