

## Good jobs, bad jobs: Workers' evaluations in five countries

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**H**ow good or bad is a particular job? How good or bad is my own job? These are questions that everyone has asked or been asked. They are important questions, because they go to the heart of the issues of job quality and personal welfare.

One direct way to evaluate the extent to which jobs are good or bad is to rely on the opinions of workers by asking them about their own job satisfaction. Understanding job quality is indeed important for several reasons. First, careful evaluation of labour market policies requires that account be taken of their effects on all aspects of employment, not merely wages and employment levels. In this respect, the value of job satisfaction data stems from the existence of subjective, but important, aspects of the employment relationship, coupled with the near impossibility of measuring all the objective characteristics of a job. And even if measurement difficulties could be overcome, measurements of each characteristic would then need to be combined in order to create what economists call a utility index. In constructing such an index, job satisfaction data allow the job incumbent's personal values to be used instead of those of the policy-maker or researcher. In short, no simple, externally imposed taxonomy of "good jobs" and "bad jobs" is likely to capture what is obvious to labour market participants about their own jobs.

Second, although a number of large-scale surveys have included questions about job satisfaction,<sup>1</sup> there has been relatively little systematic exploration of cross-sectional variation in job satisfaction within large socio-economic groups (as distinct from employees of a specific

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<sup>1</sup> For example, the General Social Survey in the United States has inquired about job satisfaction every year since 1972. The British Household Panel Survey has followed job satisfaction since 1991.

organization or group of organizations).<sup>2</sup> As a result, the meaning of high, low, or changing levels of job satisfaction in larger socio-economic groups is not yet well understood. Not only has existing research in this field focused predominantly on industrialized economies, but none of it has tried to determine how relationships between job satisfaction and its covariates compare across dissimilar national labour markets.

Third, job satisfaction has been shown to be an important predictor of quits and other objective outcomes (Freeman, 1978; Akerlof and Dickens, 1982; Akerlof, Rose and Yellen, 1988; Clark, 2001). In this respect, job satisfaction can be viewed as an important organizational indicator. Seashore (1974) and Clark (1998) argue that job satisfaction can be viewed as an important output or outcome of organization and labour markets – a direct measure of well-being. Keon and McDonald (1982) found a two-way relationship between job satisfaction and life satisfaction. In other words, job satisfaction is both an organizational indicator and a social indicator.

This article examines job satisfaction data collected by the People's Security Surveys (PSSs) of the ILO in five countries. Its objectives are to evaluate (1) the determinants of job satisfaction in each country, (2) the extent to which similar patterns appear within each country, and (3) whether those patterns support the use of job satisfaction data as an indicator of job quality. Following a background section presenting the study data and analytical framework, the second section of the article relates measured job satisfaction to other information from the surveys to determine whether observed patterns integrate sensibly with economics and psychology in a specific national context. The findings are confirmed by regression analysis in the third section, and a final section offers some concluding remarks.

## Data and framework

Before beginning our analysis, it is important to note some limitations to the use of job satisfaction information. Job satisfaction data complement objective information on wages, hours, and so forth, but may sometimes produce evaluations of job quality which – from the researcher's point of view – appear to be at variance with the objective facts. The main reason is that respondents answer job satisfaction questions from their own frames of reference. The respondents' use of frames of reference is part of the purpose of examining job satisfaction data and part of what we set out to analyse. Nevertheless, it is important to keep in mind that these frames vary in ways which we do not pretend to understand or measure.

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<sup>2</sup> A recent exception is Clark (1996), who analyses job satisfaction data from the British Household Panel Survey in detail. Clark (1998) provides the only multi-country study we are aware of, using data from the International Social Surveys Programme Work Orientations I module.

Table 1. Scope of selected People's Security Surveys

	Overall sample size	Target population	Geographic coverage
Argentina	2 920	Ages 15-64	Metropolitan Buenos Aires, Cordoba, Rosario
Brazil	4 000	Ages 15-64	Metropolitan Rio de Janeiro, São Paulo, Recife
Chile	1 188	Ages 15-64	Metropolitan Santiago, Concepción, Valparaíso
Hungary	1 000	Ages 18-60	National
Ukraine	8 099	Individuals on official registers*	National

\* Individuals on official registers of employees in the industrial sector, service sector, public budgetary sphere, agricultural sector; unemployed workers; students; and pensioners. Self-employed were excluded from the sampling frame.

### Job satisfaction data

The data for this study are drawn from the PSSs conducted in Argentina, Brazil, Chile, Hungary and Ukraine during 2000 and 2001. The surveys differ somewhat in coverage, as shown above in table 1.<sup>3</sup>

All five surveys used a sequence of questions that invited the respondent's evaluation of her or his job satisfaction on six dimensions: pay, non-wage benefits, nature of work, autonomy or independence, opportunities for promotion, and opportunities for skill upgrading. In each case, responses were gathered on a five-point scale ranging from "very dissatisfied" to "very satisfied".<sup>4</sup> The distributions of responses are shown in figure 1.<sup>5</sup> Means are shown in table 2. Job satisfaction tends to be higher in the three Latin American countries than in the two transition economy countries. This is partly related to the fact that the Latin American samples were entirely urban; the means for urban respondents in Hungary and Ukraine were 0.24 and 0.31 higher than the overall means. Chile displays the highest level of job satisfaction and Ukraine the lowest. Among the six aspects of job satisfaction, respondents in all five countries tended to be the most satisfied with the nature of their work and least satisfied with their pay and benefits.

This article analyses the *total job satisfaction score* obtained by summing the six job-satisfaction scores in order to produce a total score between 6 and 30 (see figure 2). This procedure is commonly followed

<sup>3</sup> For more details on methodology, see Jeria Cáceres, 2001.

<sup>4</sup> In Argentina, Brazil and Chile, a seventh question asked about the work environment. The responses to this question are not used in this article in order to allow closer comparability with the Hungarian and Ukrainian data.

<sup>5</sup> Figures 1 and 2 use unweighted counts. All tables use weighted data.



Table 2. Job satisfaction scores (employees)

	Argentina	Brazil	Chile	Hungary	Ukraine
<b>Wages</b>					
Mean	2.9	2.8	3.0	2.6	2.5
Satisfied, very satisfied (%)	37.9	34.6	39.0	19.3	19.6
Unsatisfied, very unsatisfied (%)	41.7	43.6	35.8	42.7	66.9
<b>Benefits</b>					
Mean	2.9	2.8	3.0	2.3	2.5
Satisfied, very satisfied (%)	41.8	35.0	40.0	16.3	15.1
Unsatisfied, very unsatisfied (%)	42.9	48.9	34.2	57.9	60.0
<b>Nature of work</b>					
Mean	3.6	3.7	3.7	3.8	3.4
Satisfied, very satisfied (%)	71.7	73.4	70.6	66.2	62.1
Unsatisfied, very unsatisfied (%)	13.2	13.8	11.9	10.8	18.8
<b>Autonomy</b>					
Mean	3.5	3.4	3.6	3.7	3.1
Satisfied, very satisfied (%)	64.9	60.7	60.8	58.7	38.3
Unsatisfied, very unsatisfied (%)	18.0	20.3	14.7	14.0	24.2
<b>Opportunities to upgrade skills</b>					
Mean	3.1	3.2	3.3	2.9	3.1
Satisfied, very satisfied (%)	50.6	50.6	48.5	39.6	37.0
Unsatisfied, very unsatisfied (%)	33.9	32.8	26.5	40.1	28.4
<b>Promotion opportunities</b>					
Mean	2.9	2.8	3.2	2.7	2.8
Satisfied, very satisfied (%)	39.9	35.1	43.2	30.4	22.6
Unsatisfied, very unsatisfied (%)	43.5	46.9	32.0	41.0	35.7
<b>Total job satisfaction score<sup>a</sup></b>					
Mean	18.8	18.6	19.8	18.0	17.4
Standard deviation	5.0	4.5	5.8	5.0	4.1
24 or higher (%)	15.2	14.4	25.2	11.3	6.9
12 or lower (%)	8.7	9.8	6.2	11.7	10.9
25th percentile	16	16	17	14	15
Median	19	19	20	18	18
75th percentile	22	22	24	22	20
Observations	781	1 458	433	437	5 731

