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Informal Employment and Subjective Well-being in Europe: Evidence from the European Social Survey Data

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Abstract. Work constitutes one of the main spheres of human life. Hence, a person's perception of work, or a type of job in particular, may affect their subjective well-being. The absence of any written labour contract, also known as "informal employment", leads to uncertain prospects and an unstable low income situation, resulting in low job satisfaction. This paper attempts to reveal the impact of informal employment on subjective well-being in European countries by examining the differences between countries through employment protection legislation. Informal employment in countries with liberal employment protection legislation has a less negative effect on the subjective well-being of employees, than countries with strict legislation. The results, based on European Social Survey (2010) data, demonstrate a negative relationship between informal employment and subjective well-being. Countries with strict labour legislation face lower levels of subjective well-being due to a higher share of informal workers and a greater difference in happiness scores between the insiders (permanently employed) and outsiders (informally employed).

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Annex

Table A1. European countries characteristics on macro-level indicators, taken into analysis

	EPL 2010	Human Development Index
1 Belgium	3.14	0.89
2 France	3.14	0.88
3 Germany	2.77	0.90
4 Slovenia	2.73	0.88
5 Greece	2.66	0.86
6 Spain	2.63	0.88
7 Norway	2.62	0.94
8 Netherlands	2.53	0.91
9 Portugal	2.48	0.81
1 ¹ Slovakia	2.46	0.83
1 Czech Republic	2.45	0.86
1 ¹ Poland	2.45	0.81
1 ¹ Estonia	2.43	0.83
1 ¹ Hungary	2.29	0.81
1 ¹ Denmark	2.27	0.89
1 ¹ Sweden	2.17	0.9
1 ¹ Switzerland	2.15	0.9
1 ¹ Israel	2.07	0.89
1 ¹ Russian Federation	2.02	0.75
2 ¹ Finland	2.01	0.88
2 Ireland	2.01	0.91
2 ¹ United Kingdom	1.54	0.86

Sources: OECD indicators of employment protection, available at <<http://www.oecd.org/employment/emp/oecdindicatorsofemploymentprotection.htm>>; United Nations Development Programme Human Development Reports, available at <<http://hdr.undp.org/en/content/human-development-report-2010>>.

Table A2. Results from ordered probit models for happiness (10 point scale) and life satisfaction (10 point scale), for population 15-65, based on ESS data 2010

	Happiness				Life satisfaction			
	Specif_1	Specif_2	Specif_3	Specif_4	Specif_1	Specif_2	Specif_3	Specif_4
male	-0.0527***	-0.0664***	-0.0660***	-0.0664***	-0.0342**	-0.0498**	-0.0492**	-0.0492**
age_15_25	0.375***	0.483***	0.481***	0.482***	0.334***	0.447***	0.445***	0.445***
age_26_35	0.109***	0.141***	0.141***	0.141***	0.0880***	0.130***	0.129***	0.129***
age_46_55	-0.0250	-0.0253	-0.0249	-0.0248	-0.0165	-0.0185	-0.0180	-0.0183
age_56_65	0.0728	0.0862*	0.0847*	0.0844*	0.138***	0.149***	0.147**	0.145**
High education	0.0897*	0.0719*	0.0729*	0.0730*	0.0882*	0.0736*	0.0752*	0.0758*
Married	0.367***	0.351***	0.350***	0.350***	0.253***	0.232***	0.231***	0.231***
Good health	0.472***	0.374***	0.369***	0.368***	0.511***	0.396***	0.387***	0.387***
Living in a city	-0.0791*	-0.0550	-0.0660*	-0.0662*	-0.102**	-0.0780*	-0.0973***	-0.0969**
Disabled	-0.0950*	-0.136***	-0.141***	-0.142***	-0.0885*	-0.140***	-0.150***	-0.151***
Religious	0.0321**	0.0367***	0.0369***	0.0369***	0.0305**	0.0354***	0.0360***	0.0359***
Children at home	-0.0808**	-0.0500	-0.0489	-0.0490	-0.108***	-0.0774***	-0.0756***	-0.0757***
Family income	0.0627***	0.0668***	0.0669***	0.0668***	0.0746***	0.0806***	0.0809***	0.0807***
Informal employment		-0.163*	-0.178*	-0.158		-0.172*	-0.199**	-0.297
Temporary employment		-0.0470	-0.0438	0.0495		-0.107*	-0.102*	0.0438
Self-employed		-0.0133	-0.0139	0.242		-0.0195	-0.0207	0.204
Non-employed		-0.162	-0.152	-0.0849		-0.138	-0.120	-0.422
HDI		4.025*	4.627*	4.599*		4.998**	6.052**	6.054**
Transitional economy		-0.0468	-0.0120	-0.0135		-0.0340	0.0263	0.0279
EPL			-0.138	-0.120			-0.239	-0.235
iEPL				-0.00804				0.0429
tEPL				-0.0387				-0.0603

sEPL				-0.107				-0.0935
nEPL				-0.0280				0.123
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<i>N</i>	25612	25286	25286	25286	25664	25333	25333	25333
<i>r</i> ² _p	0.0363	0.0453	0.0459	0.0460	0.0358	0.0481	0.0499	0.0500
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* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A3. Results from OLS regression with clustered errors for subjective well-being index, for population 15-65, based on ESS data 2010

