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Labor union membership is associated with higher levels of life satisfaction in low income countries, but not in high income countries. Evidence suggests that union membership affects life satisfaction in low income countries through better working conditions.

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Introduction

Does union membership affect life satisfaction? While the broad purpose of unions is to improve the pay and working conditions of its members, that membership comes at a cost including union dues, lost wages due to potential strikes, and responses by management to reduce labor costs. In fact, earlier studies using data from different countries and time periods have shown that union workers report being less satisfied with their jobs relative to nonunion workers in the same occupation (Artz, 2012; Heywood, Seibert and Wei, 2010; Borjas, 1979; Freeman, 1978). Yet, paradoxically, union workers are also less likely to leave their jobs (Hammer and Avgar, 2005). This pattern suggests that while union workers may voice dissatisfaction with their specific jobs, they maximize their utility or overall life satisfaction by maintaining their union status.

This paper offers evidence on this hypothesis, directly examining the relationship between union membership and self-reported life satisfaction in a sample containing individuals from forty-nine countries over a period of 27 years. We find no evidence of an effect of union membership on life satisfaction in high income countries, but union membership is associated with higher life satisfaction in low income countries. This effect is particularly strong for younger and less skilled workers in low income countries even after controlling for individual income. The results suggest that union membership may impart non-wage benefits (e.g., job security, working conditions, or benefits) to individuals in low-income countries that increase the quality of life.

This result contributes to existing literature about the impact of labor market regulation and unions on economic outcomes in developing countries. Freeman (2009) reviews the debate over the impact of labor unions and social protection in developing countries, arguing that an earlier policy consensus that unions and regulation inhibits growth has been replaced with a more

nuanced understanding that labor institutions and their effects vary considerably across countries. Our results suggest that an additional dimension to consider in this evaluation is the impact of union membership on individual life satisfaction.

Data and Methods

We use data from the World Values Survey to estimate an ordered probit model for self-reported life satisfaction. The measurement of life satisfaction is based on individual responses to *"All things considered, how satisfied are you with your life as a whole these days?"* Responses range from 1 to 10, with 10 indicating the highest level of satisfaction.

Although the last wave of the World Values Survey includes data from 87 countries, the data available varies slightly across countries. As a result, we are able to construct a sample including 49 countries across all five waves of the survey (1981-1984, 1989-1991, 1994-1999, 1999-2004, and 2004-2008). Our data forms an unbalanced panel of countries. In each successive wave, a larger set of countries is included in the survey. However, the data is recorded at the individual level—there are from 1,000 to 3,000 respondents from each country in each wave. We include in our estimation sample only those who report being in the labor force. Thus, our full sample includes approximately 57,000 observations.

We create a dummy variable for labor union membership, with roughly 21 percent of our estimation sample reporting union membership. The percent of workers in each country affiliated with a labor union ranges from one to 75 percent.[1] In our sample, those who are in unions are slightly older, more likely to report being in a skilled or semi-skilled profession, and more likely to live in a country with higher per capita income.

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[1] We exclude Algeria from our estimation sample because over 99 percent of the respondents from that country indicated they were affiliated with a labor union. If we include Algeria, however, our qualitative conclusions are identical.

Although we are primarily interested in the coefficient on union membership, we include a variety of control variables including dummy variables for employment status, gender, skilled labor, and marital status. The indicator variable for employment status is equal to one if the respondent is employed part-time, full-time, or self-employed. The gender dummy variable is coded one if the respondent is male; the skilled labor variable is equal to one if the respondent reports being in a skilled or semi-skilled occupation. Marital status is equal to one if a person reports being married or living with a partner. We also include as controls an index for self-reported health status, an index for education level, age, age squared, and number of children of the respondent.

Because of the potential effects of unions on wages, it is important to also control for income. Unfortunately, the World Values Survey only reports income scales (1 to 10) which are not comparable in absolute terms across countries because of the cross-country variation in level of per capita income. To make these as comparable as possible, we multiply the income scale by the log of GDP per capita of the respondent's country. We include the income scale, the log of GDP per capita, and the interaction of the two in our estimation. We also use the average annual unemployment rate in each country as a control variable.[2] Finally, we include dummy variables for each country and wave of the World Values Survey to control for fixed country characteristics or characteristics of the time period that is common to all countries.

Results

Results of the estimation of the ordered probit models appear in Table 1. In the first column we report results for the full sample. Many of the control variables enter as expected with respondents who live in richer countries, who are employed, skilled, report higher levels of health, or are married reporting higher levels of subjective well being. In contrast, men report

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[2] GDP per capita and average annual unemployment rate are from the World Development Indicators.

lower levels of satisfaction. Age enters the estimation in a non-linear fashion with life

satisfaction first declining with age, but then reaching a turning point and increasing. Also

consistent with previous findings is the result that higher income relative to others in the

respondent's country (measured by income scale), is associated with higher reports of life

satisfaction. The interaction between income scale and per capita GDP, however, is insignificant

in all estimations.

The coefficient on union is positive and significant in column 1, indicating that union

membership is associated with higher levels of life satisfaction. However, union membership

may affect life satisfaction of certain types of workers differentially. Older workers who are

more established in their jobs may benefit less from collectively negotiated wages or non-wage

benefits. Skilled workers may also have more bargaining power on their own than unskilled

workers and may also benefit less from union membership. Finally, whether or not an individual

is currently employed may also affect the extent to which union membership benefits that

individual. To further explore these relationships, we create three interaction terms to

investigate if older workers, skilled workers, or those who are employed react differently to

union membership. The results of this estimation appear in column 2. Two of the interactions

are significant, with older and skilled workers benefitting less from union membership than

younger and unskilled workers.