<sup>a</sup> Sum of six scores above.

where multiple job-satisfaction indicators are available, though the total score is subject to more than one interpretation. The simplest interpretation is that the total job-satisfaction score offers a measure of overall job satisfaction.<sup>6</sup>

However, the analysis offered in this article is based on a somewhat more complex interpretation. The six job-satisfaction scores tend to move up and down together, and this tendency can be quantified using factor analysis. A factor analysis performed on the six specific job-satisfaction scores produces the same result for all five countries: an individual who reports being highly satisfied with pay also tends to report high satisfaction with the degree of autonomy, and so on. In statistical terms, we found a single dominant factor, and this estimated factor has roughly the same positive relationship to the six specific job-satisfaction scores in all five countries.<sup>7</sup> The correlation of this factor with the total job-satisfaction score exceeds 0.99 for every analysis reported in this article.

An economic interpretation of the existence of this factor would suggest that labour markets function in ways that package jobs so that they *tend* to be good, bad or mediocre on all six dimensions. A psychologist, by contrast, would be likely to argue that the six job satisfaction questions tap into a latent psychological construct that might naturally be termed “job satisfaction”. In practical terms, this would cause the responses for each dimension to move up or down with the underlying level of overall satisfaction. Psychologists’ preferred interpretation of the factor analysis result is that it reveals this latent “job satisfaction” construct statistically. These economic and psychological explanations of the finding of statistical regularity are not just different words for the same phenomenon, nor are they mutually exclusive. Although we know of no methodology for measuring their relative validity, it is unlikely that either is completely correct or incorrect: both are incomplete to the extent that the six satisfaction scores do not move in lockstep.

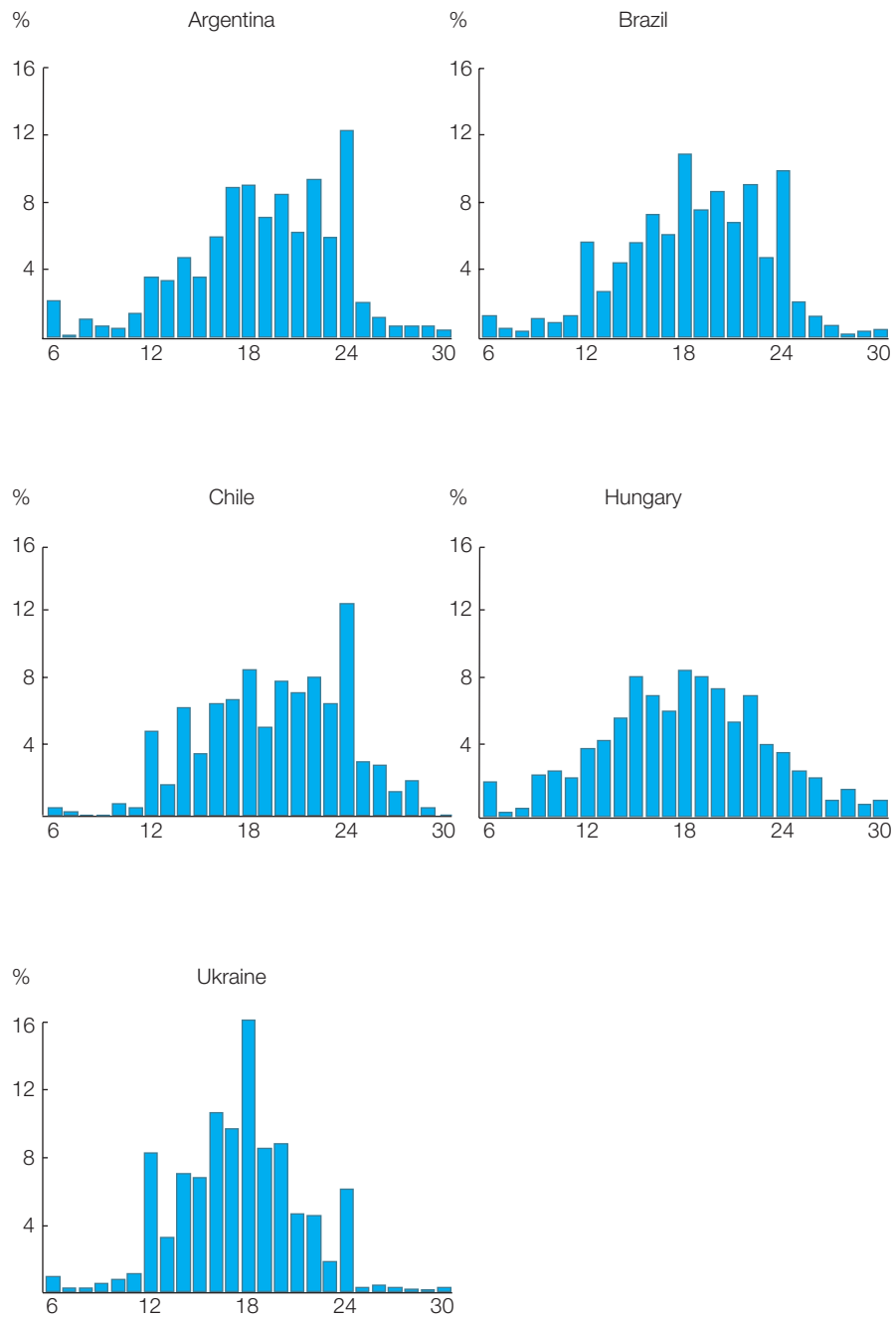
Table 2 indicates that, on average, respondents were fairly neutral about their jobs, with average total scores ranging from 17.4 for Ukraine to 19.8 for Chile. The distributions of total job-satisfaction scores for the five samples are shown in figure 2.

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<sup>6</sup> The PSS questionnaires did not include a question about overall job satisfaction.

<sup>7</sup> The single factor is dominant in the sense that its associated eigenvalue exceeds 2.0 in all five countries, while the eigenvalue associated with the second factor is always less than 0.5. The estimated factor loadings are approximately the same size in all five countries. For details, see Ritter and Anker (2002).

Figure 2. Distribution of total job satisfaction scores



### Analytical framework

Job satisfaction outcomes are determined by the characteristics of both the individual incumbent and the job/employer. Certain kinds of individuals have an advantage in getting matched to a “good” job. Certain kinds of jobs or employers will deliver higher levels of job satisfaction. More specifically, job satisfaction outcomes are determined by the interplay of:

- (1) The technical characteristics of the job. Is it, for example, inherently dangerous?
- (2) The employer’s decisions about how to position the job and the firm in the labour market. Has the employer chosen, for example, to provide generous compensation relative to other employers competing for similar workers?
- (3) The characteristics of the individual. Is he or she highly educated, for example?
- (4) The individual’s choices about how to position herself in the labour market. For example, has the worker chosen a demanding but highly paid job?
- (5) The individual’s frame of reference. Is he or she highly educated, for example?

The same example is deliberately chosen for items 3 and 5 in order to highlight an inherent difficulty in interpreting subjective measures such as job satisfaction: the individual’s frame of reference, when asked about job satisfaction, is inevitably correlated with her/his own characteristics. A highly educated individual is very likely to have high pay relative to the labour market as a whole, but this generates a frame of reference which includes the expectation of high absolute pay (Clark and Oswald, 1996). If, then, s/he perceives that s/he is underpaid relative to other highly educated people, s/he is likely to report lower job satisfaction.<sup>8</sup>

Relative position effects of this sort are not static. Suppose, for example, that discrimination against women becomes a highly visible issue. This could induce a shift in women’s frame of reference away from women in similar circumstances and toward men doing comparable work. This shift would, in turn, tend to reduce women’s reported job satisfaction. Similarly, a significant drop in the returns to education in a particular labour market might induce highly educated workers to believe that they are underpaid, reducing their reported job satisfaction.