	Subjective well-being			
	Specif_1	Specif_2	Specif_3	Specif_4
male	-0.0743**	-0.0979***	-0.0970***	-0.0973***
age_15_25	0.624***	0.821***	0.818***	0.819***
age_26_35	0.165***	0.233***	0.234***	0.234***
age_46_55	-0.0455	-0.0493	-0.0483	-0.0488
age_56_65	0.193*	0.206**	0.204*	0.202*
High education	0.198*	0.165*	0.164*	0.165**
Married	0.560***	0.511***	0.507***	0.507***
Good health	0.946***	0.721***	0.706***	0.705***
Living in a city	-0.180*	-0.125*	-0.152*	-0.151*
Disabled	-0.196*	-0.278**	-0.290**	-0.291***
Religious	0.0539**	0.0624***	0.0623***	0.0622***
Children at home	-0.186**	-0.124*	-0.119**	-0.119**
Family income	0.141***	0.146***	0.146***	0.146***
Informal employment		-0.314	-0.356*	-0.330
Temporary employment		-0.171	-0.165	0.219
Self-employed		-0.0399	-0.0449	0.472
Non-employed		-0.282	-0.262	-0.580
HDI		9.161***	9.882***	9.843***
EPL			-0.308	-0.276
iEPL				-0.00952
tEPL				-0.159
sEPL				-0.215
nEPL				0.128
_cons	5.134***	-2.703*	-2.558*	-2.598*
<i>N</i>	25571	25247	25247	25247
<i>r</i> ²	0.168	0.213	0.216	0.217

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

Table A4. Conditional effects on happiness, life satisfaction and subjective well-being based on ordered probit and OLS regressions with clustered errors, ESS data of 2010

	For countries with lowest EPL scores (EPL-minimum)			For countries with highest EPL scores (EPL-maximum)		
	Happiness	Life satisfaction	SWB	Happiness	Life satisfaction	SWB
male	-0.0663***	-0.0492**	-0.0973***	-0.0663***	-0.0492**	-0.0973***
age_15_25	0.481***	0.446***	0.819***	0.481***	0.446***	0.819***
age_26_35	0.141***	0.130***	0.234***	0.141***	0.130***	0.234***
age_46_55	-0.0249	-0.0182	-0.0488	-0.0249	-0.0182	-0.0488
age_56_65	0.0840*	0.146***	0.202*	0.0840*	0.146***	0.202*
High education	0.0735*	0.0748*	0.165**	0.0735*	0.0748*	0.165**
Married	0.351***	0.231***	0.507***	0.351***	0.231***	0.507***
Good health	0.369***	0.386***	0.705***	0.369***	0.386***	0.705***
Living in a city	-0.0659*	-0.0974**	-0.151*	-0.0659*	-0.0974**	-0.151*
Disabled	-0.142***	-0.150***	-0.291***	-0.142***	-0.150***	-0.291***
Religious	0.0370***	0.0357***	0.0622***	0.0370***	0.0357***	0.0622***
Children at home	-0.0493*	-0.0750***	-0.119**	-0.0493*	-0.0750***	-0.119**
Family income	0.0668***	0.0808***	0.146***	0.0668***	0.0808***	0.146***
Informal employment	-0.170	-0.231	-0.345	-0.181	-0.166	-0.360
Temporary employment	-0.0106	-0.0478	-0.0255	-0.0713	-0.147	-0.281*
Self-employed	0.0784	0.0610	0.142	-0.0910	-0.0919	-0.203
Non-employed	-0.129	-0.230	-0.382	-0.171	-0.0406	-0.176
HDI	4.710***	5.824***	9.843***	4.710***	5.824***	9.843***
EPL_min	-0.122	-0.230	-0.276			
iEPL_min	-0.00706	0.0408	-0.00952			
tEPL_min	-0.0379	-0.0621	-0.159			
	(-0.55)	(-0.69)	(-1.19)			

sEPL_min	-0.106	-0.0954	-0.215			
nEPL_min	-0.0256	0.118	0.128			
EPL_max				-0.122	-0.230	-0.276
iEPL_m				-0.00706	0.0408	-0.00952
tEPL_m				-0.0379	-0.0621	-0.159
sEPL_m				-0.106	-0.0954	-0.215
nEPL_m				-0.0256	0.118	0.128
_cons			-3.022*			-3.464*
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N	25286	25333	25247	25286	25333	25247
r2_p	0.0460	0.0500		0.0460	0.0500	
r2			0.217			0.217
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* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table A5. Results from multilevel modeling on subjective well-being of only employed separately for males, females and total population of age 15-65 for 21 European countries, based on ESS data of 2010