Another way in which unions may have a heterogeneous effect on the life satisfaction of

individuals is that advantages and disadvantages of unions may be more salient in low income

countries. In fact, as shown in columns 3 and 4 of Table 1, when the sample is split at the

median level of GDP per capita ($4,500 in 2000 U.S. Dollars), the coefficient on union becomes

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insignificant in the high income countries.[3] This suggests that the effects of union membership may not be the same across countries. Although we do not report the detailed results here, we draw the same qualitative conclusions when we use an interaction term with union membership and GDP per capita rather than presenting split sample results. The fact that this difference between high and low income countries occurs in spite of the fact that we control for individuals' relative standing in the income distribution in their country as well as GDP per capita in that country suggests that the effect of union membership may work through other channels than the effect of union membership on income.

One possible mechanism through which union membership could affect life satisfaction is through improved working conditions. Donado and Walde (2012) argue that unions have played a critical role in making workplaces safer.[4] This mechanism may be particularly important in developing countries where labor standards may not be as high. In fact, using data from the International Labour Organization, we find a strong negative and significant correlation between GDP per capita and fatal occupational accidents.

Further results suggest that the reason why union membership is associated with higher levels of life satisfaction may be through its perceived effect on working conditions of union members. Although we are not able to obtain accident data for all the countries in our original sample, we do have it for 34 of the 49 countries. When we now split the sample by median number of fatal accidents per year (8 per 100,000 workers), we find a similar pattern as found in high and low income countries. These results are in columns 5 and 6 of Table 1. Furthermore,

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[3] Although we only report detailed results for a specification mirroring that in Column 1, the high-income/low-income comparison yields similar conclusions in both the specification with additional interaction terms and without.

[4] See also Robinson (1991) and Botsch (1993) for specific examples of the role of worker movements in improving workplace safety.

when we include accidents as an explanatory variable in the estimation that appears in Column 1, the coefficient on union becomes insignificant.[5]

Conclusion

Union membership is positively correlated with life satisfaction in low income countries but not in high income countries. While our results suggest that union membership may increase life satisfaction in developing countries due to improved working conditions, we do need to stop short of making a claim of causation. In fact, we do not find a significant correlation between fatal accidents and the percent of respondents in each country who are union members. However, such a correlation is difficult to interpret because of the endogeneity inherent in the relationship.

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[5]The inclusion of the accident variable does reduce the sample size. However, estimating the specification in Column 1 on the reduced sample still yields a positive and significant coefficient on union membership.

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Table 1: Subjective Well-Being and Union Membership

	(1)	(2)	(3)	(4)	(5)	(6)
			High		Low	High
	Full Sample	Full Sample	Income	Low Income	Accident	Accident
Union Member	0.039	0.187	0.015	0.060	0.005	0.043
	(0.011)***	(0.058)***	(0.016)	(0.016)***	(0.018)	(0.019)**
Ln(GDP/capita)	1.208	1.205	-0.699	0.774	1.444	1.204
	(0.099)***	(0.099)***	(0.275)**	(0.137)***	(0.319)***	(0.171)***
U Rate	0.008	0.008	-0.016	-0.034	0.040	0.019
	(0.003)**	(0.003)**	(0.007)**	(0.006)***	(0.013)***	(0.008)**
Employed	0.224	0.229	0.296	0.177	0.276	0.204
	(0.015)***	(0.016)***	(0.025)***	(0.019)***	(0.033)***	(0.025)***
Skilled	0.057	0.069	0.039	0.058	0.062	0.010
	(0.012)***	(0.012)***	(0.018)**	(0.015)***	(0.025)**	(0.018)
Education Index	0.003	0.003	-0.005	0.009	-0.002	0.001
	(0.002)	(0.002)	(0.003)	(0.003)***	(0.004)	(0.004)
Income scale	0.053	0.053	0.047	0.084	0.040	0.076
	(0.006)***	(0.006)***	(0.008)***	(0.008)***	(0.010)***	(0.010)***
Income scale*	0.066	0.066	-0.006	0.049	0.084	-0.098
Ln(GDP/capita)	(0.022)***	(0.022)***	(0.034)	(0.031)	(0.045)*	(0.038)**
Health	0.314	0.314	0.358	0.282	0.377	0.304
	(0.006)***	(0.006)***	(0.008)***	(0.008)***	(0.011)***	(0.010)***
Male	-0.055	-0.055	-0.074	-0.036	-0.081	-0.011
	(0.009)***	(0.009)***	(0.013)***	(0.012)***	(0.016)***	(0.016)
Age	-0.039	-0.039	-0.043	-0.035	-0.046	-0.036
	(0.002)***	(0.002)***	(0.003)***	(0.003)***	(0.004)***	(0.004)***
Age^2	0.000	0.000	0.001	0.000	0.001	0.000
	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***	(0.000)***
Married	0.204	0.204	0.284	0.153	0.296	0.204
	(0.011)***	(0.011)***	(0.015)***	(0.015)***	(0.019)***	(0.018)***
Children	0.007	0.007	0.007	0.012	0.008	0.015
	(0.004)*	(0.004)*	(0.005)	(0.005)**	(0.007)	(0.006)**
Union*Age		-0.001				
		(0.001)				
Union*Employed		-0.067				
		(0.046)				
Union*Skilled		-0.073				
		(0.028)***				
Number of Countries	49	49	25	24	17	17
Observations	56674	56674	27237	29437	17416	19937

Standard errors in parentheses. All estimations include dummy variables for country and wave.
* significant at 10%; ** significant at 5%; *** significant at 1%