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<sup>8</sup> Unfortunately, the data do not include the respondent’s perception of the fairness of any aspect of employment.

Thus, it is important to keep in mind that job satisfaction data measure the quality of jobs *as filtered through the perceptions of the individual holding the job*.

## Bivariate analysis

This section explores the relationships between total job satisfaction scores and variables in the following categories:

- characteristics of the respondent;
- employer size and self-employment status;
- the respondent's evaluation of workplace safety;
- perceived job security;
- earnings on the job;
- transferability of skills used on the job;
- union membership;
- the respondent's perception of employer attitudes.

These relationships are examined one at a time, with four subsections devoted to employees, and a fifth to the self-employed. The following section then goes on to use regression analysis to assess the extent to which the bivariate relationships overlap as part of a more integrated picture.

### *Individual characteristics of respondents*

Table 3 shows the overall means of total job satisfaction, as well as means by sex, age and educational attainment. In this and subsequent tables, the rows labelled “*t*-statistic” display the test statistic for a test of the null hypothesis that the means of the first and last categories are equal (a two-tailed test). The rows labelled “significance level” use asterisks to indicate whether the null hypothesis is rejected at standard significance levels of 10, 5, and 1 per cent. In some cases, as noted in later tables, where the number of observations in the first category is small, the test compares the second category or merged first and second categories to the final category.

The first panel of table 3 shows that women are generally less satisfied than men in Brazil, but more satisfied in Hungary. In Argentina, Chile and Ukraine, the difference between women and men is less than half a total job-satisfaction point. However, because the Ukraine sample is more than three times larger than the next largest sample, the small 0.3 point difference between men and women in Ukraine is statistically significant.

There does not seem to be a simple relationship between age and job satisfaction in any of the five countries (second panel of table 3),

Table 3. Job satisfaction by employee characteristics (average total job satisfaction score, employees)

	Argentina	Brazil	Chile	Hungary	Ukraine
All employees	18.8	18.6	19.8	18.0	17.4
Women	18.8	18.3	20.1	18.6	17.5
Men	18.8	18.9	19.7	17.4	17.2
Tested difference <sup>a</sup>	0.0	0.6	-0.4	-1.2	-0.4
<i>t</i> -statistic <sup>a</sup>	0.1	2.4	0.8	2.6	3.4
Significance level <sup>b</sup>		**		***	***
Age in years <sup>c</sup>					
< 30	19.2	19.0	19.5	18.4	17.6
30 to 39	18.0	18.3	19.9	18.2	17.3
40 to 49	18.9	18.4	19.6	17.2	17.5
≥ 50	19.0	18.8	20.4	18.1	17.3
Highest education completed <sup>d</sup>					
Primary or less	17.9	18.3	18.3	14.9	15.7
Vocational				17.1 <sup>e</sup>	
Secondary	19.1	19.0	19.6	18.8	16.6
Special secondary					17.5 <sup>f</sup>
University <sup>g</sup>	20.7	19.2	21.4	19.8	17.8
Tested difference <sup>a</sup>	2.8	1.0	3.1	4.9	2.1
<i>t</i> -statistic <sup>a</sup>	6.4	2.2	4.2	6.3	4.1
Significance level <sup>b</sup>	***	**	***	***	***
Employees in samples	771- 781	1 456- 1 458	433	437	5 731

<sup>a</sup> For *t*-test of equality of means of first and last categories. <sup>b</sup>\*\*\* = 0.01; \*\* = 0.05; \* = 0.10. <sup>c</sup> Test of difference between extreme categories not performed. <sup>d</sup> Respondents were asked about their highest level of education and offered a pre-coded list of possible responses (i.e. they were not asked for years of education). <sup>e</sup> Somewhat less educational attainment than *secondary*. <sup>f</sup> Three to four years' technical education substituting for the last two years of secondary education and securing admission to the third or fourth year of university, i.e. considerably more than ordinary *secondary*. <sup>g</sup> Includes all post-secondary education (e.g. university and "college" for Hungary; undergraduate and post-graduate studies in the Latin American countries).

though the data do hint at a U-shaped relationship. The *t*-test comparing the youngest and oldest workers is therefore omitted. That no clear pattern emerges is not really surprising; there is no *a priori* reason to expect a direct relationship, and age differences mirror a number of indirect and, possibly, conflicting influences. First, research in many countries has found that age typically has an inverted-U relationship with earnings. Second, there are large inter-generational differences in the countries surveyed here: older people in Hungary and Ukraine lived most of their working lives under communism; and in Latin America,

average levels of education have been rising. Third, younger workers are more likely to be found in less satisfactory jobs, which they subsequently leave for positions that suit them better.

The relationship between education and job satisfaction is shown in the last panel of table 3. In every country, higher education is consistently associated with higher average job satisfaction. The differences between *university* and *primary or less* range from one to 4.9 total job satisfaction points in Brazil and Hungary, respectively; and the difference is statistically significant in every case. At least part of the association between education and job satisfaction probably reflects the composite effect of the well-documented positive relationship between education and earnings and a strong positive association between earnings and job satisfaction. As Freeman (1978) points out, however, “by altering the way in which persons respond to questions, variables like education (which raises aspirations) ... could have very different effects on job satisfaction than on objective economic conditions”.

### *Employer and workplace characteristics*

Employer size is similar to age in the sense that it is a catch-all variable that blends a number of separate effects. Table 4 reinforces this view; the relationship with job satisfaction is neither consistent among countries nor unidirectional in any of the five countries. One interesting pattern is that the smallest employers generate the lowest job satisfaction in Latin America (though the number of observations in the under 10 category is very small for Argentina), but the highest job satisfaction in Hungary and Ukraine. This may stem from historical differences in the nature of small-scale establishments in these countries. Small enterprises in Latin America are often unregulated, informal-sector establishments with relatively poor prospects. In the transition economies, small establishments are typically more dynamic, comprising workers who have left rigid, previously state-run enterprises.

The second panel of table 4 looks at the respondent's evaluation of workplace safety. This is the first of several variables that are the employee's subjective evaluation of an objective situation.<sup>9</sup> In all five

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<sup>9</sup> We assume that there is a connection between actual job safety and workers' evaluations, though it is the perceptions themselves, whether realistic or not, that are relevant to job satisfaction. The approach of measuring objective circumstances using subjective responses has also been used in the health field where subjective evaluations of health have been demonstrated to be good predictors of objective outcomes, specifically mortality (Golini and Calvani, 2001).

Table 4. Job satisfaction by employer and workplace characteristics (average total job satisfaction score, employees)

	Argentina	Brazil	Chile	Hungary	Ukraine
Employer size					
Under 10 employees	17.7	18.4	19.9	18.1	18.1
10 to 50 <sup>a</sup>	20.2	18.9	19.9	17.9	17.7
50 to 100 <sup>b</sup>	20.9	19.5	19.7	17.1	17.2
Over 100	20.1	19.2	20.1	18.0	17.3
Tested difference <sup>c</sup>	2.3	0.8	0.2	-0.2	-0.8
<i>t</i> -statistic <sup>c</sup>	4.3	2.6	0.3	0.2	4.2
Significance level <sup>d</sup>	***	***			***
Workplace safety evaluation					
Very unsafe	14.2	15.9	17.8	15.0 <sup>e</sup>	16.7
Unsafe	16.8	16.6	17.4		16.6
Neutral	17.3	17.5	17.7	16.4	16.5
Safe	19.4	19.2	20.3	18.4	17.8
Very safe	21.7	20.5	22.8	19.4	19.3
Tested difference <sup>c</sup>	4.8 <sup>f</sup>	3.9 <sup>f</sup>	5.5 <sup>f</sup>	4.3 <sup>g</sup>	2.6
<i>t</i> -statistic <sup>c</sup>	7.6 <sup>f</sup>	8.5 <sup>f</sup>	5.0 <sup>f</sup>	4.2 <sup>g</sup>	7.5
Significance level <sup>d</sup>	***	***	***	***	***
Employees in sample	635	1 234	369	388	5 521