	Employed men				Employed women				All employed			
	SWB1	SWB2	EPL min	EPL max	SWB1	SWB2	EPL min	EPL max	SWB1	SWB2	EPL min	EPL max
male									-0.124***	-0.125***	-0.125***	-0.125***
age_15_25	0.631***	0.638***	0.638***	0.638***	0.583***	0.584***	0.584***	0.584***	0.604***	0.608***	0.608***	0.608***
age_26_35	0.208***	0.209***	0.209***	0.209***	0.250***	0.252***	0.252***	0.252***	0.227***	0.228***	0.228***	0.228***
age_36_45	Basic category											
age_46_55	-0.160**	-0.162**	-0.162**	-0.162**	0.0130	0.0135	0.0135	0.0135	-0.0659	-0.0663	-0.0663	-0.0663
age_56_65	0.102	0.101	0.101	0.101	0.298***	0.299***	0.299***	0.299***	0.213***	0.213***	0.213***	0.213***
Higher education	0.0685	0.0677	0.0677	0.0677	0.123**	0.122**	0.122**	0.122**	0.0972***	0.0965***	0.0965***	0.0965***
Marriage/partnership	0.571***	0.570***	0.570***	0.570***	0.457***	0.456***	0.456***	0.456***	0.502***	0.500***	0.500***	0.500***
Good health	0.689***	0.690***	0.690***	0.690***	0.798***	0.798***	0.798***	0.798***	0.750***	0.750***	0.750***	0.750***
Living in a city	-0.101**	-0.100**	-0.100**	-0.100**	-0.120***	-0.121***	-0.121***	-0.121***	-0.108***	-0.107***	-0.107***	-0.107***
Disability	-0.374***	-0.373***	-0.373***	-0.373***	-0.344***	-0.345***	-0.345***	-0.345***	-0.359***	-0.359***	-0.359***	-0.359***
Religious	0.0598***	0.0595***	0.0595***	0.0595***	0.0654***	0.0652***	0.0652***	0.0652***	0.0636***	0.0634***	0.0634***	0.0634***
Children living in the household	-0.0354	-0.0347	-0.0347	-0.0347	-0.0897*	-0.0897*	-0.0897*	-0.0897*	-0.0629*	-0.0624*	-0.0624*	-0.0624*
Family income	0.127***	0.127***	0.127***	0.127***	0.135***	0.135***	0.135***	0.135***	0.130***	0.130***	0.130***	0.130***
Permanently employed	Basic category											
<i>Informal employed</i>	0.0676	0.238	0.127	0.0119	0.0770	0.659*	0.269*	-0.139	0.0716	0.475	0.207*	-0.0725
<i>Temporary employed</i>	-0.114*	0.657*	0.168	-0.343***	-0.165***	0.290	0.000815	-0.301**	-0.148***	0.433*	0.0643	-0.320***
HDI	10.73***	10.71***	10.71***	10.71***	9.822***	9.771***	9.771***	9.771***	10.18***	10.14***	10.14***	10.14***
EPL	-0.250	-0.200			-0.296	-0.244			-0.275	-0.225		
Informal*EPL		-0.0719				-0.254				-0.174		
Temporary*EPL		-0.318*				-0.188				-0.240**		

EPL_min			-0.200				-0.244				-0.225	
iEPL_min			-0.0719				-0.254				-0.174	
tEPL_min			-0.318*				-0.188				-0.240**	
EPL_max				-0.200				-0.244				-0.225
iEPL_max				-0.0719				-0.254				-0.174
tEPL_max				-0.318*				-0.188				-0.240**
_cons	-3.462	-3.561	-3.869	-4.190	-2.578	-2.656	-3.031	-3.423	-2.870	-2.952	-3.298	-3.659
lnsl_1_1												
_cons	-0.762***	-0.762***	-0.762***	-0.762***	-0.816***	-0.817***	-0.817***	-0.817***	-0.786***	-0.786***	-0.786***	-0.786***
lnsig_e												
_cons	0.479***	0.479***	0.479***	0.479***	0.490***	0.489***	0.489***	0.489***	0.485***	0.485***	0.485***	0.485***
N	9695	9695	9695	9695	11183	11183	11183	11183	20878	20878	20878	20878