<sup>a</sup> Actually 11 to 50 for the Latin American countries and 10 to 49 for Ukraine and Hungary. <sup>b</sup> Actually 51 to 100 for the Latin American countries and 50 to 99 for Ukraine and Hungary. <sup>c</sup> For *t*-test of equality of means of first and last categories, except as otherwise noted. <sup>d</sup> \*\*\* = 0.01; \*\* = 0.05; \* = 0.10. <sup>e</sup> First and second categories combined because of small cell sizes in both. <sup>f</sup> For equality of means of second and last categories. <sup>g</sup> For equality of mean of last category with mean of combined first and second categories.

countries, respondents were asked to describe the safety of their workplace on a five-point scale ranging from “very unsafe” to “very safe”.<sup>10</sup> These questions are subjective in a different way than the job satisfaction questions. The latter ask for a rating of the worker’s emotional (affective) response to different aspects of the job, whereas the workplace safety and job security questions elicit an evaluation of an objective condition.

<sup>10</sup> The surveys also gathered information about work-related injuries and illness, as well as exposure to specific workplace hazards. The incidence of injuries was low and, not surprisingly (given the very small cell sizes), no statistically significant relationships with job satisfaction emerged. It is very difficult to collect detailed workplace hazard data in general surveys, so there were three problems with the approach to measuring workplace safety for this study: (1) the list of categories was not exhaustive; (2) like injuries, some hazards showed a very low incidence; and (3) some exposures were too broadly specified (e.g. “exposure to hazardous chemicals” rather than, say, “frequent exposure to hazardous chemicals without protective equipment”). Consequently, the relationship between job satisfaction and exposure to hazards did not display consistent patterns.

The results point to a strong link between job satisfaction and perceived workplace safety, both statistically and quantitatively: the difference between the best and worst categories ranges from 2.6 job satisfaction points in the Ukraine sample to 7.5 points in the Argentina sample. The Ukraine results are somewhat puzzling because there is no strong relationship between perceived safety and job satisfaction for those in the worst three categories; the relationship only emerges when comparing “neutral” to “safe” or “very safe”.<sup>11</sup>

### *Job characteristics*

Table 5 starts with another subjective evaluation: prospective job security over the coming 12 months. Without exception, higher confidence that the job can be retained is related to higher job satisfaction, with the gap between “very unconfident” and “very confident” ranging from 3.3 (Ukraine) to 6.6 points (Hungary).<sup>12</sup> The difference is statistically significant at the 0.01 level in every case. Given the strength of this result (and of the results for safety reported above), it is worth emphasizing that none of the six job satisfaction questions asked directly about job security or job safety. Nor were the safety and security questions posed as questions about satisfaction regarding the levels of job safety and security.

The reasons why job safety and security influence job satisfaction are obvious. A bit less transparent is the use of transferable skills on the job. The underlying reasoning involves two steps. The starting point is the economic theory of labour markets, which argues that workers are compensated for transferable skills they use on the job. The argument rests on the observation that transferable skills can be sold to another employer. This, in turn, has two consequences for job satisfaction. First,

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<sup>11</sup> In the Ukraine PSS the subjective job-safety query is immediately preceded by two questions about whether the respondent or any fellow worker has been off work due to injury, illness or stress. In the Latin American surveys, the preceding question is about the respondent’s own injury, illness or stress and there is no question about a larger group. In Hungary, the safety evaluation question is preceded by unrelated questions. Since the respondent is much more likely to recall a specific problem when asked about fellow workers, the placement of questions on the Ukraine PSS tended to emphasize unsafe aspects of the work environment just prior to the subjective question. This may partly account for the relatively high level of “very unsafe” responses and could have changed the relationship with the job satisfaction question.

<sup>12</sup> It is likely that the range is smaller for Ukraine partly because the question was framed in a more pessimistic fashion. For Argentina, Brazil, Chile and Hungary, the endpoints of the scale were: “very (or fully) confident” and “very unconfident”. For Ukraine, the endpoints were: “Confident I will keep present job” and “Expect to lose present job”. For the sake of brevity, however, this article uses the “very confident” to “very unconfident” labels. A large “don’t know” group on this question in Ukraine – almost 18 per cent of the sample – reported mean job satisfaction slightly better than those in the neutral category, but they have not been included in the analysis.

Table 5. Job satisfaction by job characteristics (average total job satisfaction score, employees)

	Argentina	Brazil	Chile	Hungary	Ukraine
Keep job one year?					
Very unconfident	16.5	15.5	17.3	13.2	15.6
Unconfident	16.5	17.0	15.5	14.6	16.1
Neutral	18.7	18.2	19.1	16.5	16.7
Confident	19.6	19.5	20.5	19.2	18.0
Very confident	21.2	19.9	22.6	19.8	18.9
Tested difference <sup>a</sup>	4.7	4.4	7.1 <sup>b</sup>	5.2 <sup>b</sup>	3.3
<i>t</i> -statistic <sup>a</sup>	6.8	6.3	7.3 <sup>b</sup>	6.7 <sup>b</sup>	7.8
Significance level <sup>c</sup>	***	***	***	***	***
Skills transferable?					
No	17.4	18.1	19.2		
Yes, partly	18.8	18.5	19.8		
Yes, mostly	19.7	19.2	20.6		
Tested difference <sup>a</sup>	2.3	1.0	1.4		
<i>t</i> -statistic <sup>a</sup>	4.7	3.2	1.7		
<i>p</i> -value	0.00	0.00	0.10		
Significance level <sup>c</sup>	***	***	*		
Computer user?					
No				16.7	17.2
Yes				19.9	18.3
Tested difference <sup>a</sup>				3.2	1.1
<i>t</i> -statistic <sup>a</sup>				6.9	8.7
Significance level <sup>c</sup>				***	***
Employees in samples	764- 771	1 451- 1 452	385- 426	432- 433	4 691- 5 731

<sup>a</sup> For *t*-test of equality of means of first and last categories, except as otherwise noted. <sup>b</sup> For equality of means of second and last categories. <sup>c</sup> \*\*\* = 0.01; \*\* = 0.05; \* = 0.10.

transferability of skills may partly be a proxy for earnings; and second, the transferability of skills partially insures the worker against job loss because the worker is more likely to be able to find a new job generating comparable income.

In Argentina, Brazil and Chile, use of transferable skills was measured with a direct (subjective) question: respondents were asked whether they thought the skills and knowledge associated with their main job were transferable to other jobs. But because of the general nature of this question, the reported skills may include some of those acquired through formal education. In Hungary and Ukraine, by contrast, the survey asked whether the respondent knew how to use a computer – a specific transferable skill – and whether the respondent had

Table 6. Job satisfaction by job characteristics (average total job satisfaction score, employees)

	Argentina	Brazil	Chile	Hungary
Time on current job				
< 2 years	18.2	18.4	19.1	17.6
2 to 5 years	18.6	18.7	19.2	17.3
> 5 years	19.6	18.9	20.7	18.3
Tested difference <sup>a</sup>	1.4	0.5	1.6	0.7
<i>t</i> -statistic <sup>a</sup>	3.5	2.0	2.4	1.0
Significance level <sup>b</sup>	***	**	**	
Earnings on job				
1st quartile (lowest)	16.4	16.7	18.4	
2nd quartile	18.1	18.6	17.4	
3rd quartile	19.5	18.9	19.8	
4th quartile (highest)	20.5	20.1	23.1	
Tested difference <sup>a</sup>	4.1	3.4	4.7	
<i>t</i> -statistic <sup>a</sup>	7.0	9.3	7.1	
Significance level <sup>b</sup>	***	***	***	
Employees in samples	671- 778	1 386- 1 455	380- 430	434

<sup>a</sup>For *t*-test of equality of means of first and last categories. <sup>b</sup>\*\*\* = 0.01; \*\* = 0.05; \* = 0.10.

access to a computer at work.<sup>13</sup> If the computer is used at work, the above reasoning about the link between transferable skills and job satisfaction applies. And, of course, a positive association may also indicate that people like using computers or having the kinds of jobs in which computers are used (white-collar jobs).

The association between job satisfaction and different levels of transferable skills is fairly strong – between 1.1 and 3.2 points using the available measurements – though transferable skills are clearly not as important a consideration as job security.

Table 6 shows a modest positive relationship between *time on current job* and job satisfaction in Argentina, Brazil and Chile, but no statistically significant relationship is evident for Hungary (no data are available from the Ukrainian survey). For two reasons it is somewhat surprising that a stronger positive relationship does not appear. First, earnings are typically positively related to seniority in the job. Second, unsatisfied employees would be more likely to filter out of their jobs over time, leaving senior employees who are, on average, more satisfied.

<sup>13</sup> For *computer user* to be coded yes, the requirement was that the respondent both knew how to use a computer and had access to one at work. This was the closest we could get to the desired concept using PSS data, though it does not preclude the possibility that the respondent knew how to use a computer and had access to one at work, but did not *use* one at work.

It is unfortunate that the PSS questionnaires did not gather information about earnings on the job in Hungary and Ukraine, since earnings can be expected to be one of the most important determinants of job satisfaction. Indeed, for the three Latin American countries, table 6 documents a very strong relationship: those in the highest earnings quartiles have total job satisfaction scores that are 3.4 to 4.7 points higher than those in the lowest quartile.<sup>14</sup> It is striking, however, that these differences are roughly comparable to those identified in respect of job safety and job security; pay is not obviously the most important determinant of job satisfaction.<sup>15</sup>

### Employer-employee relationships

Table 7 turns to measurements of the quality of employer-employee relationships. All five data sets make it possible to identify union members. For the Latin American countries, however, the respondent was not asked about union membership unless there was a union at the workplace. In Hungary and Ukraine, two questions addressed employer attitudes directly. The first asked whether the worker felt able to *express concerns* and grievances. The second asked whether the employer could be trusted to look after the worker's interests (*trust employer*). Employer attitudes were not directly addressed in the Latin American surveys, but all five surveys contain a question about whether there is a *safety department* or committee at the workplace. For reasons connected to the regression analysis below, this variable is considered to be a good proxy for the existence of processes to safeguard the employees' interests rather than being simply an indicator of a safer workplace.

Union membership is associated with significantly higher job satisfaction in every country but Chile. The association is fairly weak in Argentina, Brazil and Ukraine, but rather strong – 2.1 points – for Hungary. On their own, these results seem to be of only modest interest, but they are strikingly different from the standard finding from industrialized countries, where a robust negative relationship between job satisfaction and unionization has been found.<sup>16</sup>

The data from Hungary and Ukraine offer evidence of the importance of intangible aspects of employer-employee relationships. Whether workers can discuss concerns with their employer or trust their employer is part of a larger picture that encompasses notions of fairness, reciprocity

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<sup>14</sup> The earnings quartiles were calculated from the PSS data, including individuals who were self-employed or employers.

<sup>15</sup> This finding also emerges from parallel tabulations replacing the total job satisfaction score with the pay component only.

<sup>16</sup> The relationship has been found in the United States (Freeman, 1978; Borjas, 1979), Canada (Meng, 1990), Australia (Miller, 1990) and the United Kingdom (Clark, 1996).

Table 7. Job satisfaction and employer-employee relations (average total job satisfaction score, employees)

	Argentina	Brazil	Chile	Hungary	Ukraine
Union status					
Non-member	18.9	18.7	20.0	17.5	17.2
Member	19.9	19.4	19.8	19.6	17.7
Tested difference <sup>a</sup>	1.1	0.7	-0.2	2.1	0.5
<i>t</i> -statistic <sup>a</sup>	2.4	2.6	0.4	4.1	4.5
Significance level <sup>b</sup>	**	***		***	***
Safety department					
No	18.1	18.0	18.3	17.2	17.2
Yes	20.6	19.7	21.0	18.4	17.7
Tested difference <sup>a</sup>	2.5	1.6	2.7	1.3	0.5
<i>t</i> -statistic <sup>a</sup>	7.0	6.9	4.6	2.5	4.2
<i>p</i> -value <sup>*</sup>	0.00	0.00	0.00	0.01	0.00
Significance level <sup>b</sup>	***	***	***	**	***
Can discuss concerns with employer					
No				15.5	16.4
Don't know					17.1
Yes				18.4	18.4
Tested difference <sup>a</sup>				2.9	2.0
<i>t</i> -statistic <sup>a</sup>				3.9	15.1
Significance level <sup>b</sup>				***	***
Trust employer					
No				15.2	16.5
Yes				19.0	18.6
Tested difference <sup>a</sup>				3.7	2.1
<i>t</i> -statistic <sup>a</sup>				7.0	19.8
Significance level <sup>b</sup>				***	***
Employees in samples	631- 642	1 264- 1 297	373- 402	408- 437	5 731

<sup>a</sup> For *t*-test of equality of means of first and last categories. <sup>b</sup> \*\*\* = 0.01; \*\* = 0.05; \* = 0.10.

and dignity. The glimpse these two questions provide of that larger picture is compelling. Interestingly, the Ukrainian data show that certainty that the employer is not open to discussion is worse than uncertainty, and that nearly a third of the sample answered “don’t know” to this question. The perception that the employer is open to discussions about concerns and problems is associated with higher job satisfaction (2.0 to 2.9 points on average in Ukraine and Hungary, respectively). The broader question about trusting the employer to look after the worker’s interests produces a similar spread for Ukraine (2.1 points) and an even larger gap for Hungary (3.7 points). The correlation between answers to the openness and

trust questions were 0.54 and 0.43 in Hungary and Ukraine, respectively – high, but far from 1.0.

As mentioned earlier, the presence of a safety department seems more likely to reflect the existence of internal processes that safeguard workers' interests than an increment in workplace safety (for further elaboration, see the discussion about this variable in the regression analysis below). In table 7, the association of this variable with job satisfaction is positive and statistically significant in every country, but the magnitude of the difference is noticeably smaller in Hungary and Ukraine. In Brazil, Chile and Ukraine, large employers are required by law to set up safety departments (subject to different thresholds), so some of the observed difference may be echoing other employer-size effects. The regression analysis conducted in the next section controls for employer size, however, and the relationship remains statistically important.<sup>17</sup>

### Self-employed workers

The number of self-employed individuals is large enough for detailed analysis only in the Argentina and Brazil samples, though some limited conclusions can be drawn from the Chile sample as well (the self-employed were not included in the sampling frame for the Ukrainian PSS). Unlike earlier tables, table 8 reports cell sizes because so many are small enough to be of note, particularly for Chile, where we found it necessary to merge cells in several cases.

The top of table 8 compares job satisfaction between the usual three employment status categories, including employers, which are excluded elsewhere in this article. In the Argentine data, employees' job satisfaction is 1.4 points higher than that of the self-employed. The gap is neither large nor statistically significant in the Brazilian and Chilean data. The small number of employers in each sample have substantially higher job satisfaction than employees and self-employed workers.