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

Table A6. Results from multilevel modeling on subjective well-being separately of only employed, for three age groups: 15-29 years old, 30-50 years old and 51-65 years old, 21 European countries, based on ESS data of 2010

	Age group of 15-29 years old				Age group of 30- 50 years old				Age group of 51-65 years old			
	SWB1	SWB2	EPL min	EPL max	SWB1	SWB2	EPL min	EPL max	SWB1	SWB2	EPL min	EPL max
Gender	0.00484	0.00541	0.00541	0.00541	-0.102**	-0.103**	-0.103**	-0.103**	-0.186***	-0.188***	-0.188***	-0.188***
Age	-0.0669***	-0.0672***	-0.0672***	-0.0672***	-0.0168***	-0.0168***	-0.0168***	-0.0168***	0.0293***	0.0290***	0.0290***	0.0290***
Higher education	0.322***	0.323***	0.323***	0.323***	0.0786*	0.0791*	0.0791*	0.0791*	-0.00499	-0.0109	-0.0109	-0.0109
Marriage/partnership	0.597***	0.596***	0.596***	0.596***	0.446***	0.447***	0.447***	0.447***	0.446***	0.443***	0.443***	0.443***
Good health	0.898***	0.898***	0.898***	0.898***	0.719***	0.720***	0.720***	0.720***	0.688***	0.690***	0.690***	0.690***
Living in the city	-0.0609	-0.0609	-0.0609	-0.0609	-0.0979**	-0.0964**	-0.0964**	-0.0964**	-0.140**	-0.141***	-0.141***	-0.141***
Disability	-0.508***	-0.508***	-0.508***	-0.508***	-0.314***	-0.313***	-0.313***	-0.313***	-0.348***	-0.346***	-0.346***	-0.346***
Religious	0.0340***	0.0338***	0.0338***	0.0338***	0.0653***	0.0649***	0.0649***	0.0649***	0.0765***	0.0761***	0.0761***	0.0761***
Children living in the household	-0.0399	-0.0384	-0.0384	-0.0384	0.0621	0.0627	0.0627	0.0627	-0.169***	-0.170***	-0.170***	-0.170***
Family income	0.0842***	0.0844***	0.0844***	0.0844***	0.162***	0.162***	0.162***	0.162***	0.128***	0.128***	0.128***	0.128***
Permanently employed	Basic category											
<i>Informal employed</i>	<i>0.00768</i>	<i>0.152</i>	<i>0.0564</i>	<i>-0.0437</i>	<i>0.00890</i>	<i>0.937*</i>	<i>0.314*</i>	<i>-0.338*</i>	<i>0.0777</i>	<i>0.377</i>	<i>0.183</i>	<i>-0.0203</i>
<i>Temporary employed</i>	<i>-0.0616</i>	<i>0.205</i>	<i>0.0359</i>	<i>-0.141</i>	<i>-0.260***</i>	<i>0.497</i>	<i>0.0178</i>	<i>-0.482***</i>	<i>-0.115</i>	<i>1.406**</i>	<i>0.429*</i>	<i>-0.591***</i>
HDI	7.113**	7.086**	7.086**	7.086**	10.27***	10.21***	10.21***	10.21***	11.96***	11.90***	11.90***	11.90***
EPL	-0.0635	-0.0224			-0.233	-0.167			-0.435	-0.372		
Informal*EPL		-0.0624				-0.406*				-0.127		
Temporary*EPL		-0.110				-0.312*				-0.636**		
EPL_min			-0.0224				-0.167				-0.372	
iEPL_min			-0.0624				-0.406*				-0.127	
tEPL_min			-0.110				-0.312*				-0.636**	
EPL_max				-0.0224				-0.167				-0.372

iEPL_m				-0.0624					-0.406*				-0.127
tEPL_m				-0.110					-0.312*				-0.636**
_cons	1.459	1.392	1.357	1.321	-2.572	-2.674	-2.930	-3.198	-5.473*	-5.546*	-6.118**	-6.716**	
lns1_1_1													
_cons	-0.890***	-0.892***	-0.892***	-0.892***	-0.873***	-0.874***	-0.874***	-0.874***	-0.874***	-0.682***	-0.680***	-0.680***	-0.680***
lnsig_e													
_cons	0.457***	0.457***	0.457***	0.457***	0.475***	0.474***	0.474***	0.474***	0.474***	0.499***	0.498***	0.498***	0.498***
N	4046	4046	4046	4046	9968	9968	9968	9968	9968	6864	6864	6864	6864

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