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<sup>17</sup> Respondents who say they work for large employers where safety departments are mandated do not uniformly report that there was a safety department at their workplace. Since job satisfaction is a subjective variable, it is respondents' knowledge of such a department, not its actual existence, that is relevant. Adalberto Cardoso has pointed out to us (in personal communication) that Brazil presents a special case, however. In Brazil, the safety department requirement is actively enforced, and the required safety departments, which are widely known by their acronym (CIPA), are elected by the workers. Since these facts seem to rule out widespread disregard of the regulation and unawareness by the workers, the reference to a "safety department" rather than a CIPA in the PSS question was almost certainly misunderstood by some of those who worked for large employers and answered in the negative. This error in the data biases downward the difference in job satisfaction between those with and without a CIPA because some of those with a CIPA and high job satisfaction are misclassified as not having a CIPA, thus raising the non-CIPA mean.

Table 8. Average total job satisfaction score, self-employed

	Argentina		Brazil		Chile	
	Mean	Observed	Mean	Observed	Mean	Observed
Employer	19.3	42	22.1	41	22.3	18
Self-employed	17.4	373	18.7	520	19.2	121
Employee	18.8	781	18.6	1 458	19.8	433
Tested difference <sup>a</sup>	1.4 <sup>b</sup>		-0.1 <sup>b</sup>		0.6 <sup>b</sup>	
<i>t</i> -statistic <sup>a</sup>	4.7 <sup>b</sup>		0.3 <sup>b</sup>		1.0 <sup>b</sup>	
Significance level <sup>c</sup>	***					
Female	17.6	148	18.4	205	19.4	36
Male	17.2	225	18.9	315	19.2	85
Tested difference <sup>a</sup>	-0.4		0.5		-0.2	
<i>t</i> -statistic <sup>a</sup>	0.8		1.1		0.2	
Significance level <sup>c</sup>						
Age in years <sup>d</sup>						
< 30	17.9	73	18.8	114	21.4	15
30 to 39	18.2	88	18.4	131	19.9	29
40 to 49	17.3	103	19.0	168	18.3	42
> 50	16.4	109	18.5	107	19.2	34
Highest education, completed						
Primary or less	16.5	182	18.0	354	19.1	43
Secondary	17.7	131	19.7	129	18.6	57
University	19.1	54	21.8	37	20.9	21
Tested difference <sup>a</sup>	2.5		3.7		1.8	
<i>t</i> -statistic <sup>a</sup>	4.1		5.8		1.1	
Significance level <sup>c</sup>	***		***			
Workplace safety evaluation						
Very unsafe	15.5	15	15.0	27	16.7 <sup>e</sup>	43
Unsafe	15.5	86	17.5	95		
Neutral	17.5	60	18.5	82	20.4	19
Safe	18.1	184	19.2	253	20.9 <sup>e</sup>	57
Very safe	19.5	26	19.9	63		
Tested difference <sup>a</sup>	2.6 <sup>f</sup>		2.4 <sup>b</sup>		4.1 <sup>g</sup>	
<i>t</i> -statistic <sup>a</sup>	3.9 <sup>f</sup>		2.8 <sup>b</sup>		2.5 <sup>g</sup>	
Significance level <sup>c</sup>	***		***		**	
Keep job one year?						
Very unconfident	14.0	44	16.3	18	15.9 <sup>e</sup>	24
Unconfident	17.0	87	16.7	124		
Neutral	16.9	79	18.0	91	18.5	32
Confident	18.7	113	19.8	183	20.7 <sup>e</sup>	62
Very confident	19.4	42	20.2	102		
Tested difference <sup>a</sup>	5.3		3.5 <sup>b</sup>		4.8 <sup>g</sup>	
<i>t</i> -statistic <sup>a</sup>	5.2		5.3 <sup>b</sup>		2.8 <sup>g</sup>	
Significance level <sup>c</sup>	***		***		***	

Table 8. Average total job satisfaction score, self-employed (*concl.*)

	Argentina		Brazil		Chile	
	Mean	Observed	Mean	Observed	Mean	Observed
Skills transferable?						
No	16.0	92	18.5	160	19.4	19
Yes, partly	17.6	157	18.2	228	18.5	51
Yes, mostly	18.2	118	19.8	126	20.4	38
Tested difference <sup>a</sup>	2.2		1.3		1.0	
<i>t</i> -statistic <sup>a</sup>	3.2		2.3		0.6	
Significance level <sup>c</sup>	***		**			
Time on current job						
< 2 years	16.7	96	17.8	143	17.7	34
2 to 5 years	17.1	63	18.8	132	19.6	20
> 5 years	17.7	214	19.2	245	20.0	67
Tested difference <sup>a</sup>	1.0		1.4		2.3	
<i>t</i> -statistic <sup>a</sup>	1.6		2.9		1.6	
Significance level <sup>c</sup>			***			
Earnings on job						
1st quartile (lowest)	16.6	82	16.5	144	16.3	35
2nd quartile	17.5	54	18.5	94	18.9	12
3rd quartile	17.5	46	19.3	100	21.0	30
4th quartile (highest)	19.0	74	20.8	113	20.5	23
Tested difference <sup>a</sup>	2.4		4.3		4.3	
<i>t</i> -statistic <sup>a</sup>	3.4		7.9		3.4	
Significance level <sup>c</sup>	***		***		***	

<sup>a</sup> For *t*-test of equality of means of first and last categories. <sup>b</sup> For equality of means of second and last categories. <sup>c</sup> \*\*\* = 0.01; \*\* = 0.05; \* = 0.10. <sup>d</sup> Test of difference between extreme categories not performed. <sup>e</sup> Categories combined because of small cell sizes in both. <sup>f</sup> For equality of "safe" and "unsafe" categories. <sup>g</sup> For equality of mean of last two categories combined with mean of first two categories combined.

Table 8 demonstrates that many of the relationships between job satisfaction and individual or job characteristics are qualitatively similar for the self-employed and employees. Here attention will therefore be drawn only to substantial differences from the patterns observed for employees. There are relatively few such differences, and those few are matters of magnitude; the directions of differences is completely consistent.

In the Brazilian sample, the climb in job satisfaction as we move into higher educational categories is much steeper in table 8 than in table 3 – a 3.7 point gap between *university* and *primary or less* for the self-employed versus 1.0 point for employees. Also in the Brazilian sample, the difference between more than five years on the job and less than two years is associated with a difference of only 0.5 point for employees, but 1.4 points for the self-employed.

The difference in average job satisfaction between the highest and lowest earnings quartiles is smaller for the self-employed in Argentina, but larger in Brazil. (As mentioned earlier, the earnings quartiles are calculated using data for both employees and the self-employed.)

There were only 121 self-employed individuals in the Chilean sample. The resulting observations, however, are sufficient to confirm tentatively that higher job satisfaction for the self-employed is associated with higher education, safer workplaces, higher job security, more time on the job, and higher earnings.

## Regression analysis

The comparisons of sub-sample means discussed in the preceding section suggest explanations for the observed cross-sectional distribution of job satisfaction. It is clear, however, that these explanations overlap because of correlations among the categories (conditioning variables). This can be illustrated by an example such as university-educated workers, who are more likely to work in office environments that are, on average, safer than other workplaces. In Argentina there is a 7.5 point job satisfaction difference between the two extreme safety categories and a 2.8 point gap between the highest and lowest education categories. But because of correlation between education and safe workplaces, the effects of education and safety – as well as other factors correlated with education – are commingled in both numbers. In this section, regression analysis is used in an attempt to separate these effects.

## Employees

Table 9 reports the results of regressing total job satisfaction scores on regressors comparable to the categories used in tables 3-6. All of these regressors are indicator variables.<sup>18</sup> The reference (omitted) categories are: age less than 30 years, primary education or less, fewer than ten employees, the middle (neutral) categories for the job safety and job security evaluations,<sup>19</sup> skills not transferable, not a computer user at work, not a union member, no safety department, cannot express concerns and grievances, and does not trust employer. The coefficients reported in table 9 are the difference in total job satisfaction points associated with each explanatory variable after statistically controlling for (holding fixed) the other explanatory variables.

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<sup>18</sup> Therefore, the regression is equivalent to an ANOVA without interactions. Regressions using a quadratic specification for age and tenure produce similar results.

<sup>19</sup> The middle category is used because the extreme categories contained small numbers of cases in some samples.

Table 9. Regression of total job satisfaction score, employees

	Argentina	Brazil	Chile	Hungary	Ukraine
Female	-0.49 (0.37)	-0.53** (0.24)	0.89 (0.55)	0.13 (0.48)	-0.22* (0.13)
Age					
30 to 39	-1.21** (0.48)	-0.48 (0.30)	-0.49 (0.80)	-0.05 (0.57)	-0.17 (0.17)
40 to 49	0.20 (0.48)	-0.39 (0.31)	-1.12 (0.89)	-1.07* (0.60)	0.16 (0.16)
50 and over	-0.25 (0.58)	-0.15 (0.46)	-0.10 (0.93)	0.16 (0.86)	-0.02 (0.19)
Completed education					
Vocational				1.41* (0.81)	
Secondary	0.06 (0.44)	-0.20 (0.25)	0.02 (0.66)	1.76** (0.81)	0.39 (0.60)
Special secondary					1.04* (0.60)
University	0.48 (0.54)	-0.07 (0.46)	2.19*** (0.67)	2.26** (0.94)	0.98 (0.60)
Employer size					
10 to 50	1.36*** (0.47)	0.23 (0.33)	-0.55 (0.68)	-0.57 (0.72)	-0.51** (0.21)
50 to 100	1.92*** (0.57)	0.75* (0.45)	-0.69 (0.97)	-1.58* (0.84)	-0.98*** (0.23)
>100	1.17** (0.59)	0.08 (0.35)	-1.04 (0.72)	-0.64 (0.78)	-0.72*** (0.20)
Workplace safety evaluation					
Very unsafe	-2.96* (1.64)	-1.00 (0.93)	2.18 (1.85)	0.59 (1.43)	0.14 (0.19)
Unsafe	-1.34* (0.74)	-0.47 (0.47)	0.14 (0.99)	0.00 (0.94)	-0.14 (0.37)
Safe	0.92 (0.60)	1.45*** (0.32)	2.03*** (0.72)	1.47*** (0.54)	0.61*** (0.15)
Very safe	1.86** (0.83)	2.58*** (0.42)	3.67*** (0.92)	1.42** (0.58)	1.57*** (0.36)
Keep job one year?					
Very unconfident	-0.93 (0.81)	-1.68 (0.77)	-0.83 (1.35)	-2.27 (1.17)	-0.57 (0.39)

Table 9. Regression of total job satisfaction score, employees (*concl.*)

	Argentina	Brazil	Chile	Hungary	Ukraine
Unconfident	-1.28** (0.62)	-0.79 (0.37)	-2.43 (0.93)	-1.13 (0.88)	-0.25 (0.30)
Confident	0.00 (0.48)	0.80 (0.31)	1.01 (0.69)	1.79 (0.60)	0.93 (0.13)
Very confident	0.96* (0.58)	0.95 (0.39)	2.25 (0.78)	2.19 (0.61)	1.51 (0.18)
Skills transferable?					
Yes, mostly	1.25** (0.55)	0.67** (0.32)	0.88 (0.78)		
Yes, partly	0.92* (0.56)	0.44 (0.31)	0.14 (0.69)		
Computer user				1.45*** (0.54)	0.67*** (0.14)
Time on current job					
2 to 5 years	0.13 (0.51)	-0.36 (0.34)	-1.53** (0.76)	-1.32* (0.77)	
More than 5 years	0.73 (0.47)	0.00 (0.29)	0.35 (0.75)	-1.16* (0.67)	
Union member	0.10 (0.43)	0.29 (0.28)	-0.72 (0.65)	1.81*** (0.52)	0.24** (0.12)
Safety department	1.75*** (0.41)	1.20*** (0.27)	2.56*** (0.58)	0.88* (0.46)	0.27** (0.13)
Express concerns?					
Yes				1.21 (0.82)	0.92*** (0.15)
Don't know					0.52*** (0.14)
Trust employer				2.38*** (0.51)	1.43*** (0.12)
Constant	16.45*** (0.90)	16.84*** (0.49)	16.26*** (0.96)	14.29*** (1.26)	16.24*** (0.66)
R <sup>2</sup>	0.27	0.16	0.40	0.38	0.17
Observations	526	1 158	282	341	4 559

Significance levels: \*\*\* = 0.01; \*\* = 0.05; \* = 0.10. Standard errors in parentheses.

Earnings were not used in the regressions because theoretical considerations and empirical evidence suggest that earnings would be an endogenous regressor, biasing the regression results (see Ritter and Anker, 2002). The theoretical argument is simply that more satisfied employees are more likely to be successful, achieving higher earnings.

Except for the job safety and job security sections of table 9, a test of the null hypothesis that the coefficient on the highest category (university, for example) is zero gives results comparable to those of the *t*-tests reported in tables 3-6. For the safety and security variables the comparable test uses the null hypothesis that the difference of two coefficients is zero (e.g. the difference between the coefficients on the very safe and very unsafe indicators). The results of these tests are reported in the discussion below.

In general, the regression results are consistent with the comparisons of means discussed in the previous section in terms of the direction of the associations. As expected, the magnitudes of the effects are generally smaller, however, because of the correlations among explanatory variables.

The largest effects are still those of perceived job safety, job security, and the employer-employee relations variables. The differences between “very safe” and either “unsafe” or “very unsafe” categories – depending, as in table 4, on cell size – range from 1.4 to 3.5 job satisfaction points. The differences are statistically significant at the 0.01 level, except in the Hungary sample.<sup>20</sup> The peculiar finding for Ukraine – that the difference between “very unsafe” and “neutral” does not matter – persists in the regression results.

The coefficients for perceived job security show a similar pattern of decreasing magnitudes. The differences between coefficients on “very confident” and “very unconfident” (or “confident”, depending on cell size) range from 1.9 to 4.7 points across the five countries studied, and all are statistically significant at the 0.05 or 0.01 level.<sup>21</sup>

As mentioned earlier, the natural interpretation of the apparent effect of the *safety department* variable on job satisfaction in table 7 is that it serves as a proxy for workplace safety. But the regression results strongly suggest that this interpretation is misleading. Since the regressions control for workers’ direct evaluation of safety, the effects of *safety department* seem far too large to represent a further increment in workplace safety. Furthermore, when the *very unsafe* to *very safe* variables are excluded from the regression, the coefficient on *safety*

<sup>20</sup> In a regression not reported here, the “very unsafe” and “unsafe” categories were combined in the Hungary data to increase the cell size. The difference with the “very safe” coefficient was still insignificant.

<sup>21</sup> Kelley, Evans and Dawkins (1998) found a similarly large effect of job security on job satisfaction using Australian data.

*department* changes little, increasing by about 0.2 for Argentina, Brazil and Hungary and remaining virtually unchanged for Chile and Ukraine. Therefore we interpret the *safety department* variable as a proxy for the existence of processes that safeguard, or reflect concern for, workers' interest (especially, perhaps, safety). This interpretation is strengthened by the results for Hungary and Ukraine: when the *express concerns* and *trust employer* variables are excluded, the *safety department* coefficients are much larger and statistically significant in both samples. In short, the evidence suggests that the existence of a safety department is closely related to these more direct measures of employer attitudes.

It is clear overall that employer attitudes are very important determinants of job satisfaction. In Hungary, the combined impact of *safety department*, *express concerns*, and *trust employer* is 4.5 job satisfaction points; and in Ukraine, it is 2.6 points. Thus the importance of these variables in determining job quality is estimated to be comparable to, or greater than, that of perceived job security.

### Self-employed workers

Table 10 reports analogous regressions for self-employed individuals in the Latin American samples. The results for Chile are reported for completeness, but the small sample size leads to large standard errors, thereby severely limiting the usefulness of the regression.<sup>22</sup> The regressions leave out several variables used in the employee regressions that have little meaning for self-employed workers.

As was the case for employees, the regressions for self-employed workers find that the magnitude of effects is generally smaller than it was in the comparisons of conditional means given in table 8. However, there are some notable contrasts with the regression results for employees shown in table 9. First, the effect of a university education is much larger for self-employed individuals than for employees; and the same goes for the effect of secondary education in Brazil. Second, for self-employed Brazilians, the effects of different levels of perceived workplace safety are negligible except for a large coefficient of  $-3.46$  on the "very unsafe" indicator.<sup>23</sup> The magnitude is roughly the same as the difference between the "very safe" and "very unsafe" coefficients in the employees regression, but there the effect is not concentrated in the jump from "unsafe" to "very unsafe".

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<sup>22</sup> The sample is smaller than in table 8 because the regression requires complete information on all variables.

<sup>23</sup> There are 65 observations in this category.

Table 10. Regression of total job satisfaction score, self-employed workers

	Argentina	Brazil	Chile
Female	0.23 (0.50)	-0.83** (0.39)	1.26 (1.09)
Age			
30 to 39	0.10 (0.72)	-0.34 (0.55)	-0.70 (2.09)
40 to 49	-0.88 (0.77)	0.22 (0.55)	-1.22 (2.11)
50 and over	-1.83*** (0.69)	-0.45 (0.66)	-0.41 (1.97)
Completed education			
Secondary	0.07 (0.56)	1.13** (0.46)	-0.13 (0.95)
University	1.69*** (0.58)	3.09*** (0.64)	2.18* (1.26)
Workplace safety evaluation			
Very unsafe	-1.51 (1.17)	-3.46*** (1.11)	-2.19 (1.98)
Unsafe	-1.66** (0.72)	-0.37 (0.55)	-3.36** (1.67)
Safe	0.11 (0.60)	0.25 (0.49)	0.86 (1.36)
Very safe	1.37 (0.97)	0.45 (0.80)	0.97 (1.98)
Keep job one year?			
Very unconfident	-2.33** (0.92)	-1.77 (1.20)	-0.07 (2.22)
Unconfident	0.52 (0.71)	-1.13** (0.54)	-1.63 (1.15)
Confident	1.59*** (0.60)	1.61*** (0.46)	1.87 (1.19)
Very confident	1.83** (0.90)	1.86*** (0.61)	1.70 (1.22)
Skills transferable?			
Yes, mostly	1.31** (0.65)	1.01* (0.54)	0.87 (1.45)
Yes, partly	1.00* (0.58)	-0.50 (0.43)	-0.93 (1.27)
Time on current job			
2 to 5 years	-0.34 (0.83)	0.68 (0.54)	2.49* (1.51)
More than 5 years	0.96 (0.65)	0.83* (0.48)	3.33*** (1.04)
Constant	16.25*** (1.03)	17.45*** (0.72)	17.12*** (2.79)
R <sup>2</sup>	0.22	0.21	0.47
Observations	351	512	103

Significance level: \*\*\* = 0.01; \*\* = 0.05; \* = 0.10. Standard errors in parentheses.

## Concluding remarks

Individual workers' expressions of job satisfaction relate in predictable ways to worker, employer and job characteristics. First, job satisfaction is strongly associated with perceived job security in all five countries. Though it may be tempting to regard this finding as tautological, it is important to remember that the dependent variable does not directly measure job security. Second, the worker's evaluation of workplace safety is strongly related to job satisfaction in all five countries, though the specific pattern of results is somewhat puzzling for Chile, Hungary and Ukraine. Here again, it is important to keep in mind that the dependent variable does not directly measure workplace safety. Third, highly educated workers are more likely to report high job satisfaction levels. Fourth, employer attitudes, as perceived by workers, have large and highly significant effects. And fifth, in sharp contrast to previous research findings on the United Kingdom, the United States, Canada and Australia, union membership is not negatively related to job satisfaction.

The PSS questionnaires were structured largely around the conceptual framework for understanding socio-economic security proposed by Standing (1999). That framework describes seven dimensions of economic security and offers a different perspective on our findings. Specifically, the results reported in this article indicate that job satisfaction is closely related to what Standing terms work security (the safety measures), employment security (the job stability measures), security of occupational skills (the transferable skills variables) and voice representation security (unionization and employer attitude variables).

Given the large differences among the five labour markets studied, especially between the Eastern European and Latin American countries, the results reported here are satisfyingly consistent. Job satisfaction data thus prove to be credible indicators of job quality, generally responding sensibly and consistently to various characteristics of the employment relationship.

## References

- Akerlof, George A.; Dickens, William T. 1982. "The economic consequences of cognitive dissonance", in *American Economic Review* (Nashville, TN), Vol. 72, No. 3 (June), pp. 307-319.
- Akerlof, George A.; Rose, Andrew K.; Yellen, Janet L. 1988. "Job switching and job satisfaction in the U.S. labor market", in *Brookings Papers on Economic Activity* (Washington, DC), No. 2, pp. 495-582.
- Borjas, George J. 1979. "Job satisfaction, wages, and unions.", in *Journal of Human Resources* (Madison, WI), Vol. 14, No. 1 (Winter), pp. 21-40.
- Clark, Andrew E. 2001. "What really matters in a job? Hedonic measurement using quit data", in *Labour Economics* (Amsterdam), Vol. 8, No. 2 (May), pp. 223-242.

- . 1998. *Measures of job satisfaction: What makes a good job? Evidence from OECD countries*. Labour Market and Social Policy Occasional Papers, No. 34 (DEELSA/ELSA/WD(98)5). Paris, OECD.
- . 1996. "Job satisfaction in Britain", in *British Journal of Industrial Relations* (Oxford), Vol. 34, No. 2 (June), pp. 189-217.
- ; Oswald, Andrew J. 1996. "Satisfaction and comparison income", in *Journal of Public Economics* (Amsterdam), Vol. 61, No. 3 (Sep.), pp. 359-381.
- Freeman, Richard B. 1978. "Job satisfaction as an economic variable", in *American Economic Review* (Nashville, TN), Vol. 68, No. 2 (May), pp. 135-141.
- Golini, Antonio; Calvani, Plautilla. 2001. *Relationships between perceptions of health, chronic diseases and disabilities*. Nihon University Population Research Institute, Research Paper Series, No. 73. Tokyo, Nihon University.
- Jeria Cáceres, María. 2001. *People's Socio-economic Security Survey methodology: Note on sampling designs*. Paper presented at the ILO Technical Conference on People's Socio-economic Security Surveys, 28-30 Nov., Geneva, ILO.
- Kelley, Jonathan; Evans, M. D. R.; Dawkins, Peter. 1998. "Job security in the 1990s: How much is job security worth to employees?", in *Australian Social Monitor* (Melbourne), Vol. 1, No. 1 (Sep.), pp. 1-7.
- Keon, Thomas L.; McDonald, Bill. 1982. "Job satisfaction and life satisfaction: An empirical evaluation of their interrelationship", in *Human Relations* (New York, NY), Vol. 35, No. 3, pp. 167-180.
- Meng, Ronald. 1990. "The relationship between unions and job satisfaction", in *Applied Economics* (London), Vol. 22, No. 12 (Dec.), pp. 1635-1648.
- Miller, Paul W. 1990. "Trade unions and job satisfaction", in *Australian Economic Papers* (Adelaide), Vol. 29, No. 55 (Dec.), pp. 226-248.
- Ritter, Joseph A.; Anker, Richard. 2002. *Empirical modeling of job satisfaction: Results from five nonindustrialized countries*. Unpublished manuscript. Geneva, ILO.
- Seashore, Stanley E. 1974. "Job satisfaction as an indicator of the quality of employment", in *Social Indicators Research* (Dordrecht), Vol. 1, No. 2 (Sep.), pp. 135-168.
- Standing, Guy. 1999. *Global labour flexibility: Seeking distributive justice*. London, Macmillan Press.